

Making kin and taking care: Intra-active learning with time, space and matter in a Johannesburg preschool.

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Theresa Magdalen Giorza

11th June 2018

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Abbreviations

CAPS	Curriculum and assessment policy statement
CDP	The Curriculum Development Project
CoE	Community of enquiry
CFCI	Child-friendly cities initiative
DBE	Department of Basic Education (National)
DSD	Department of Social Development
DHE	Department of Higher Education
DoE	Department of Education (Provincial)
DoH	Department of Health
ECD	Early childhood development
ECE	Early childhood education
ECEC	Early childhood education and care
NEEDU	National education evaluation and development unit
NELDS	National early learning development standards
PRAESA	The Project for the Study of Alternative Education in South Africa
UNESCO	The United Nations Educational, Scientific and Cultural Organisation
UNICEF	The United Nations Children's Fund

Abstract

Making kin and taking care: Intra-active learning with space, time and matter in a Johannesburg preschool.

This research explores the lives and learning of a group of Grade R children and their human and non-human collaborators, (myself included) paying particular attention to the agency of the material environment. The learning spaces of a preschool and its neighbouring park emerge as key players in the lively *thinking-with* that is sparked off by our engagements with each other: people, other creatures, plants, spaces, things, energies, pasts, presents and futures. The spaces cannot be separated from their relationships with time and matter (of which we are a part), nor from the stories, habits and patterns of our engagement with them. All of these connected things, material and discursive, work in the research as lively assemblages or apparatuses that change and are changed by ongoing and unanticipated events. Photographs and video clips produce new ideas about and with the data created through the project and rather than reflecting reality, these visual forms diffract with time and space to offer the researcher and the participants new and different sensory, conceptual, affective and temporal experiences. These differences make a difference to the thinking that emerges. Relationships of accountability and belonging are recognized as central concepts in the learning with the park and the preschool. Paying attention to the choices we can make about taking care of our human and nonhuman relations or 'kin' invites new thoughts about what it means to learn together in an inner-city preschool. Learning together requires a posthuman ethics that pays attention to what matters in the entanglements of learning and the becoming response-able to one another.

Introduction

Two civil society organisations have influenced my work over the past decade and inspired me to do this research. The one is an arts education NGO and the other is a community-based daycare centre in an inner-city suburb.

The non-government organization (NGO) that I joined in 2003, had been established in the nineteen-eighties to promote arts education for young children in the townships of Johannesburg. The founder of the Curriculum Development Project (CDP), the late Charlotte Schaer, took an activist stance in relation to the rights of children as artists and was deeply aware of the injustice of Bantu Education which denied black children any form of creative education. She worked closely with community-based artist educators who were part of the united mass democratic movement opposing apartheid. She was deeply inspired by the work of the municipality of Reggio Emilia and used documentation as an advocacy tool. The CDP received ongoing financial and organizational support from international funders including the Flemish government, and the Swedish funder, SIDA, before and after the new democratic government was established. The close partnership between Schaer and artist educator Lindi Solomon, produced two art facilitation manuals: *Khula udweba* and *Creative beginnings*¹ that have become classic texts for art educators in South Africa.

My involvement with the work of CDP made me aware of the marginalization of the arts both in policy and provision for toddlers and preschoolers. When I joined CDP, in the early 2000s, the current early childhood development practitioner training model was in place, although it has gone through some modifications in the interim. Short courses

¹ Well into its third decade of operation, the CDP continues to work in the area of art in ECD and receives local funding from the Jim Joel Fund and the National Lotteries, among other funders.

accredited by the South African Qualifications Authority (SAQA) were on offer ranging from a level one basic entry level training to a level four (the equivalent of a matric level). Subsequently, the level five was also introduced. An elective offered as part of the basic level four Early Childhood Development (ECD) qualification was called 'Art in ECD'. It was worth 8 points out of the total 140 of the full qualification and optional amongst a range of elective courses. Considering the vast amount of evidence placing the arts and play at the centre of learning for this age group, this state of affairs is bewildering. It gradually became clear that the hold of the social development agenda and the power of the discourse of developmental psychology meant that artists and art educators were on the fringe of the discourse of 'ECD'. Despite this, the Curriculum Development Project (CDP) ran their Art in ECD elective on funder support and offered a three-month (one day a week) intensive and experiential creative arts course for ECD practitioners, believing that if practitioners really experienced their own creativity and the power of open ended exploratory experimentation with materials they would be able to see learning in a new way – in a way that valued the creativity and intelligence of children. The current place of the arts in the accredited level 4 and 5 courses for ECD practitioners are within the subject area of Lifeskills. Current Director of CDP, Deyana Thomas, considers this to be a further marginalising of the 'arts as pedagogy' or 'arts as methodology' approach central to the CDP's philosophy. The CDP continues to offer art courses for early education practitioners alongside their many other inspiring projects that use creative practices to make change in the world.

Posthumanist and new materialist philosophies together with pedagogical practice of Philosophy with Children, have offered me a way to continue with the project of putting arts-based learning at the centre rather than the periphery of early learning, while paying attention to the relationships and responsibilities entailed in working together in learning communities. The

Reggio Emilia concepts of 'a hundred languages' and 'the environment as teacher' have been central to my thinking and practice and took on new significance for me when diffracted through a posthumanist ethics. These concepts are explored in detail in the thesis.

The daycare centre that is the focus of my study is one of the thousands of independently run early childhood institutions across the country that offer a vital service to children and their families. The state does not provide early childhood education and care, but rather offers a range of subsidies and support programmes to private and community-based centres. My research site is a community-based initiative, run by a volunteer management committee, committed to providing care and education in an affordable, inclusive, environment. I begin my account with a summary of the main ideas through a contextual and conceptual mapping of the study.

1. **Owning up**

I will try to argue how sensory perception, pleasure and the power to seduce – what Malaguzzi called the ‘aesthetic vibration’ – can become activators of learning; how they are able to support and nourish kinds of knowledge not based uniquely on information; and how, by avoiding simply definable categories, they can lead to the sensitive empathy and relation with things which creates connections. (Vecchi, 2010, p. 6.)

Working closely and in artful, messy ways with the materials and spaces of a local inner-city preschool have led me to ask questions about how empathy and things are connected. I became interested in how paying attention to the more-than-human in learning can make us behave more ethically. The two tangled and intertwined strands of aesthetics and ethics turn out to have no ends. They are inseparable in my story of art and accountability in early learning and the proposal of an aesthetics of care in early years teaching and learning.

Listening, witnessing, enquiring

My many years of work in art education, and more specifically in the area of art in early childhood, and my precarious implicated subjectivity as the inheritor of colonial privilege and displacement has forged my particular ‘take’ on things. As a teacher in higher education, as an activist in the non-government sector, as an artist/maker of things, as a researcher and as a resident of an inner-city suburb, I am in an ongoing search for a way to participate and contribute to the way things are and can be. I feel it is necessary to find ways to (not)belong and be (dis)connected. I find Fikile Nxumalo’s (2016a) use of Donna Haraway’s notion of a “refigured” modest witnessing a generative way of thinking about my engagement with my surroundings. This kind of witnessing requires a close listening and an

empathetic 'being and becoming with' others in everyday pedagogical events. My subjectivity as researcher is hopefully somewhat distributed between and among the many data, images, voices, ways of being and knowing I offer in my account.

I begin my research journey as artist, teacher, and researcher. And each of these subjectivities is both intensified and unsettled by a philosophical attitude. My taking on of a pedagogical practice of listening and enquiry that I found in Philosophy with Children, the community of philosophical enquiry and the approach of the proponents of the Reggio Emilia system has changed my practices of art-making, teaching and researching in particular ways that relate to both conceptual and ethical issues. My encounter with Philosophy with Children happened during my Master's in Education (M Ed) course work programme at the University of the Witwatersrand. Karin Murriss, a well-known proponent of the approach taught the course and welcomed students into a community of practice that included many international Philosophy for Children (P4C) practitioners and researchers. P4C was a programme established by Matthew Lipman and Ann Margaret Sharp in the United States in the 1960s. Their teacher training programme and supporting texts are central to a world-wide network of P4C practitioners. It is noteworthy that Lipman was featured in the BBC documentary series 'The Transformers' (1990) alongside Reuven Feuerstein and Lev Vygotsky (Gregory, Haynes, & Murriss, 2017, p.xxi) as key influencers of educational thought. Haynes and Murriss (2012; 2017) use the term, *Philosophy with Children*, rather than 'for', to suggest a flattening or equalising of the teaching and learning relationship in co-enquiry.

The challenging practice of the community of philosophical enquiry is the pedagogy at the heart of the approach. It offers possibilities for foregrounding thinking together (creative, critical, caring and collaborative thinking) and ethical relationships of mutual listening. The pedagogy offered a way for me to be a different kind of teacher and learner. I could claim a

new way of being in my own skin: a position that was less fixed, more shifting and always contentious. Discomfort was expected. I could always anticipate or assume disruption and conflict. This attitude coheres with a postmodern ethics, discussed in more detail in the pages that follow.

My already established relationship with the community of the Siyakhula Daycare Centre² and the local neighbourhood invited the possibility for even closer engagement and an exploration of an aspect of learning whose demands for attention had become increasingly loud: the hands-on, self-directed engagement with materials and things-in-the-world.

Incidental and intra-active learning

During their years of emerging speech and literacy, children make meaning through a range of non-verbal and verbal modes and do a great deal of learning that is not easily visible to others and can't necessarily be articulated. As adults working with children our role is to be receptive to these occurrences and possibilities and also to create conditions for more. This idiosyncratic and 'incidental' learning cannot be tracked or measured using pre-set standards and so methods of evaluation that use predetermined standards are mostly not appropriate. If this kind of learning is valued, one's concern as an adult is not only to find ways to recognise it but more importantly to allow it to happen in the first place through the creation of conducive spaces and then to 'make visible' the learning being achieved. In addition, to value this kind of learning means to collectively find ways to extend, deepen and share it. Co-creating or creating with this kind of learning environment requires planning for the unexpected - a paradoxical notion that demands continual re-thinking, re-turning and re-responding to what emerges (Barad, 2014). Disrupting the notion of 'child-centred' education, child and human are both decentred in this pedagogy in

² Siyakhula is a pseudonym, as are all the names used to refer to the adults and children in this account, unless specifically stated otherwise.

which “interests are treated like contagious trends and they do not reside in each individual” (Olsson, 2010, p. 71). Figure 1.1 and 1.2 show an example of a contagious interest in the shape of leaves and lips between leaf, child and adult. An idea from a forest caught a child’s fascination with symbolic representation. She recognised the leaves as having the same shape as human lips. Their colour was an additional connector.



Figure 1.1: Contagious pink/orange leaf lips. The shape and colour of leaves in a forest give Mbali an idea.



Figure 1.2: We share the contagion and it extends beyond the day in the forest.

Due to the enormous power adults have in the lives of children on a daily basis, incidental learning is often a casualty of the systems, routines, plans and programmes we put in place to create order and manage large groups of children in limited spaces. Emerging from an interest in arts-based learning and the implications of a posthumanist position, this study draws on two pedagogical approaches (Reggio Emilia and Philosophy for Children) and uses them to enter a local South African early learning context and to explore how the material environment performs in the learning space. The two pedagogies function in the research as two partial and connected apparatuses that help to track the unfolding patterns of learning as they affect those involved. 'Those' is a pronoun that needs to be read as not only referring to human participants. The learning will affect the people (children, adults, families) as well as the things and spaces that make up this intra-active "entangled phenomenon" (Barad, 2007, p. 396).

A number of writers have, in the last decade, framed the South African education debate as a response to a 'crisis' (Fleisch, 2008; Bloch, 2009; Taylor, 2011). The transition from an unequal racially tiered society to one where the State legislates 'equal' provision for all citizens has revealed the complexity of the social realities that are experienced by the majority of South Africans and the immensity of the challenge of inequality. Unfortunately, the response to this crisis by the state, advised by selected education experts, is to provide more of the same, and more of the same earlier on. The title of the book, *Too much, too soon* (House, 2011), while focusing on the British context, expresses the position of many early childhood educators on the new proposals for a formal curriculum for the birth to four age group (Department of Basic Education, 2015). The very good reasons for 'non-formal' and play-based education need to be spelled out much more clearly than they are in this document as "children's play encompasses and consolidates everything they know and many more things they do not yet know" (Stanley, 2012, p. 9). It is both a case of too much too soon and too

little too late. Too much formal literacy and too little real world engagement and playful meaning-making (using oral, embodied, material and other languages).

This research uses the approaches of philosophical enquiry as seen in the Philosophy with Children approach and the *progettazione* of the Reggio approach to enact a responsiveness to what children, adults, materials and spaces bring to the learning experience and an attention to the workings of creativity, chance, imagination and perplexity. So rather than a Reggio Emilia-inspired intervention, or the implementation of Philosophy with Children, it is an engagement with what is “always already” there: a witnessing of the resourcefulness, intelligence and creativity of a group of South African children and their non-human others. My main research question, formulated at the start of my research journey, and inspired by a Reggio Emilia heuristic, was framed as follows:

What happens to learning when the environment works as a third teacher in a Johannesburg preschool?

As I worked with the data emerging from the study, the relationship between two seemingly disconnected stories shifted my thinking. My theoretical framework is one that challenges me to consider both the microcosms and macrocosms of the worlds I am part of. This account is partly about how these two parallel narratives were already entangled in the emergent data.

(Un) Ethical encounters

The lively and friendly woman I could see across the room was familiar to me, but I couldn't place her. I felt that I had known her well in some other forgotten context. I was attending the seventieth birthday of a friend, Nora, whom I had met about fifteen years earlier through a political party branch (the governing party that had won victory in the first democratic elections in

South Africa). We had sung together in a branch choir (singing mainly struggle songs) which had then become a community choir with an expanded repertoire. Now Nora had retired from her job in a women's empowerment organization and was battling with an eye problem that had left her partially sighted. She was a 'salt of the earth' type and had lots of close women friends. Our mutual loyalty to the political party had waned and complexified since factionalism and corrupt leadership had dominated its workings, but we still met in other forums. I greeted the familiar-looking party guest and we chatted in a larger group for a while, before formally introducing ourselves. She generously reminded me who she was. Her name was Delia and she had a long association with the local community-based crèche (Siyakhula Daycare Centre) on whose management committee I served. She had agreed to take on the management of the crèche, at a time of crisis in 2016. The whole staff had resigned over a dispute related to a fraudulent bank payment they had made to themselves. They had cleverly tricked one of the signatories into signing the withdrawal slip. Delia felt she could put things right and keep the school going. To the committee's surprise and disappointment, she herself left after a short period, under a cloud of accusation and suspicion of financial misconduct. It was a sobering moment for me then at the party- to meet a 'villain' from the story I had played a part in, but in such an intimate and convivial context. She assured me that she knew she had been wrong and that was why she had left so abruptly. She had just been under immense pressure due to her daughter's needs that the temptation to 'borrow' the crèche's money without asking had just been too great.

How to steal a crèche³

It is not possible to tell one story of (mis)conduct without it leading to the telling of a string of similar incidents. My involvement with this particular daycare centre began in 2012 when one of the founders of the centre, Thandi, asked me to assist with a mediation process and dismissal of the centre's principal who had effectively 'hijacked' the crèche. The principal had opened a parallel bank account in the same name as the crèche's account and instructed parents to deposit their fees there instead of into the legitimate account. She systematically moved equipment and toys into another site in the suburb in order to establish her own school from which she could directly benefit. Once a new team of staff were in place at Siyakhula, my role there was primarily to contribute to the educational programme being offered and continue with routine committee responsibilities (like assisting with parent meetings, annual general meetings, nutrition programme applications, banking etc.). Teachers were generally under qualified, as the salaries on offer were low. Wages were paid almost entirely from the incoming fees paid by parents and the centre was committed to keeping fees low enough to be affordable to parents in this working-class suburb. Teachers with even a minimal qualification would be able to find better jobs in wealthier suburbs or in formal Grade R teaching jobs in the state schooling system. Zinhle was one such example. She had joined Siyakhula as an unqualified teacher in 1999 and had gradually managed to complete her Level 4 practitioner qualification while employed there. She took a job at a nearby primary school in 2013 where she still teaches and continues to work at improving her qualifications. A degree in education is the legal requirement for teachers employed in state schools, but in order to implement the provision of Grade R to all children, the state has employed under-qualified teachers and provided funding for them to study part-time

³ This sub-heading makes reference to Crispian Olver's exposé of corruption in the Nelson Mandela Bay metro. His book is entitled: *How to steal a city: The battle for Nelson Mandela Bay* (Olver, 2017).

though distance learning while on the job. As the management of SiyaKhula had assisted her with fees for her initial training, she remains grateful and in return has taken a position on the crèche's management committee.

Even Zinhle features in the story of financial irregularity. She was arrested on one occasion, together with the centre's cook in relation to their involvement in a fraudulent money lending scheme. They were both released after an overnight stay in the police station cells. She was also the person tricked into signing a withdrawal slip for an unauthorized salary payment in 2016. The narratives of irregularity, mismanagement and dishonesty were initially not part of the research narrative. They continued along a parallel path, seemingly unrelated to the learning programme and the experience of the children.

ECD in South Africa now

The complex and changing yet rigidly age-defined field of early childhood education (ECE) is the broad terrain of this account. Current South African policy stipulates that the Grade R or 'reception' year is the first year of compulsory schooling. Introduced through the White paper 5 on Early Childhood Development in 2001, access for children to this single year of preschool has increased greatly although full access has not yet been achieved (2012 statistics put the figure at 78% as compared with 39% in 2002) (Richter, L., Biersteker, L., Burns, J., Desmond, C., Feza, N., Harrison, D., Martins, P., Saloojee, H., & Slemming, W., 2012). It is part of the first phase of formal education: 'Foundation Phase' which includes Grades R to three (5 to 8 year olds) but remains outside the formal Foundation Phase provisioning. In South Africa, like in many other countries in the world, new policies and curricula are being developed by the government for this Reception year and the earlier (Birth to four) Pre-Grade R years. The preparation of educators is undergoing review and receiving increased attention and budget allocations. However, these developments take place in the context of lively contestation

both locally and globally over conflicting theoretical and political positions. Research, policy and practice are motivated by a continuum of positions that can be seen as ranging from the most well established, dominant approaches, through the less 'mainstream' to the more exploratory and experimental. These contestations are central to the arguments in this thesis.

In the local ECE environment, as in South Africa more generally, patterns of inequality, lagging infrastructure provision, and limited management capacity are cited as barriers to improving the lives of children, and increasing their access to the benefits of our constitutional dispensation (South African Early Childhood Review, 2017)⁴. Only one third of children under five access formal childcare and education outside of the home (Harrison, 2012, p.1). Concerns relating to these 'basic' requirements and the extension of formal programming to the excluded majority have tended to be centralised and mainly focused on the challenge of monitoring standards of sites. Harrison (2012), notes that while most centres do plan and implement daily programmes including play, stories and rhymes, in a third of all cases, the effectiveness of the programmes in supporting or taking account of pre-literacy and pre-numeracy skills are limited (p. 17). Predominant concerns among non-government and community-based organisations in South Africa, as well as for ECD social workers employed by provincial governments has been the meeting of compliance regulations for registration of early childhood education centres with Department of Social Development, rather than an exploration of pedagogical practice. The details and processes related to registration are complex and confusing, even for the officials managing the process. Registration with these organs of state opens access to a valuable range of services and subsidies, for example, the Department of Social development (DSD) per capita subsidy; the Department of Education (DoE) Grade R teacher subsidy, and the

⁴ Available at: www.ilifalabantwana.co.za/wp-content/uploads/2017/10/SA-ECR_2017_WEB-new.pdf

Department of Health (DoH) nutrition programme. The Bhalisa Inkulisa Toolkit⁵ details all requirements and administrative processes associated 'partial care registration' for ECD centres. There is a considerable backlog in the allocation of subsidies (twenty-five percent of registered facilities were receiving no subsidy in 2012 when the Diagnostic Review was done (Harrison, 2012, p. 2).

Recent research (Bridge, 2016) carried out by the Bridge ECD Consortium⁶ explores a more flexible and self-managed approach to compliance in which achievable goals are intended to be set in terms of existing conditions on the ground. Still in a pilot phase, the ECD Quality Toolkit⁷ is framed around the concept of 'quality' and takes an explicit child-centred approach which defines aspects of quality provision for purposes of increasing and improving children's access to care and education. It provides for a reflective interview with practitioners and principals of ECD sites, in which interviewees are asked to reflect on their own understandings of quality in terms of four designated areas: teaching and learning; ECD environments; and ECD policy. It is an attempt to include practitioners' views about quality in early learning into processes of 'benchmarking of minimum standards' but can be seen to be an unresolved tussle between a process of contextualised self-assessment and a centralised, standardised set of optimum pre-set standards. The methodology is framed as both an information-gathering exercise and potentially a transformative intervention impacting on practice. With regard to the information gathering, there appears to be an awareness of the limitation of interviews in that, according

⁵ Also available on www.lifalabantwana.co.za

⁶ Bridge started as a registered non-profit organization in 2009. Its membership is made up of non-government organisations, government as well as business. It aims to contribute, through networking, research and collaboration, to government efforts to implement policy in various areas of education. It has nine areas of focus, or 'communities of practice', of which early childhood development is one. www.bridge.org.za

⁷ www.bridge.org.za/.../ecd-quality-toolkit-pilot-project-findings-presentation/

to mediators of the pilot reflective toolkit, in many cases respondents voiced opinions that were contradicted by their incidentally observed practice and often responses seemed to be “tailored to fit” what the interviewer “might want to hear” (Bridge, 2016, p. 25).

The project and tool is still in progress and will be accompanied by additional material and on-going monitoring and support. It is unfortunate that the process is centred around standards rather than relationships. The intervention appears to be a lost opportunity that might rather instantiate a more localised process that could build municipal capacity and relationships on the ground. The research presented here considers some events and contextual realities that offer ways of considering these potential alternatives.

Unwieldy and bureaucratic systems of centre registration and monitoring have led policy advisors to move to promoting a more flexible and mixed form of provisioning that will include home-visits and play-groups as well as centre-based programming for under-fives (Harrison, 2012; Atmore, van Niekerk & Ashley-Cooper, 2012). These interventions would focus on child-adult as well as child-child interactions (Harrison, 2012, p.18). A multi-sectoral National Integrated Plan for Early Childhood Development: 2005-2010 (UNICEF, 2005) was developed by the government in partnership with UNICEF partners and it became policy in 2015 (Republic of South Africa, 2015). The policy includes provision for programming through a range of modes and includes the deployment of fieldworkers trained as playgroup mentors (Atmore, van Niekerk & Ashley-Cooper, 2012, p. 133). These proposals have the potential to shift focus from technical registration and compliance issues to more education-related pedagogical ones. The consideration of public spaces like community halls and parks also invite different approaches to thinking about provisioning. However, moves to decentralisation and support for less standardised provision promises to be a

slow process. This research is a contribution to this contested field of endeavour.

Dahlberg and Moss (2005, p. 133) point out that the same priority focus on technical issues and concern for centralised monitoring can be seen in the early childhood system in the United Kingdom, suggesting that this focus is more about choices made by political leadership than a simple issue of lack of resources, inadequate infrastructure and poverty. In their insightful comparison of ECE provision in Sweden and the United Kingdom, they note that in the Swedish system, the devolution of control to local municipalities with minimal regulation and assessment (the curriculum guidelines are only sixteen pages long), a free 'entitlement' to ECE services (paid for by taxes), and constantly improving status and equalising of working conditions for early childhood educators create the climate for the emergence of diverse and locally relevant curriculum offerings and the negotiation of pragmatic solutions to organisational challenges by community networks. In contrast, the UK system is centrally controlled and heavily regulated by national government. ECE is seen as a paid-for service or commodity, with compensatory programmes for designated groups. There is a hierarchical structure dividing early childhood workers from preschool teachers. There appear to be some parallels between the UK structure and the South African one, the most noticeable being the limited decision-making power given to childcare institutions themselves and their most direct form of government (municipalities). In relation to the introduction of a Birth to four curriculum, Harrison (2012) warns that "a single *compulsory* curriculum could stifle the creativity and diversity of programmes for early childhood development" and draws attention to the importance of flexibility combined with better teacher/practitioner education (Harrison, 2012, p. 16). The recently introduced curriculum guideline for the Birth to Four age group is discussed briefly in chapter two.

While these are important concerns and opportunities for increased access and redress in terms of inherited patterns of inequality and exclusion, they are of interest in this study only as contributing parts of an intra-acting mutually affecting relational terrain in which the intelligence and rights of children matter. The centralised and top-down management of services, while being important channels of funding and support for providers, are also examples of efforts to provide for, protect and prepare children as passive receivers of services and as not-yet-capable passengers rather than active and engaged co-creators of their worlds. The assumption underlying this study was that children are ready and willing participants in the creating of their world and their learning. A commitment to a pedagogical and research intervention of 'being-and-becoming-with' anticipated the emergence of rich learning and the possibility of different ways of knowing.

The research narrative plays out in a small community-based daycare centre in inner-city Johannesburg in which I join a Grade R class as co-teacher, co-researcher and resident (troublesome) artist⁸.

A neighbourhood crèche

The inner-city daycare centre that is my research site is, unlike the majority of sole trader-run ECD sites in the area, a community-based crèche. The centre is managed by a small board of trustees that includes the founder of the centre as well as one of the former teachers, Zinhle, who currently teaches Grade R in a State-run primary school. The centre is housed in a municipally owned pre-fabricated structure that shares common space with a recreation centre and an adult skills centre. Its neighbours are a public park and a clinic. The skills centre has been empty and idle for some years but is

⁸ One of the most noteworthy divergences I made from 'normalcy' in the running of the preschool was my refusal to use threats or punishment in my engagements with children. A long yellow piece of broken Lego was often used as a warning when sound levels rose above a certain level or an adult felt they had 'lost control'. The issue of violence and punishment in teaching and learning is directly related to the broader and central issue of the 'colonisation' of childhood taken up elsewhere in this document.

used by community development workers to store their cleaning equipment. The recreation centre is an important resource for the local community: the hall is hired out for church gatherings, political meetings and wedding parties. This is also where the centre has often held its end-of-year Grade R graduation ceremony. A gym is run in one section of the centre and a boxing team uses the space between the recreation centre and the crèche for exercising.

This inner-city neighbourhood's population, up until 1994, was ninety percent white due to the apartheid law known as the Group Areas Act which allowed only those classified as 'white' to own or rent property in the area. The movement of 'black'⁹ people in the area would have been controlled through a number of other laws relating to their movement and employment. Now, twenty years later, the area's residents are ninety percent black and the suburb is home to an increasingly diverse community of people from different parts of South Africa as well as from numerous African and other countries. This is an example of post-Apartheid urban South Africa where one could say that white space has been decolonised.¹⁰

The founders of the daycare centre were two health care professionals, Thuli, a speech and hearing therapist and educational psychologist, and Rose, a state registered nurse and the mother of a child with a 'disability'. Thuli had been working as a speech and hearing therapist at the Johannesburg General Hospital (now called the Charlotte Maxeke Hospital) and had seen children with disabilities whose parents could not find daycare facilities that were prepared to take their children. She formed a not-for-profit organisation and established the Siyakhula Daycare Centre (discussed above) which hired

⁹ In South Africa the term 'black' has a history as a category of classification under Apartheid, in which black Africans were separated from 'whites', mixed-race 'coloureds', and 'Indians'. Its current usage, with a capital 'B' is often a politically charged term and owes much of its power to the Black Consciousness Movement. It works as a boundary-making concept alongside a theorization of 'whiteness' (Mangcu, 2016).

¹⁰ On the whole, land use and demographics generally show unchanged Apartheid spatial patterns (South African Government, 2011, p. 260)

staff and opened in 1994. She appealed to me to join the committee when the school faced a financial and management crisis caused by the principal having 'hijacked' the crèche. In the period since I joined the daycare centre as a committee member, management has changed three times, each time as a result of an issue of alleged theft or corruption.

My decision to undertake research in the centre was partly motivated by a sense of duty towards my fellow committee members, as I knew the research project would enable me to combine my academic work with my "community engagement"¹¹ and I would be able to spend time in the site and be of some support to the Thuli, the staff and the children.

The Grade R teacher, Alina, who was my key research partner, has siSwati and Mozambican heritage. She completed her high school education in Soweto¹² achieving a matric pass but did not obtain enough points for university attendance. She worked at two other preschools as an assistant teacher prior to coming to this one as the Grade R teacher. The Grade R class was made up of twenty-nine children, although only twenty-five graduated from Grade R at the end of the year. Two children were advised to repeat the year and two left the centre for unknown reasons. At least five of the twenty-five children received 'top ten' awards in grade one. Measuring grade one performance was not an intention of my work and no effort was made to formally follow up on individual children. Parents and teachers that I met by chance in the year following my research gave this information unsolicited. What it confirmed was my belief in the intelligence and resourcefulness of children allowed to learn.

¹¹ The Council for Higher Education envisages the work of South African universities and academics as having three components: Research, teaching and community engagement http://www.che.ac.za/sites/default/files/publications/Kagisano_No_6_January2010.pdf

¹² Soweto (the name being an abbreviation of South Western Township), is the oldest township of Johannesburg, established in 1930 under the Apartheid Urban Areas Act of 1923 designed to separate 'black' people from 'white'. See www.sahistory.org.za

Two narratives emerged from an initial pilot study in the preschool. They invited me down some promising new paths that wound around in perplexing ways but eventually crossed and opened up further new directions for investigation. The first of these narratives was the lively agency of the children together with and in-between their surroundings (places, spaces, material and things) that sparked their thinking and their learning. The other was the complex and challenging issue of the structure, systems and ethics of the organisation.

What's happening in Grade R?

The decision by the South African government in 2001 to focus on implementation of a compulsory school-based Grade R year to the exclusion of the birth to four age group was primarily a budgetary imperative (Biersteker, 2012, p. 24-26). Although the easiest and most cost-effective way to increase access for the majority, its positioning in public schools was controversial. It was recognised by early childhood education experts as a risk in terms of a creeping formalisation of the preschool pedagogies and as “weakening the community-based sector” (Biersteker, 2012, p. 26). In terms of numbers it has made significant progress. In terms of performance expectations, it has not. Most reports of the current situation on early childhood education and care consider the majority of programmes as below standard (Martins, 2012, p. 4; Biersteker, Dawes, Hendriks, & Tredoux, 2010; Biersteker, 2012, p. 57). The issue of epistemological access goes beyond ‘bums on seats’. Performance on a range of internationally coordinated tests present an image of the average SA child that is slow and far behind their global counterparts. By Grade four, performance of South African children is evaluated as having the lowest score out of sixty countries (Howie, Combrinck, Roux, Tshele, Mokoena, & McLeod Palane, 2017). Apart from the questions that arise about the validity of these tests for local conditions

and the problems of multi- and translanguaging¹³ issues at play, what is most alarming is the response of policy makers to these results. The remedy for low performance in the early grades in reading and numeracy is predominantly envisaged as an increased input in formal literacy and numeracy instruction (see, e.g., Spaul & Hoadley, 2017). Despite decades of early education research that shows the importance of open-ended exploratory and experimental play in the negotiation of meaning and the use of symbolic systems of representation as foundational, increased attention is paid to the later phases of early learning. Collaborative and arts-based pedagogies like those enacted by Reggio Emilia, Vivian Gussin Paley, Beth Olshansky and locally the multiliteracies work of Pippa Stein have been strongly endorsed by academic institutions like Harvard University's Project Zero and theorists like Jerome Bruner, Howard Gardner, Gunther Kress, Hilary Janks. They are no longer marginal or alternative¹⁴. Adding to existing evidence of the value of arts and multi-modal learning, this project makes the claim that learning environments are active agents in the learning of children.

To tell the story of this place and the time I spent there, including the intense month-long period of data creation, as one that is only about clever children and happy endings would be a distortion. The troubled organisational life of the school continued in parallel with the lives and the learning of the children. Looking back, I see how the compartmentalisation of these different parts of life and school worked to perpetuate the exclusion and

¹³ Translanguaging is a theoretical position in language studies that disrupts notions of discrete, fixed and bounded languages used independently. Translanguaging acknowledges the porosity of language and the emergent and complex subjectivities produced through access to multiple, dynamic and mutually affecting language resources (see for example, Makalela, 2014).

¹⁴ Apart from the dedicated arts NGOs mentioned in my introduction, The Project for the Study of Alternative Education (PRAESA) is an example of an NGO that does important work in promoting reading and multimodal and philosophical storyplay in all languages, inspired by Sara Stanley.

dismissal of the children as fellow citizens and co-producers of our shared learning environment.

Politics in the preschool

The first thread in my research story is that of incidental and intra-active learning, the second is that of values and ethics. Dahlberg & Moss (2005, p. 65-66) express a disillusionment with the “universalist ethics” that has come to us from Kant and the European enlightenment. In this ethical system, moral principles are based on rationality and an objective set of impartial laws that separate right from wrong.

Modernist ethics follow the same trend, with the autonomous, independent, moral citizen adhering to a set of predetermined rules and principles based on rationality and objectivity. Society is seen as a contract with rights and responsibilities balanced as if in a calculation (Dahlberg & Moss, p. 67). Postmodern ethics, on the other hand, depends on a practice of ethical judgement and choice. Each new relational situation requires a sensibility to the specifics of the ethical dilemma or decision being faced. Feminist inspired notions of an “ethics of care” (Tronto, 1987; 1993; Sevenhuijsen, 1998) offer a relational and responsive approach to both ethics and politics. The philosopher, Emmanuel Levinas, recognises in Cartesian Western thinking (and the ‘colonising’ moves that they inspire) an oppressive violence in the “grasping” impulse to know and master the unknown (Levinas, cited in Dahlberg & Moss, 2005, p. 77). The knower ‘grasps’ the Other by means of concepts, categories and classification denying the possibility for the Other to be unknown. By grasping the Other, or the stranger, the rational knower makes this stranger familiar and the Other into the same¹⁵.

¹⁵ This reflective process of mirroring sameness is discussed later in considering an alternative ‘diffractive’ engagement with reality.

Poststructuralist thinkers like Butler, Foucault and Derrida all critique the violence of modernist thinking that puts the mechanisms of order and normality at the service of the autonomous, independent, rational knower. In opposition, Levinas offers the idea of an “ethics of an encounter “ (Dahlberg, Moss & Pence, 2013, pp. 76-81; Dahlberg & Moss, 2005, p. 78-81) through which one shows respect for the infinite difference and possibility of the Other. The goal is heteronymy rather than autonomy: a relational sense of connection and interdependence (Dahlberg & Moss, 2005, p. 80). The ethical approach I explore in this thesis is a posthuman one: it is relational and responsive, but takes into account the broader, no less connected realities of the human and non-human, the living and the non-living (Barad, 2007, p.392; Bennett, 2010). The notion of an encounter is put to work, but the Other requiring respect and welcoming includes the more-than-human.

That the ‘crisis’ in education is predominantly interpreted as a curriculum and public service efficacy issue (National Development Plan, 2012, p. 270; Taylor, 2012, pp. 23-30) points to a long-established trend identified by Davis in which education has historically been “oriented by matters of practical action, not ethical action” (Davis, 2004, p. 176). Biesta argues that the dominant trend in “evidence-based” educational research does not question the premises upon which much of this research is carried out, namely the purposes and desired outcomes of education and that it ignores the importance of values and contextual realities in education (Biesta, 2007). The analysis made by government research bodies identify performance issues as the reason for the ‘crisis’ and not political or moral ones. Indications are that all the proposed interventions for the improvement of early childhood education provision are based on the premise of ‘developmentality’ and there is insufficient attention paid to contextual realities (Dixon, 2013; Ebrahim, 2014). A notable effect of the developmentalist / scientific notion of early childhood development is that it positions teachers and practitioners as experts in the “science” of childhood and effectively excludes parents and

children themselves as experts (Dahlberg & Moss, 2005, pp.164-168) which has profound implications for their being and becoming citizens.

Dahlberg, Moss and Pence (1999; 2007; 2013), Dahlberg and Moss (2005), Walkerdine, (2003) and Burman (2000) explore the implications of an ethical and political critique of the current discourses in early childhood education and developmental psychology. This critique suggests that the focus of ECE provision and teacher education needs to be framed by a better listening and reflective awareness of local conditions and the crafting of locally appropriate responses that remain open to the unexpected other (human and non-human) and in particular, the young other. Central to the critique of the developmental discourse is a problematizing of the already decided 'appropriate' ways to engage with children who are placed somehow outside of the ethical norms of responsibility and accountability associated with 'adult' or 'human'. There is little room in such a discourse for a responsive ethics and an attitude of listening. As Gunilla Dahlberg puts it:

To be able to hear the ungraspable call of the child, and to have the capacity to relate to absolute alterity, one needs to interrupt totalizing practices which give the teacher possibilities to possess and comprehend the child. We have to open up for the unexpected and affirm what is to come. (Dahlberg, 2003, p. 273).

The 'child-centred' narrative of our official curricula and related research initiatives exclude issues of co-production and decision-making from the lives and learning of children. As adults we can feel impunity with regard to our ethical choices around children. As adults we are allowed to make decisions *for* children and have grown complacent about our accountability to the children in our company.

Key concerns facing our education system should not be reduced to issues of performance on international literacy and numeracy measurements. If one considers the disturbing reports about corporal punishment (Murriss, 2013),

numbers of children not attending school at all, and other forms of societal violence like poverty, hunger (Masondo, 2013) and the misuse of public funds and resources a very different set of 'measures' seem more appropriate. These measures would relate more to the ethical appropriateness of our responses and the flexibility of our systems than to individual children's rating on tests. This research proposes a more appropriate response to children in this context that affirms not only their cognitive and creative ability but more importantly their relational and ethical sensibility and their singularity within particular communities and categories. It proposes the inclusion of children into the fold of responsible co-habitants of our shared worlds.

The South African Bill of Rights in the Constitution outlines the rights of the child (Republic of South Africa, 1996) and has been further developed into an act (Republic of South Africa, 2005). It is important to note that this Bill of Rights also includes socio-economic rights. These rights exist in the Derridean paradigm of democracy and its related concept of justice, where it is seen as something still to come (Barad, 2010, p.261; Dahlberg, Moss & Pence, 2013, p. 43). The Children's Act in itself will not guarantee that children's rights are fulfilled. We increasingly rely on an active citizenry to ensure that the state is taken to task if it obstructs the expression of these rights by certain sections of society¹⁶. While central government needs to be held accountable, what is more relevant to my narrative is the decentralised mobilisation of local forms of power and decision-making.

The action of civil society in response to issues on the ground is an example of the workings of what Deleuze and Guattari (1987) call "minor politics". "Minor politics" are the politics of the everyday and the local. Democracies

¹⁶ Two important court cases were won in 2002 and 2012 respectively when the Treatment Action campaign (TAC) and Section 27 took government departments to court for not providing adequate services to the South African population. The first case resulted in the provision of anti-retrovirals to people diagnosed with the HIV virus and the second with the Limpopo provinces education department having to supply overdue text books to schools in that province (www.section27.org.za and The Star, 5 July, 2012)

need both the major (the large scale, programmatic kind of politics) and the minor. Minor politics involve “the ways in which creativity arises out of the situation of human beings engaged in particular relations of force and meaning, and what is made of the possibilities of that location” (Rose, 1999, p. 280).

Positioning this research

This research is an effort to contribute to post-developmental, and “post-age” (Haynes & Murriss, 2017) discourse and the lobby of the community of early childhood educators who share concerns about the over-regulation, standardization and grading of performance of children of this age group. A contributor to the epistemological injustice of these “ranking” practices (Dixon, 2011, p. 20) is the refusal on the part of the state to acknowledge and respond to deeper contextual issues. In my post-anthropocentric research design, the pedagogical events shared by children, teacher, environments and myself as artist/teacher/researcher are seen as parallel and equal parts of an intra-activity of learning. I draw on and extend discourses and practices that counter the dominant paradigm of the developmental psychology and medicalised models. These ‘alternative’ theories and practices are shared by a range of different organisations and groupings in South Africa. The theory/practices I refer to include the Reggio Emilia approach and the Philosophy with Children pedagogy. Reggio Emilia and Philosophy with Children inform my research design and provoked my initial research question.

Research question:

What happens to learning when the environment works as a third teacher in a Johannesburg preschool?

The intra-active pedagogies always already at play among children and their surroundings perform as the ‘teacher. The ‘environment as the third teacher’

is a notion shared and put to work by proponents of the Reggio Emilia municipal preschool system (in the city of the same name). The Reggio Emilia municipal school system provides a model of reflexive (and potentially diffractive) teaching and learning and gives credit to the environment as the 'third' teacher positioned alongside any dual learning partnerships between children, teachers, and parents. As a matter of principle¹⁷, each group of children are allocated two teachers who work in collaboration, and the environment is a 'third' (Rinaldi, 2006; Lenz Taguchi, 2010, p. 11; Malaguzzi, 2016, p.223). The environment is also seen as a third teacher in that the first is the family at home and the second, the teachers (Strong-Wilson & Ellis, 2007; Narey, 2009, p. 169). The democratic involvement of parents and community are an important aspect of the Reggio approach. A further evocation of the 'third' teacher is that the other children are the child's first teacher, the adults in her or his life are the second, and the environment the third¹⁸. In all of these permutations, the third teacher is 'third' in the particular sense that this teacher is outside of any (human)linguistic, dialogic, didactic interchange.

Loris Malaguzzi, the inspirational co-founder of the Reggio Emilia system of early childhood education (discussed in further detail in Chapter four), introduced an innovative modification to the system in the early 1970s. In the re-envisaged programme, each municipally-run preschool would have a practitioner with an arts background, (*an atelierista*) to work alongside the teachers. These artist/educators were invited to bring into the toddler centres and preschools, a special focus on materiality and its place in learning and getting to know the world. An open-ended exploratory attitude and an awareness of contemporary art was important – not an 'art for

¹⁷ Malaguzzi sees the pairing of teachers as a safeguard against the "inhuman" and "individualistic" tendencies that can take hold when adults are alone with thirty children (Malaguzzi, 2016, p. 223).

¹⁸ www.rye youtube video rye Presbyterian nursery school robot project.

children' or an 'art for school', but an artistic and philosophical attitude. My main research question is unpacked through a further three sub-questions:

What is the role of the artist/educator when the environment works as a third teacher?

How is the contribution to learning that is made by the material environment noticed, acknowledged and reflected on in this site? By children? By teachers? By the researcher?

How does the establishment of a community of philosophical enquiry enhance listening, documentation and reflection in an intra-active pedagogy?

This research, while attempting to learn a post-anthropocentric theory and practice that would give the nonhuman a place in pedagogy, recognises the historical exclusion of children from full membership of the family of the 'human'. This move means taking them seriously as equal members of society and as contributors to knowledge production and capable of ethical responses and choices. I take up the challenge offered by the municipality of Reggio Emilia, and the Mosaic approach (Clark & Moss, 2001) to explore ways to include children in the decisions that affect their lives and learning and try to do this without ignoring or excluding the contributions of their nonhuman and non-living entanglements.

Structure of the thesis

Chapter two turns the concept 'child' around a few times to re-consider what it brings with it from the past and how we can do something different with it. Disrupting the binary of nature and culture is central in the work of the thesis. Taking into account some significant histories of early childhood education, Fröbel and Montessori are considered in relation to their notions of child and attitudes towards the role of material environments in learning. Chapter three is where my theoretical framework is unpacked and it offers a mapping of the new materialist ontologies proposed by a number of threads

in current philosophical and educational work. In chapter four I discuss the Reggio Emilia system and related pedagogical practices and principles and its relevance to my study and to South African early childhood studies more generally. The Philosophy with Children pedagogy and in particular the community of philosophical enquiry (CoE) is a both a pedagogical and a research tool that I use in conjunction with the Reggio-inspired tools, namely *progettazione* and documentation (see chapter five). My methodology which is described in chapter six is tightly bound to the theories explored in chapter three, as well as to the pedagogies mentioned above. The posthumanist “intra-active pedagogy” proposed initially by Lenz Taguchi (2010, p. 10) in her posthumanist reading of the Reggio practice and building on the work of Karen Barad and others, is a tool I put to work in my enactment of the data creation phase of the project to explore the agency of the material environment together with the children in their and our learning (and research). This is done in the ‘data’ chapters, seven, eight and nine. I also reconsider the agency of time in the pedagogical events, paying attention to the on-going effects of historical events and long-established patterns of existence. The foregrounding of the real-time encounters between children and their surroundings as a central aspect of early learning has important implications for South African pre-schools and nursery schools as are the relationships of responsibility that play out between and among the people, spaces, materials, other creatures, and things. These two key threads run through this account and offer new options and choices for our theory and practice of early childhood education.

Not intending to contribute to discourses defining optimum quality provision and programming in child-centred programmes, I do not focus on educators’ interventions as such but more on the learning that emerges. This is an effort to follow and make visible the learning enacted by a group of Grade R children because and in spite of existing conditions. My focus is not on how to ‘do Reggio’ in an inner city preschool, but rather what following

Reggio Emilia and an enquiry-based thinking and ethics of encounter can enable me to do and see, hear and learn.

Through direct engagement with our surroundings we get to know and make changes in the world. This was true for me as well as the children. How does learning happen when we take this into account? And how can children be welcomed into the company of city/earth dwellers, so that they can contribute to the on-going negotiation of our shared futures? The link that P4C makes between thinking and ethics offered a way to work through this enquiry.

2. Competing paradigms in early childhood education

In South Africa, the provision of education and care for the majority of the birth to four age group, has, due to the history of racially determined budget allocations, been left to non-governmental organisations and the private sector. Private and community-based sites, once compliant with regulations and officially registered with the Department of Social Development, may apply for limited support (Martin, 2012). A similar situation exists in the taxi industry which offers a vital service in the space created by the apartheid government whose public transport provision for working people was minimal. The improvement of early childhood education is increasingly becoming a concern of the state due to the exceedingly poor performance of children in early years of formal schooling (Ebrahim, 2007, 2012). The National Planning Commission's 2012 report recommends two years of early childhood education (prior to Grade 1). A birth to four curriculum has been developed. These may be seen as positive developments in themselves taking into account Ebrahim's concern that the quality of programmes and educator training is currently uneven and largely unchecked (Ebrahim, 2006, pp. 36-43) thus perpetuating inequalities. It may be argued that attention from the state promises at least a focused budgetary allocation and potentially a more equitable provision. This new interest in the sector is also an international trend (Dahlberg & Moss, 2005; House, 2011).

Dominant developmentalist paradigm in early childhood education

A closer look at the nature of the interest in the sector suggests that there is room for caution as what is also becoming an increasingly dominant international trend is a developmentalist discourse that imposes a 'one size fits all' notion of quality in early childhood education. Dahlberg and Moss (2005) describe how increasing numbers of nation states and international

development agencies are paying attention to the early childhood sector in the interests of improving social investment and ameliorating social problems (Dahlberg & Moss, 2005, pp. 4-6). They point out, however, that, on the whole, the nature of the interventions proposed are largely technical, focusing on programming towards specified decontextualized developmental outcomes (Dahlberg & Moss, 2005, p. 9). This largely English-speaking modernist western tradition which dominates policy making for early childhood education (ECE) has used observed patterns of development across a population and turned them into prescriptive standards for individual children (Burman, 2000). A similar argument is made by Leach (2011) in relation to the United Kingdom.

Notions of child and childhood

The Reggio approach and Philosophy with Children (P4C), discussed in detail in chapters four and five respectively, have in common a commitment to listening as a pedagogical principle (Haynes, 2002; Rinaldi, 2012). A “pedagogy of listening” (Rinaldi, 2012, p. 242) is enacted by the educators of Reggio Emilia through careful documentations of children’s engagements with spaces, materials and ideas. Instead of a two-way, top-down communication of pre-planned content, such a pedagogy invites the unravelling or emerging of reality in which both space and time are non-linear “intra-active”¹⁹ players (Barad, 2007, p.389). Not explicitly framed by posthumanist theory, the two approaches are flexible and responsive and have recently been used in ways that decolonise and critique the dominant developmental humanist paradigm. A posthumanist take on this pedagogy of listening explicitly decentres the subject and object of teaching and learning, doing justice to the complexity of the “entanglements” of the teaching and learning phenomenon. Murriss (2016) has made a useful

¹⁹ Explored in more detail in chapter three, the concept “intra-action” proposed by Barad (2007), is central to her posthumanist “agential realism”. Reality is not made up of pre-existing entities that interact, but rather, phenomena in the world are specific relationships between things that become ‘themselves’ temporarily and ‘in relation’.

posthumanist diffractive reading of these pedagogies that makes use of Deleuze's notion of "Body without organs" (Deleuze & Guattari, 1987, p. 149-166) to describe a non-Cartesian subjectivity that is not only embodied (dis/embodied)²⁰, but also not bounded by singularity or anthropocentrism. The Reggio Emilia and P4C approaches offer a critique of the widely accepted models of development that are used as systems of measurement and normalization in schooling and child care (Kennedy, 1998; Dahlberg & Moss, 2005; Matthews, 2006; Burman, 2008; Jones, 2009; Haynes & Murriss, 2013a; Dahlberg, Moss & Pence, 2013). Developmentalism separates different aspects of development which are considered independently and unrelated: physical, moral, emotional, social development are tracked in different ways using tools from different fields of study (physical education; psychology; ethics). Intellectual/mental development is attached to the physical and the sensory as Piaget outlined in his theory of cognitive development (Piaget, 1969). The developmental model has as its focus a hypothetical, 'mythical' individual which denies difference and constructs a powerful narrative of expertise about "developmentally appropriate practice" and "scientific truth" (Hughes & MacNaughton, 2000).

In the modernist developmental model of the 'self', the cognitive/rational is over-stressed to the exclusion of the ethical, embodied and relational.²¹ Knowledge is divided into cognate disciplines that represent what we know about the world and the knower is set outside and apart from these facts and information. This notion of knowledge and curriculum separates learning from the responsibilities that come with knowing and being in the world and in relation, thereby separating epistemology from ethics.

²⁰ The body without organs (BwO) proposed by Deleuze and Guattari (1987, p. 153) is the body Spinoza talks of in his 'Ethics'. You know a body or entity not through fixed descriptive characteristics but through what it can *do* - through the flows of intensity, desire, speeds and slowness in relation with other bodies and forces.

²¹ According to Haynes (2002), one of the distinctive features of the philosophy with children movement is the bringing together of "thinking and values" (Haynes, 2002, p. 55).

A history of individual assessment and the construction of failure and exclusion permeate our schooling system (Dixon, 2011, p. 67-68). This regime of judgement has moved lower and lower down the age groups and the provision of compulsory early childhood education has unfortunately meant a formalisation and the extension of this net of dividing practices reaching the very youngest. Measurements against a set of age-related performance outcomes are used to control the advancement of children through the school system. Open-ended and unpredictable activities confound efforts to define and sequence prescribed outcomes and as a result tend to be invisible in the official curricula and the model daily programmes prescribed by our official guidelines. Recruited in order to ensure progression and achievement in groups of children who may differ in age by as much as eleven months, psychology's observed age-related tendencies become clumsy tools used to effect exclusion and failure and to deny the complexity and variation among children (Dahlberg, Moss & Pence, 2013, pp. 38-39).

The birth to four national curriculum framework is in the process of being implemented and teacher education courses are still being developed. An analysis of the discourse of the birth to four curriculum is not the work of this thesis, but a look at the structure, language and visual components of it do suggest a cognitivist grounding. The curriculum document produces a learner-as-individual and, although it makes reference to collaboration in learning, the child-centred framing is strong. Each early learning development area is introduced through "the child's voice", e.g.

Early learning and development area One: Well-being

The child's voice

I need to experience an environment where I can enjoy good health, nutrition, safety and security and where I can develop confidence and resilience. I want to be happy. This is my right.

I am usually physically very active and my body is developing and growing rapidly. I need enough nutritious food. Proper health care and a safe environment re very important to ensure growth and development. This is my right. (Department of Basic Education, 2015, p. 17)

The birth to four curriculum framework is based on the earlier National Early Learning Development Standards (NELDS)(Department of Basic Education, 2009). The NELDS name some key principles from the South African Constitution as its guiding values (p.8) and an effort is made in both documents to pay attention to issues of justice and equality. Diversity, anti-bias and care for pets and the environment are mentioned. However, the formatting, language and visual features of the curriculum document follow the style of the individualised checklist. Individual achievements are foregrounded, and the themes and principles are introduced with sentences beginning with “I am.: I need....” as exemplified above (Department of Basic Education, 2015, p. 7; p.17; p. 32; p. 41; p. 51; p. 57; p. 65). The front cover image and the supporting illustrations support the strongly ‘child-centred’ approach.



Figure 2.1: Front cover of the birth to four curriculum.

The front cover of the birth to four curriculum document shows three adults and a group of children. The adults are present only from the waist up. Their arms cross one another suggesting that they are in collaboration in their role. Their role is represented as a protective one, as their arms and hands surround the children below them in an enclosing gesture. The 'group' of children do not function 'as a group'. They exist as entirely separate entities. Nowhere on the cover or in the pages that follow are the children visually represented as doing anything with any other child. They are engaging as individuals with some object, learning apparatus or art materials.

The learning of the children in my study emerges as a much more collaborative and social and "intra-active" experience in which human other but also the non-human has an equally strong part to play in the co-production of knowledge and knowers.

Despite the best efforts on the part of curriculum planners and teachers to sequence and prescribe the development of brains and bodies, all sorts of things happen, often un-noticed, that connect, inspire, change and confound young children. We humans, from a young age, begin to make meaning out of our encounters with the world and everything in it. This study is an experimental mapping and tracing of some intra-active encounters in which the researcher, the children and the materials and spaces at hand collaborate to create on-going iterations of new knowledge and concepts. While my study is primarily concerned with the ways that children use their physical environments and intra-actions with people and things to generate their learning and thinking, they cannot be separated from the broader realities of their learning spaces. So, my account is also to some extent a mapping, tracking and following of some of the roots and shoots that emerge from the meeting of the uneven ground of current ECE provision, the shared efforts of the multiple partners in the enterprise, including various levels of government and broader society.

A progressive, modernist narrative would seek to link the individual child and her potential to the role she will assume as a self-governing citizen in a rational democracy. Post-structuralist and posthuman worldviews and pedagogies inspired by them question this focus on the individual as well as on the notion of personal morality in decision-making that automatically results in the best solution for the majority. Complicating the notion of singular identity, and questioning the justice of 'majoritarianism', a posthuman approach to early education offers profound challenges to our thinking-as-usual and possibilities for decolonizing the discourse and experimenting with the notion of child as citizen.

The Enlightenment belief in the civilizing force of rationality placed the uneducated closer to the raw and unknowing force of 'nature'. The Cartesian splitting of brain/mind (as the site of rational thought) from the body (as the source of the uncontrolled/natural/ irrational impulses) forms the basis of a modernist perception of humanity and is central to the colonial project (Canella & Viruru, 2004, p.12-13). Extending Aristotle's exclusive definition of humanity which placed women, children and slaves outside of the 'rational human' definition, colonialism in its extremes saw the people of colonized worlds as fauna to be studied or, if necessary, exterminated (Taylor, 2013, p. 25; Adhikari, 2010, p. 19). Rollo (2016) connects the mispedy underlying colonial views of child with the racial and evolutionary-based notions of superiority of the white Western male.

Efforts at decolonizing the discourses of 'child', 'childhood' and 'early childhood education' deconstruct the concepts and then reconstruct new ones. Taylor uses a 'queering'²² reconfiguration of nature that makes possible the neologism: natureculture. The "common worlds" framework that she and her colleagues propose demands an ethical standpoint in which humans

²² If the binaries of nature/culture and human/non-human are queered, the binaries are upset just as transgender subjectivities upset the male/female binary. Queering is an identity disrupting notion that proposes the contingency of subjectivities and a "coming together of opposite qualities within" (Barad, 2014, p. 175).

and non-humans share equal importance and agency, and a reciprocal connectedness (Taylor, 2013, p.65; Taylor & Pacini-Ketchabaw, 2015). We are already in relationships with particular histories often founded on uneven power relations and assumptions about predetermined identities. Murriss, drawing on Deleuzian concepts of subjectivity, makes the subjective 'I' into the multiple, always already implicated, communal '(iii)' of a body without organs (Murriss, 2016)²³. This dismembered and "(in)determinate" (Murriss, 2016, p. 31) subject is one (many) that is (are) not located within an individual who has claim to one identity, his or her own intention, or singular voice. Rather, "agency and intentionality... are always produced in relation with materialdiscursive human and nonhuman others" (Murriss, 2016, p. 31). The habit of always beginning with 'I' is a legacy of a Cartesian ontology of subject/object binaries in which we name the self 'I', "a self, apart from other selves and things" (Lenz Taguchi, 2010, p.57). Descartes' "I think therefore I am" falls away as thought is distributed among and between, rather than inside one mind.

The positioning and discursive construction of children in our inherited practices and worldview is coming under increasing scrutiny of scholars in the fields of politics, education and childhood studies. Education and politics exclude children from certain levels of participation basing these decisions on dualistic perceptions of children as incapable, ignorant, unformed, and amoral (Lam, 2012). Murriss in her 2016 book, *The Posthuman Child*, illustrates how children are victims of epistemic injustice. She appreciates the considerable work Fricker (2007) has done in revealing the processes of prejudice and stereotyping that work to exclude particular social groupings from the company of knowers. However, her critique of the exclusion of children from this group requiring redress goes further than merely adding child to the group. What she shows is how including children into the community of the episteme requires a profound and radical challenge to our

²³ The grey text (iii) indicating the unboundedness of a trans-individuality.

ideas about what constitutes knowledge. Listening to children becomes a vitally important act of onto-epistemic justice and the dismantling of our conceptions of normal, natural childhood central to the practice of childhood studies. The inclusion of child into the company of knowers (the episteme) is only possible through the recognition of child as equal ontologically. Indeed, Mannion (2007) suggests that even the relatively recent research into participation of children and 'child's voice' make the mistake of isolating children from the intergenerational systems of which they are an integral part. She proposes we look at the relational and spatial aspects of our work with children. Contextual realities and our entanglements of responsibility are what produce our subjectivities which is not to say these are permanent and predictable nor are they exclusively human.

Nature and normality

The naturalised conception of universal 'child' has both nativist/evolutionary and colonial/minority world roots (Taylor, 2011; Ebrahim, 2012). The child at the centre of mainstream official early childhood curricula is positioned as being more connected to nature, and more "inherently creative" (Department of Basic Education, 2011, p. 9) than we are as adults and will go through a process of enculturation through schooling (Taylor, 2011, p. 423).

Excavating the connection between child and nature is central to Affrica Taylor's active involvement in the "*Common Worlds*" project²⁴. Taylor (2013) draws on Raymond Williams' (1983) "*Keywords*" to trace the etymology of the term 'nature' and comes up with three "mutually reinforcing" concepts: nature as the essence or inborn character of a thing; nature as an invisible force that runs through and directs the material world including human beings; and thirdly, nature as the sum of all things in our world, "including or not including human beings" (Williams, cited in Taylor, 2013, p. 5). My

²⁴ The commonworlds website is accessible at: www.commonworlds.net

interest is in the materiality of our experience and this research aims to rework the notion of “nature” and “outside” in a way that pays attention to the intra-actions and entanglements of these relationships on a ‘flatter’, more equal, non-hierarchical terrain. So ‘nature’ is not a world outside of human entanglement but always and already in relation and co-produced with us. The intra-active affordances of learning spaces and things are not about discovering essential truths about nature or divine patterns of formation or unfolding. Each intra-action has the potential to change the participants, each affecting and being affected in particular ways.

Taylor (2013) identifies the personifications connected to the three concepts relating to “nature” mentioned above which have evolved through historical time. From medieval times and earlier, Nature was Mother nature, an all-powerful benevolent or despotic monarch depending on particular circumstances and experiences, the mother to whom all children are closely bonded. Nature as Law, a new conception that appeared in the 18th century notably through Newton’s revelations, is the nature of scientific theory and the source of developmentalist expertise. Set apart from the corrupting influence of human society, nature was revered (although simultaneously exploited and manipulated, particularly in the colonizing project) in Enlightenment thinking. Romanticised “European” nature appears in art and literature and is contrasted with the violent and untamed “other” nature of the colonies (Thoreau, 1862/2009 cited in Taylor, 2013).

Rousseau (1762) advocated a society that followed nature’s rules and patterns: nature as “moral authority”. However, the Cartesian splitting of mind from body enabled Rousseau to abandon his own “real” children and romanticize and “pontificate” about the theoretical ones (Doyle & Smith cited in Taylor, 2013, p. 7). Rousseau’s vision of “Nature’s child” and “Nature as teacher” has an unbroken, though variable history right up to the present. Early examples include the 19th Century Romantics, Thoreau, and the early childhood proponents, Rachel Carson and Emily Cobb.

Contemporary nature education and Forest school movements (notably, Chwala, 2002 and Warden, 2010) have their roots in 20th century Scandinavian and German outdoor models as well as in the 21st Century Green movement.

Rousseau's visions of "Nature's child" and "Nature as teacher" are early embodiments of the process of "purification" that Latour proposes are at the centre of modernity (Latour, 1993, pp. 10-11 cited in Taylor, 2013, p. 11). To keep nature and culture separate was a necessary and perhaps desperate move in the civilizing, progressive, developmental project of modernity which was increasingly blurring these boundaries. The conflicting pulls of protecting and risk-proofing children in relation to sexual abuse is an example of this anxiety in current contexts (Rooney, 2016, p. 4). Keeping children innocent and childlike for as long as possible is a purification move in a context of increasing sexualisation, abuse and commodification through advertising aimed at younger and younger targets.

The binaries of nature and culture are reinforced and reproduced by a range of purification moves, one persistent one being the 'child as artist'. Herbert Read (1948) and Victor Lowenfeld (1968) in the European post-war period celebrated the artistic impulse and the value of "expression" for children while claiming a scientific basis for age appropriate expectations and achievements. Similar to Rousseau's idea of "negative education", their belief in the child's innate expressiveness produced the notion of "free expression" and the claims supporting non-intervention in art education which persists in early childhood education in many contexts (Gardner, 1980; Kindler, 1996; McArdle & Piscitelli, 2002).

In her genealogy of "Nature's child", Taylor elaborates on two nature-framed traditions of early childhood education that build on Rousseau's nature's child and whose legacies persist in 21st century ECE practice: those of Fröbel, and Montessori. These two traditions are of particular relevance to

my study due to their focus on the material aspects of the learning environment and continuing influence in contemporary forms of early childhood education.

Friedrich Fröbel (1782-1852)²⁵ studied in the tradition of Rousseau that was still strong two generations after Rousseau's death. Fröbel worked to put the guiding principles to practice in the creation of 'children's gardens' for pre-primary children. Fröbel's contribution to the construction of 'nature as teacher' was his direct experience of a range of scientific and natural history disciplines, namely, surveying, forestry, mineral classification, architecture and crystallography and a religious conviction about the 'unity' of all creation. The natural laws and patterns governing growth and change in nature were believed to govern the growth and development of children. Fröbel's garden design included path ways that divided and yet clearly linked parts to whole. Each child would have a small space in which to grow things. Open-ended natural play objects, which included rocks and sticks, also included specially designed wooden geometric shapes and crystalline forms. These were called 'gifts'. They were used in guided play sessions with the purpose of developing children's appreciation for three basic elements: "the forms of nature (or Life), forms of knowledge (or Science), and forms of beauty (or Art)" (Brosterman, 1997 cited in Taylor, 2013) and for the 'Creator's' unified design of which the children were part.

In a similarly methodical way, Italian innovator, Maria Montessori (1870-1952) created an early education practice based on scientific observation and enquiry, with the child framed as natural scientist. A devout Christian and a Romantic, she was also a medical doctor trained in empirical and experimental methods, and a disciple of Darwin's theory of evolution. She opposed the push from the scientific rationalists to promote the teaching of ever more advancing knowledge *about* nature. She believed in the practice of

²⁵ Fröbel Education Kindergarten Currulum Method is available at www.froebelgifts.com

scientific enquiry and the sacred, spiritual work of revealing the underlying laws of nature and creation (Fuchs, 2004, p. 169). Building on Rousseau's "negative education", she warned against "obtrusive interference" (Montessori, 1946, p. 2) trusting the learning that would happen through careful observation and enquiry by the children while being carefully observed by their teacher (Montessori, 1912, p. 174). Maturation and development would unfold 'naturally' under the right conditions. Montessori developed a compendium of apparatus through which children could encounter and explore the laws of nature. These include categories of knowledge such as: "zoology and botany", "geography", "mathematics", "language", "practical life" and "sensorial"²⁶. Interaction between teacher and children is ideally one-on-one in practice, with larger group lessons kept to the minimum and chiefly used for introducing equipment. Classes have mixed age-groups (two and a half to six year-olds learning together). Collaborative learning and play is encouraged if it is "constructive", but there is no room for fantasy or pretend play (Lilliard, 2013). Instead of 'playing house', children are encouraged to do real tasks – children may sweep the floor, wipe tables, "cut carrots and offer them around the classroom", but sequential instructions will have been given to the children as to how these tasks should be performed (Lilliard, 2013, p.162; 166). The focus of the Montessori method on the cognitive/rational over the more ethical, relational and creative aspects of learning point not only to a particular view of 'child', but also to a view of 'adult'. In her commitment to taking children seriously, Montessori projected onto children her view of modernist humanity and science, where the invisible, unknown, contradictory, irrational or imaginary could not be accommodated.

²⁶ The approach is a well-established internationally accredited organization and approved materials are sold on official websites or by accredited retailers. Outside of the "high fidelity" Montessori programmes there are many more offering partial and adapted versions (Lilliard, 2013, p. 159; pp. 176-178). The www.samontessori.org.za website numbers current schools as 175 member schools and 335 non-member schools currently operating in South Africa.

Contrasting notions of science and reality and their impact on pedagogy will be discussed in chapter three.

Most mainstream early childhood curricula exhibit a reverence for natural processes and laws that form a part of the learning program. The natural processes and laws are also associated with the so-called development of children who are matched against a pattern of normativity that comes with considerable authoritative weight. Mainstream early childhood education approaches build on the legacies of Rousseau, Fröbel and Montessori, but take on strong influences from the developmentalist guidelines of Piaget and Gesell, and some softening and complexifying from the psychoanalytic thrusts of Erikson, Bowlby and Winnicott (Gordon & Browne, 2013; Bruce, 2012). Attention is paid to physical, cognitive and emotional aspects of the child's experience, but the 'child' is present as some kind of 'universal' individual. What is left out of this picture or story, is the variation and particularity of children's social realities and their close connectedness to the people, places and experiences that make up this reality (Dahlberg, Moss & Pence, 2013, p.46).

Descriptions of sequential development in research populations have become prescriptions for universal age-related achievement. In the majority of countries around the globe, the child will be expected to attain set standards of achievement for particular ages based on research done in Europe and the United States. This normative conception of 'child'²⁷ has been the focus of extensive research and critique in the early childhood education, psychology and sociology of childhood fields - much of it claiming a post-structuralist or posthumanist position (Burman, 2000; Hughes & MacNaughton, 2000; Cannella & Kincheloe, 2002; Dahlberg & Moss, 2005; Lenz Taguchi, 2010; Taylor, 2013; James & Prout, 2015; Pacini-

²⁷ The term, 'child' as used in this thesis is as a shifting but convenient concept that holds different meanings in different discourses relating variously to biological, social, political orders.

Ketchabaw, Nxumalo, Kocher, Elliot & Sanchez, 2015; Murriss, 2016). The Common Worlds research collective, mentioned earlier in this chapter, have drawn on the work of Latour (1993) and Haraway (2003) to create the concept of *Common Worlds* which is used to explore in an interdisciplinary way, “children’s relations with the more-than-human world” (Common Worlds research network website). Veronica Pacini-Ketchabaw in Canada, Affrica Taylor in Australia and Fikile Nxumalo in the United States are central to the project which has created a growing global community of research into the naturecultures of childhood (Taylor, 2013; Blaise, Banerjee, Pacini-Ketchabaw & Taylor, 2013). This disruption of the nature/culture binary is discussed further below.

Developmentalist approaches to early learning focus on the structured inculcation of a narrow selection of representational modes of meaning making, namely numeracy and literacy. This process, as described by socio-cultural theorists, is an introduction for children to the culture of the society (Leong & Bodrova, 2001). Child moves from a natural unknowing state to a proper functioning member of the literate numerate community of persons.

Developmentalist approaches also view moral capacity as a sequential process of maturation. Lawrence Kohlberg’s theory of moral development (Kohlberg, 1984) met a series of feminist inspired critiques, first from Gilligan (1977) and then Tronto (1987). Gilligan wanted to investigate the reasons for Kohlberg’s finding that girls were at a lower stage of moral development than boys of a similar age. Gilligan found that girls did perform lower than boys on the abstracted, individualized measures that Kohlberg used. These measures related to abstracted, decontextualised codes of justice based on ‘universal’ and ‘objective’ truths. Girls, however, exhibited more awareness of relational aspects of care and responsibility that tended to be more contextualized and specific to particular relations and events.

Kohlberg's approach to morality as justice can also be associated with a colonial Western conception and application of individualized 'rights-based' justice. Robert Coles (1977) did research with first nations groups in Canada and found that children from these groups considered white English-speaking children as lacking in "proper moral(s)" and showing a "lack of care for others and for the earth" (Coles, cited in Tronto, 1987, p. 650). Tronto (1987) has developed a theory of an ethics of care that frees the notion of care from gender identity and proposes that the moral sensibilities of both justice and care should be used with discernment by all. These conflicting notions of morality and ethics play out in my research.

Alternative approaches to working with young children, like the community of philosophical enquiry (CoE) (as enacted in Philosophy with children) and the *progettazione* and documentation of Reggio Emilia work with a post-developmental notion of ethics and image of child: one in which the child is recognized as knower and expert, and already morally responsible and already able (Haynes, 2014; Dahlberg, Moss & Pence, 2013). My study explores the ways in which an ethics of care is relational with and towards the more-than-human as well as the living and non-living in our lived contexts of time, space and matter.

Beyond 'basics'

In recent years, the South African Government Department of Basic Education has seen its role as improving early childhood education by imposing more control over the prescribed 'delivery' of the so-called 'basics', meaning numeracy and literacy. Similar responses have been noted in developing countries and Canadian educationalist, Kieran Egan writes with Michael Ling (Egan & Ling, 2002) about the need for entirely different 'basics' to address the under-performance of young learners: those of the imagination and storytelling. In contrast to Montessori's notion of cognitive development as discussed above, for Egan and Ling, imagination is central

to thinking and learning. Their argument includes ethical and related pedagogical considerations about the way that we see young learners and their abilities. Egan and Ling note that the 'back to basics' agenda focuses on learners' inadequacies rather than their strengths (see also Matthews, 2008; 2009). They argue that while rational computing operations might be difficult for six years olds, their skills in metaphorical thinking and narrative are strong and should form the basis for their learning which would build on the thinking that they are engaged in rather than shutting it down (Egan & Ling, 2002). Haynes and Murriss draw attention to the fact that while adults switch comfortably between literal and metaphorical language in their philosophical discussions, children's comments are most often interpreted *literally* by adults, shutting down their enquiries (Haynes & Murriss, 2013b). It is in the light of this call for more imaginative and open-ended pedagogies that scholars working in a 'new materialist' paradigm see the need to challenge the dominant discourses and work to establish environments and pedagogies that build on children's strengths, abilities and interests. As Davies (2014) and Murriss (2016) point out, listening without organs (LwO) disrupts the "listening-as-usual" practices in schools which are aimed at hearing the same, the expected, in order to evaluate and judge. The dismantling of the developmentalist construction of child as 'less-than', also has the potential to dismantle the construction of educator as judge. It is important to add here that one of the less obvious effects of the power-producing adult/child binary is the taking on by children of the judgmental attitudes of their teachers. So, it is important to note that this standards-based paradigm also produces 'child' as judge. Burman's work on Fanonian post-colonial theory provides some important pointers here (Burman, 2016) and "offer(s) resources for addressing current debates on the political ambiguities of discourses of childhood, gender, education and development" (Burman, 2016, p. 2). Fanon's analysis of "racialized colonial subjectivity and identification" traces the reproduction and internalisation by oppressed people of the subjectivities of oppression, race and slavery imposed on them

through the violence of French colonisation of Algeria (Burman, 2016, p. 1). Burman's study of the tropes of childhood emerging from the work of Fanon is on-going and beyond the scope of my study. However, her work and the work of others including Murriss (2016), and the *Commonworlds Collective* in the project of decolonising the discourses of childhood ask the important questions about how children (in the company of nonhuman, more-than-human and other-than-human) are placed outside and below the designation of fully human knowing subject.

Ethical engagements among peers (as well as among and with the spaces, things and ideas we share daily) need to be foregrounded in a pedagogy of listening.

Exploring alternative ontologies

My experimental material-discursive mapping takes on the welcome challenge offered by posthumanist scholars to consider the 'human' as a concept to be troubled, cracked open and excavated rather than taken as the assumed foundation of our educational endeavours (Taylor & Hughes, 2016).

A detailed inventory of the evidence provided by this excavation includes three key areas of contention. Firstly, the implication of western humanism in many of the current crises facing our existence: increasing inequality resulting in a polarization of a small 1% of the world's population of elites, from the majority 99%; a depletion of resources and the increasing threat of global warming. The notion of progress and the belief in the superiority of certain cultures fueled the colonial expansion, institutionalized slavery and industrial capitalism of the nineteenth century. These practices laid the foundation of current patterns of inequality and voracious extraction and inequitable exploitation of the world's resources. Second, in terms of knowledge systems, patriarchal forms of rationality elevated the academy and the disciplines over other ways of knowing. Through Cartesian practices

of defining, categorizing, describing and objectifying the episteme reduced and limited the possibilities of knowing and being with and in the world to a set of representational practices productive of particular subjectivities of 'knower'. Modern, western notions of scientific progress effectively excluded the knowledges of an extended community of others: human (women, children, colonized indigenous peoples), as well as the non-human (animals, plants, minerals, and the throngs and swarms of things and forces at play in our multi/pluriverse²⁸). Anthropocentric models of scientific thinking – Cartesian and Newtonian, place the human observer, in the words of quantum physicist, Niels Bohr, outside of “that nature that we seek to understand” (Barad, 2007, p. 67). A third piece of evidence against humanism is the hierarchical ordering of existence that it assumes. Both classical humanism (Greek, Renaissance and Enlightenment versions of Humanism) (Taylor, 2016, p. 8) and the deity-centred, monotheistic, text-based religions (Judaism, Christianity and Islam) place 'man' at the centre and apex of the universe – both in terms of his species and his gender. As Foucault (1973) noted, this 'man' has been a relatively recent invention and one that is unlikely to prevail. Biesta (1998) draws from Foucault to explore the reconstruction of the educational subject through a pedagogy “without Humanism” (Biesta, 1998, pp. 1-16), that is, without the anticipated, predetermined end result or product of the humanist subject. Deleuze and Guattari refer to the modern White male articulation of subjectivity as “the Majority subject” (Deleuze & Guattari, 1987, p. 133). The hubris of humanist ontologies that give man the role of commanding the 'uni'-verse prevents him from learning from the material and non-material forces operating in the world and beyond. Epistemic humility features strongly in many of the

²⁸ I use the terms universe, pluriverse, multi/pluriverse and uni/pluriverse to draw attention to the contested notion of 'the universal' or universal/s - both one and many. Many worlds co-exist and are entangled. Walter Mignolo gives an account of his encounter with and use of the term 'pluriverse' in the following site: <http://waltermignolo.com/on-pluriversality/>. His use, learnt through his engagement with the Zapatista uprising, refers to "border thinking" that queers colonial/indigenous and modern/postmodern cosmologies.

posthumanist positions taken up in the quest for a posthumanist ethics (Taylor, 2016, p. 16).

Just as humanism has been complex, heterogenous and shifting, so too is posthumanism. Taylor (2016) refers to posthumanisms (plural), while Braidotti (2013) refers to “strands in contemporary posthuman thought” (p. 38). Posthumanism is not a single idea with a defineable moment or beginning. Some forms of humanism had within them elements of the posthuman (consider the challenges to male-dominated western forms of knowledge and power made by the feminist movement as well as anti-colonial and anti-racist movements). In the opening chapter of the book Carol Taylor has edited with Christina Hughes on posthumanist research in education she proceeds to work through a range of posthumanisms, many similar and overlapping, some particular and distinctive in their workings. She suggests that we are in the middle of a shifting but already clearly “posthuman condition” (Taylor, 2016, p. 7). Hughes also notes that our heritage of humanism is so strong it is common to find ourselves reverting to old habits and ways of thinking. I draw from a range of thinkers including philosophers Deleuze and Guattari, feminist scientist philosophers, Karen Barad and Donna Haraway, feminist new materialists, Stacey Alaimo and Samantha Frost, posthumanist philosopher, Rosi Braidotti, and political theorist, Jane Bennett.

I acknowledge that a number of indigenous ontologies also trouble the nature/culture, human/more-than-human binaries in that they are relational and flattened ontologies. I draw on the Khoisan notion of ‘thinking strings’ in chapter three.

The work of this thesis is to activate the idea of a human and more-than-human co-production of early childhood education and care. Being, knowing, and thinking are relational and involve simultaneously both material and discursive forces. I use the notion of the ‘environment as third

teacher' to trouble existing theories and practices in early childhood education and care that assume a separation is possible between issues of aesthetics and politics, and between pedagogy and ethics.

A different kind of 'real'

The dualisms of nature/culture and discourse/reality do not capture the complex reciprocity and interconnectedness that make up experience. Post-structuralist notions of subjectification recognize the power of language and discourse to create subjects, not merely describe them, thus challenging the nature realist notions of essential nature of 'child'; 'boy'; 'girl'; etc. with a cultural lens, that is, claiming the entirely discursive construction of gender. However, an emerging community of posthumanist early childhood theorists see the nature/culture divide as a limiting dualism that gives language and the human position undue dominance in our understanding of the world- an understanding in which the *real* world gets lost (Barad, 2003, p. 801; Taylor, 2013, p.62; Murriss, 2016, p. 232). The posthumanist view proposes that our biology and our culture (our culture being the social and cultural aspects of our gendered or age-defined selves) are closely entwined in our experience and sense-making. Indeed, the materiality of our biology (our blood and bone) have impacted directly on the emergence of gender and age-related practices. Posthumanism looks beyond discourse as separate from reality, material and biology, but rather in relation, dialogue, conversation with it in a process of mutual co-production (Barad, 2007; Prout, 2005; Hultman & Lenz Taguchi, 2010; Taylor, 2011, Murriss, 2016). Simply put, the nature/culture binary is 'man made'. Posthumanist thinkers (still always already vitally human) working in a range of disciplines and many working against disciplinarity, try to remove, decentre or 'cut down to size' the anthropocentric gaze in order to acknowledge the agency of the non-human elements in the relationships of co-production and the making of meaning. Relational materialism is one of the terms used to describe this philosophical position (Hultman & Lenz Taguchi, 2010, p. 526) which makes

a philosophical connection with the monism of Spinoza, the agential realism of Barad, and the “radical immanence” of contemporary French philosophers Deleuze and Guattari (Braidotti, 2013, p. 56). As mentioned briefly above, Barad’s “agential realism” challenges the objectivity demanded by rational scientific approaches to meaning making. Her more complex version of reality is rigorously demonstrated through a careful attention to specific intra-actions of participant elements in the phenomenon under examination. In other words, realism is not about defining the fixed and recognisable identities of elements in the world, but rather recognising the production of subjectivities that exist temporarily in particular arrangements and events. Agential realism is a conceptual/material framework that is discussed in chapter three and put to work in the later chapters in which I work with research data from the field (I acknowledge that in fact the ‘data’ are not mute and passive pre-existing entities, but part of a worlding phenomenon as I am, but this is discussed in more detail in chapter five).

The material turn prompted by the posthumanist position reincorporates the experiential aspect of knowing into that of interpretation and language but ‘experience’ has wider reference than in earlier materialisms, incorporating the ‘being’ of non-human as well as human. Questioning the post-structuralist standpoint on the construction of subjectivity through the power-production agency of discourse, the posthumanist position acknowledges the agency of other-than-human elements in our relationships and learning (Lenz Taguchi, 2010, pp. 26-30).

While theorists working within a poststructuralist paradigm have contributed to the critique of developmentalism in childhood educational practices and created the space in which the move to post anthropocentrism has been possible, a perpetuation of the enlightenment humanist project is often still promoted and needs to be recognised in social justice and human rights discourses. Important new areas of study emerged from the nineteen

eighties onwards which included the sociology of childhood (e.g. Qvortrup, 1987; Prout, 2005; James & Prout, 1997/2015; Mayall, 2000), the geographies of childhood (Kraftl, 2013 ; Taylor, 2011) and the philosophy of childhood, often incorporated into the philosophy of education (Matthews, 1994; Kennedy, 2006; Kohan, 2014; Murriss; 1992; 2016). A global community of practice emerged in the mid nineteen-nineties around “Reconceptualising Early Childhood Care and Education” (RECE) which eventually in 2014 incorporated postmodern, poststructuralist, postcolonial and posthumanist scholars in a comprehensive reader (Bloch, Swadener, & Canella, 2014). Theorists within these fields are positioned differently in relation to current debates and notions of identity and subjectivity.

3. A posthumanist framework

In Chapter one the context and rationale for my project was laid out and the ethical and political position I take in relation the current challenges in early childhood education was outlined. Going beyond the social constructivist call for an empowering, collaborative and democratic curriculum and pedagogy, what is proposed is one that is framed by a post-anthropocentric ontology and ethics. No less concerned with justice, this ethico-onto-epistemology (Barad, 2007) pays attention to the interests and well-being of the human and more-than-human, and recognises the inseparable reality of our interests and our futures. This has implications for what happens in learning, for what we notice and how and what knowledge is produced. In chapter two some of the underlying assumptions of the modernist educational project were discussed. These assumptions, it is argued, pervade the current discourses and underpin the most recent policies and curricula. The dualisms of humanist ontology: those of nature and culture, theory and practice and teaching and learning set up binaries that fix patterns of engagement. They pay attention only to the cause and effect of purposeful human intention.

In this chapter I explore in detail what a posthumanist framework might offer to the project of enacting different kinds of curriculum and pedagogy in early childhood education: extending the focus beyond the human-as-agent and attempting to move beyond a humanist philosophical position.

Beyond the human

Recent studies in early childhood education draw attention to the 'more than social' nature of learning. Olsson (2009), Lenz Taguchi (2010), Rautio (2013), Kuby and Rucker (2016), Taylor (2016), Murriss (2016), and others alert us to the agency of things, places and the more-than-human in the lives and learning experiences of young children. The workings of time are also

reconsidered and are factored in as variable, flexible and active rather than as a fixed chronological sequence. Building on posthumanist philosophical theories of French philosophers Gilles Deleuze and Felix Guattari, feminist physicist philosopher Karen Barad, and material feminists Stacey Alaimo and Susan Hekman, Lenz Taguchi's 2010 book was groundbreaking in extending the work done over four decades in the infant and toddler centres of the municipal pre-school system of Reggio Emilia. Lenz Taguchi gives further momentum to the 'material' or 'corporal' turn in feminist epistemologies and proposes an "intra-active pedagogy" (Lenz Taguchi, 2010). "Intra-action", as mentioned already in chapter two, is a term introduced by Karen Barad (2007) that is different from 'interaction'. People usually interact, whereas intra-action includes more than people. That is not the only difference. Interaction may leave the participating people or even things unchanged. Intra-action implies the mutually influencing relationship between and among different agencies. Going even further, Barad proposes that this term "intra-action" is at the heart of her philosophy. Nothing that exists exists outside of complex relational "entanglements" of difference and these entanglements are not permanent or exclusive. Barad is interested in the differences that difference makes. This ontological move reorients the educational project and demands an un-ravelling of well-established and entrenched thoughts and practices.

Since Lenz Taguchi wrote her 2010 book, educational research has become the site of lively debate exploring the implications of the profound and transformational ontological shifts entailed in new materialisms and posthumanism (Snaza & Weaver, 2015; Taylor & Hughes, 2016; Snaza, Sonu, Truman, & Zaliwska, 2016). As there are/were "many humanisms" - including the secular and religious, revolutionary and liberal (Taylor, 2016, p.8), so there are multiple posthumanisms. The work of this chapter entails positioning my study in relation to these philosophical ideas.

Rinaldi (2006), in a discussion of some collaborative research carried out by Reggio Children²⁹ and the architects from the Domus Academy notes that “both the person and the environment are active and modify each other in turn” (Rinaldi, 2006, p. 82). The awareness of the power of the environment to impact on learning is a powerful message from Reggio Emilia, but it has been the work of one of their Swedish critical friends/collaborators that has followed the concept so far as to propose a “relational materialist” (Hultman & Lenz Taguchi, 2010; Lenz Taguchi, 2011) pedagogy in early childhood education³⁰.

As the title of her influential book, *Going beyond the theory practice divide* suggests, Lenz Taguchi (2010) challenges the binaries of theory and practice (discourse and material) which represent essentialist, gendered devaluations. Material has been seen to represent the hands-on and relational work traditionally assigned to women both in the home and in the caring professions, hence its close connection with the body. Discourse, on the other hand, referred to the processed, rationalized, abstracted knowledge associated with male scholarship (Lenz Taguchi, 2010, p. 23). Her posthumanist position recognizes the inter-relations and mutual influence between material nature and discursive culture (Barad, 1999; Frost, 2011; also discussed in chapter two). Culture, defined in a humanist ontology as a uniquely human intervention and a transformation of an ‘original’ and untouched nature, cannot, according to the posthumanist argument, be separated out from the rest of the world’s existence. Following Barad, Lenz Taguchi (2010, p. 43) argues for a “flattened” ontology, thereby giving the material (‘nature’) and the discursive (‘culture’) equal and mutually affecting

²⁹ Reggio Children is a public-private company established in 1994 to promote and manage the exchange initiatives between the municipal early childhood institutions of Reggio Emilia and a large number of educators and researchers from around the world. There is currently an international network of thirty-two countries. The Reggio Children website is: www.reggiochildren.it

³⁰Lenz Taguchi (2011) claims that in the Reggio Emilia documentation and pedagogy she has witnessed, the material and the environment are given less value and agency than the words and understandings made by the children. Her project involves flattening this hierarchy.

force, and also not giving the human elements in the world a superior or central position as the only knowledge- and meaning-making subjects. Using an example of a girl in the sandpit Lenz Taguchi (2011) invites us to consider the intra-action between the girl and the sand in which they are “actively doing something to each other simultaneously”. Focusing on the way each is mutually affecting the other, she notes:

The sand can be understood to ask specific questions and formulate problems by virtue of its own force in relation to the girl, which she might try to solve. This might include the ways in which a perfectly balanced body needs to be adjusted to a range of material conditions – for example, the hand letting go of the sand at the perfect height from the bucket, and then opening up with an appropriate/estimated speed. In fact, she directs her whole body around the sand and what the sand forces her to do in relation to the uneven foundation in the sandbox and the quality of the grains of sand (Lenz Taguchi, 2011, p. 38).

Sand and girl become different, in their relational co-production.

Critical posthumanism

My own study builds on the work of Lenz Taguchi and the growing community of researchers in early childhood education who are working in a posthumanist paradigm and extending poststructuralist reconceptualisations and critiques. Apart from Barad and Deleuze (and Deleuze and Guattari), a second layer of theoretical influences entangle this project. They include Donna Haraway, Michel Foucault, Judith Butler, Jacques Derrida, Jane Bennett and Rosi Braidotti. These theorists are implicated in the negotiation of my move from philosophical dualism to monism: a key move which unsettles the assumptions of Cartesian ontology and epistemology and have a postcolonial, feminist and post-age (Haynes & Murriss, 2017) impact.

The postcolonial, feminist and post-age thrusts emerge from the dismantling of the notion of 'nature' as apart from the 'human'. The colonising, conquering, extractive and depleting machinery of modern science and progress framed the world as a passive, raw and mute resource for 'Man's' exploitation. Man claimed the right to this dominion over the (natural) world by virtue of his being God's representative, God's image, and humanity's evolutionary climax (Wynter, 2003). The developmentalism at the core of 'child-centred' pedagogies shares the same recapitulationist beliefs as colonial racism. Recapitulation theory assigns evolutionary backwardness to child, and racialized 'other': both are 'savage' (Kromidas, 2014; Murriss, 2016).

Both Kromidas and Murriss argue that instead of allowing child (and animals) into the hallowed realm of the 'human', where racialized other and women have already (quite recently and perhaps not fully) been included, we instead need to aim for a new ontology entirely: one that renders us capable of becoming-other-in-ourselves-in-relation.

This work reconsiders key issues in early childhood educational practice like play; gender; animals; public parks; art materials; citizenship and inclusion through a posthumanist lens. The long tradition of materials-rich, experiential educational practice that includes play or some kind of self-directed engagements with 'things' is enlivened by this new materialist and posthuman turn. The materials and spaces of learning take on a new significance when considered as agential in the processes of learning rather than as passive tools given meaning by human intervention. This chapter lays out a general introduction to the complex and varied strands of posthumanism in order to contextualize the one I intend to adopt to frame my discussion, as well as some more specific theories and concepts that are helpful in my project.

The important emancipatory movements of the twentieth century were led, according to Braidotti (2013) by modernity's structural "others" (p. 37). The

women's movement, the anti-racism, de-colonisation, anti-nuclear and pro-environment movements were all on the edges of the modernist Humanist project, which according to Gilroy (2000, cited in Braidotti, 2013, p. 47) was a betrayal of the European ideal of the Enlightenment. The critical analysis of the power machinery of this universal modernist system fell to the poststructuralist generation. Braidotti attributes to them the foundational work that enabled a critical posthumanism to emerge. She mentions the French poststructuralists; the feminist movement, the anti-colonial phenomenology of Frantz Fanon and his teacher, Aimé Césaire, and Edward Said. The work of Foucault is particularly relevant to the development of Barad's form of posthumanism, so I will explain the connection.

Nature/culture queered

The poststructuralism of Foucault, in "queering Marx" (Barad, 2003, p. 809), begins to work with the notion of subjectivity, but according to Barad, does not quite finish the job. Foucault goes against centuries of bifurcated thinking about the world of nature and the human realm of culture and upsets the social constructivist paradigm which was strong among his left-thinking contemporaries. He identifies the body as the site at which the workings of power meet local practice (Barad, 2003, p. 809.) Foucault's reappraisal of Marx works on different levels: firstly, Marx's purely economic analysis is insufficient an explanation of how power operates, particularly in the production of our subjectivities and relationalities (McLaren, 2012). Secondly, Marx's materialism gave agency to material only when it is enlivened by human labour (Frost, 2011, pp. 72-74). And finally, Marx worked within Hegel's idea of the dialectic and gives history a chronological developmentalist lifespan that moves towards resolution of the dialectic: a transcendental notion of knowledge and a deterministic view of history (Holland, 1998).

Foucault's (1973; 1977) work on discourse and power shows how bodies are not just subjected to the expressions of power and control inherent in the systems of authority but rather they are produced by them. In his work on mental hospitals for example he shows that the designation of 'insane' as part of a discursive practice of psychiatry and medicine creates the conditions for the production of the 'insane' subject. In *Discipline and punish: the birth of the prison*, he examines the workings of the prison system in which the enactments of surveillance produce the obedient, conforming prisoner subject. Discourse, as conceived by Foucault, is not only linguistic but also cultural. However, according to Barad (2003), it does not fully acknowledge the agency of material and biology in the production of discourses.

Power works in concert with discourse, but power for Foucault (1980) is not a top down movement through a class hierarchy. Power is varied and distributed throughout society. He uses Spinozist terms: *potestas* and *potentia* to differentiate between the dominant power of authority and the distributed and flowing of power between and among subjects and societies (Braidotti, 2013, p. 26). In the context of so many power struggles around race, gender and language, economics could no longer be the only source of power or the structural basis of all systems (Foucault, 1980). Butler extends the work of Foucault in her writing on gender performativity and her critique of the politics of representation (Barad, 2003, p. 804). So although gender is now a verb, rather than a noun, for Barad this work does not go far enough in explaining just how the material and the discursive are connected. Barad (2003; 2007, p. 145) also points out that Butler's work concerns human subjectification and therefore leaves humanist assumptions about the dualistic nature of the world intact. The work of this chapter is to give an account of this.

Braidotti (2013) discusses three different contemporary approaches to posthuman thought. The first is a reactive, conservative, universalist moral position (taken up by philosopher, Martha Nussbaum among others) that

seeks to solve the *problem* of posthumanism through reasserting “individualism, fixed identities, steady locations and moral ties that bind” (Braidotti, 2013, p. 39). The second approach is the science and technology studies position which aims for a better analysis of how new technologies operate. This position works with the assumption that we are already in the middle of the posthuman era. Influenced by Bruno Latour’s Actor Network Theory (ANT), the approach or approaches see the posthuman as a “transversal inter-connection” of human and non-human actors” (Braidotti, 2013, p. 45). Bio-technologies feature significantly in posthuman theorising as do ecological considerations about the future of the planet and/or human existence with it, depending on where on a continuum of anthropocentrism one sits (Taylor, 2016, p. 14). Mbembe’s necro-politics (Mbembe cited in Braidotti, 2013, p. 9) explores the implications of the mechanised, programmed, de-humanised killing machinery that operates in contemporary warfare.

The approach of critical posthumanism built on the poststructuralist “anti-humanist philosophies of subjectivity” (Braidotti, 2013, p.38) is the third position. It is the critical posthumanism of both Braidotti (drawing on Deleuze and Guattari) and Barad which moves forward from the position of critique taken up by the poststructuralists, to “affirmative perspectives on the posthuman subject” (Braidotti, 2013, p.45) and a forges a new theory of subjectivity.

My study is not motivated by an intention to offer a critical analysis of inequalities and oppressive relations, but rather to give account to their genealogy and affirm the positive workings of the material in intra-action within the “self-organising” (Braidotti, 2013, p. 3) or more relationally, the co-productive, “sympoietic” (Haraway, 2016, p. 97) reality of the world and its becoming. I do this through a diffractive analysis of data created through pedagogical documentation.

Posthumanism calls upon a new vocabulary: one that can distribute subjectivity and agency between and among active players – both human and nonhuman, material and discursive. So much of the language at our disposal assumes the “I” of the individual voice and its separation from the world it describes. First, I will mention an umbrella concept, ‘worlding,’ that I use that connects a number of other connected ideas like ‘diffraction’, ‘affect’, ‘immanence’, ‘rhizome’, ‘nomad’ (smooth and striated spaces), and ‘ethico-onto-epistemology’.

Worlding

Barad’s (2007) and Haraway’s (2008) notion of “worlding” undoes the subject/object binary of Cartesian epistemology and moves beyond Haraway’s earlier notion of “situated knowledges” (Haraway, 1988) to offer an ontology of the on-going becoming of the world (Barad, 2007, p. 392; Haraway, 2008, pp. xxiii). Further, Haraway (2016) suggests that rather than seeing the earth as a self-sustaining system, as suggested by Braidotti above or autopoietic as suggested by the proponents of Gaia theory, we should use the term “sympoietic” (initially proposed by an environmental studies graduate student, M. Beth Demster)(Haraway, 2016, p. 61). She unpacks the concept:

Sympoiesis is a simple word; it means “making-with”. Nothing makes itself; nothing is really autopoietic or self-organising. (...) Sympoiesis is a word proper to complex, dynamic, responsive, situated, historical systems. It is a word for worlding-with, in company. Sympoiesis enfolds autopoiesis and generatively unfurls and extends it. (Haraway, 2016, p. 58)

Haraway’s chapter on sympoiesis gives a number examples of symbiotic multiple species organisms but the human body is also one: the US National Institute of Health human microbiome project website states that “bacteria in

an average human body number ten times more than human cells, for a total of about 1000 more genes than are present in the human genome.”³¹

Human knowers are not the centre or purpose of the world worlding. They are part of an inter/intra-connected being and becoming as are all other forces, matter, and temporalities. The term ‘worlding’ has a philosophical genealogy that goes back to the work of Heidegger. Haraway acknowledges this heritage but considers Heidegger “human-exceptionalist” (Haraway, 2016, p.11) and therefore reworks the concept to undo the concern about human understanding that pervades the earlier philosopher’s ontology.

The commonworlds collective draw on the work of Haraway but cite Latour’s use of the term (Pacini-Ketchabaw & Taylor, 2015, p. 59). They predominantly concern themselves with multispecies (human and other animal) intra-actions. Their use of the term still resonates strongly with a Baradian conception. Their use of the plural: ‘worlds’ coheres with the intra-active becomings of Baradian agential realism as well as the radical immanence of Deleuze and Guattari (Thiele, 2016).

The notion of ‘worlding’ allows me to work with a posthuman concept of becoming that disrupts the inherited and deeply embedded tropes of nature and natural, inside and outside space, organic and non-organic that operate in preschool spaces. In the becoming of the world, and the world’s worlding, space is not a container, nor is time a fixed chronology (Murriss, 2017).

Human action is not foregrounded in its own plane of existence. The idea of learning as worlding is used in chapter nine (one of my diffractive chapters).

Affect and intra-action

The expressive (discursive) power of the material world(s) and our empathetic mutual response to it/them is an aspect of life that has been excluded from more ‘traditional’ forms of education (Dewey, 1964; Benjamin

³¹<https://www.hmpdacc.org/hmp/overview/> Accessed 18 January 2018

& Eccheverria, 1992; Burbules, 1995) that are often “based on rigid paradigms, unchanging over time and with no doubts and uncertainties” (Vecchi, 2004, p. 9). The material turn acknowledges the flow of outside and inside, of thinking and feeling. The disruption of the binary of the inside and outside of the human body and human mind is a monist conception of reality. This acknowledgement affirms the possibility of the art-making experience to be one of intra-action between ourselves and the world. In this mutual relationship we affect the material and are affected by it (Bennett, 2010, p. xii). Spinoza, an important philosopher for new materialists and posthumanists, considers the world and all ‘in’ it to be in ongoing interaction, including human beings (our minds and intentions cannot be separated out and given celebrity status). The Spinozist account of ‘affect’ describes both the capacity to affect and to be affected and to be changed by the experience of this encounter (Massumi, 2002, p.22; 2015, p. 48). A body is defined “not by a form or by functions”, but by “relations of motion and rest, of slowness and speed between particles” (Deleuze, 1988, p. 123). Interaction, as already suggested, has commonly referred to people in dialogue, people interacting with one another.

The term “intra-active” (Barad, 2003, p.815) includes the non-human and takes away from the elements of reality their ‘free-standing’ form or characteristics. Things are recognised because they are in relation to other things. This mutual relationality is “a reworking of the traditional notion of causality” (Barad, 2003, p. 815). Deleuze and Guattari also work with a relational ontology that moves away from a concern for identity and essence and towards intra-active “machinic assemblages” (Deleuze & Guattari, 1987, p. 88). The move from identity to ‘difference’ helps reevaluate the status of young bodies and bodyminds in our human and more-than-human company. The difference we witness is not a difference between separate define-able entities, but differences within each, as in ways of being and becoming different and becoming in relation. So ‘child’ is not identifiable as

one kind of 'thing' in the world but responds and intra-acts to produce subjectivity and difference in relation with. As with other identity definitions like race, class and gender, undone by poststructuralist, feminist and decolonizing moves, age needs to be recognized as a category of exclusion and discrimination in the progressivist modernist educational project.

In the words of Niels Bohr: "We are a part of that nature that we seek to understand" (Barad, 2007, p.26; p.67). We can't remove ourselves from the universe. We can only *know* as entangled parts of what we know: "One part of the world making itself intelligible to another part" (Barad, 2007, p. 351). Objectivity is attained within particular phenomena, when an agential cut is made. The cut reveals the ways that reality is performing in that intra-action. As an example, in an intra-action between light and a barrier into which two slits have been cut, a diffraction pattern (striations of dark and light) is created by the waves of light that pass through, interfere with one another, and create marks on a screen behind the barrier with the slits. The diffraction pattern shows that the light has behaved rather like waves of water do when they pass adjacent gaps in rocks on a rocky shore. This is not the way that light behaves in other intra-actions. In the phenomenon of direct reflection light may be seen to be behaving as particles, where "geometrical optics" are adequate for explaining the bouncing of light off a surface. So there is "a relation of exteriority (only) within the phenomenon" (Barad, 2007, p. 351). These phenomena are visible outside of the science laboratory. A domestic blind can create diffraction effects, as can air vents and mirrors in water (see Figure 3.1)



Figure 3.1: A round 'shadow' from a square hole.

Due to the "curious wave behaviour of light" the shape of the sun is diffracted onto the wall even though it has passed through a square air vent hole. Aristotle was puzzled by this in the fourth century BCE and the mystery remained unsolved for two thousand years. The phenomenon depends not on the 'nature' of light, but on a combination of distance, size, shape, and behaviour all working together simultaneously to co-produce a 'pinhole' effect.

Barad tells the story of the debates between Einstein, Heisenberg, and Bohr when they were grappling with ideas about the nature of reality, and more specifically, the nature of light. Is light a particle (as is all matter according to classical physics) or a wave? A range of experiments with light in which different apparatus were used, revealed queer phenomena, namely that under certain conditions, light behaved like a particle and under other conditions, it behaved like a wave. The apparatus seemed to influence the nature of light. In a further experiment it was even shown that the light could exhibit particle qualities, then wave behaviour and then particle

qualities again. The quantum eraser experiment is explained in careful detail and plain language for 'non-scientists' by Barad (Barad, 2007, p.310-317) and it raises important questions about what matters when we look for meaning in experiments such as these. The important questions are: Did the light always have both qualities (not visible to us) or was it being transformed from the one state to the other? Was it about what we could see (what was being revealed by the apparatus), or was it about the inherent nature of the thing itself? Barad's agential realism asks us not to even attempt to define and describe discrete elements within nature. Rather we should recognize that the simplest element in nature is a "phenomenon": an intra-acting relationship between things. These things can only be recognized as part of this particular arrangement. The disturbance of diffraction makes clear the inseparability of units of reality. A wave is not an entity but a disturbance. Once we are aware of disturbance as a feature of reality, we can develop a different kind of awareness and sensitivity to changes and irregularities, rather than seeking always to recognize the definable elements of a pre-existing set of categorisable components.

This influences the way we view "child" and "learning". Learning can be conceptualised as a disturbance that troubles the world. New relationships and understandings and meanings set new things in motion. Barad's monism makes it imperative to disrupt the binary of the scientific and the social, the micro and the macro. The agential realism of sub-atomic particles is the agential realism of people and things in preschool sites. The central concept and phenomenon of diffraction threads through Barad's theory and she develops it as a tool or a methodology for research. Barad queers the dualism of the scientific and the social by drawing insights from quantum physics, science studies, feminist queer theory and the poststructuralism of

Foucault and Derrida (Barad, 2007; 2012a; 2012b; 2014; 2015; Bozalek & Zembylas, 2016)³².

Diffraction, relationality and difference

Diffraction appeared in the writings of Donna Haraway as early as 1997 as a challenge to the “sameness” produced by reflection and the adherence to representational modes of thought (Barad, 2007, p. 71-72). In late 20th century social science research, reflexivity was established as a “critical method of self-positioning” (Barad, 2007, p.72). Bozalek and Zembylas, (2017) trace the use of reflexive practices in the fields of social work and education as being firstly for making better life choices and developing skills for personal emancipation, and secondly for deconstructing the power dynamics at play in knowledge production and reproduction.

In qualitative research, reflexivity has been valued for its role in heightening researchers’ self-awareness for the purpose of improving objectivity and trustworthiness (Bozalek & Zembylas, 2017). According to Jackson and Mazzei (2012), however, the search for authentic voices and accurately described viewpoints and positions through the interview process centres the research subjects in already known and expected narratives (Jackson & Mazzei, 2012, p. viii). Preselected data and matching themes are aligned in order to produce “a voice which we can easily name, categorize and respond to” (Jackson & Mazzei, 2012, p. 4).

The more critical applications of a reflexive practice enable a critique of the assumptions underlying disciplinary knowledge and practices. A reflexive attitude to research allows for an acknowledgement of one’s position and impact as researcher. This is true of the contribution of Bourdieu to

³² Lenz Taguchi (2016) notes that Barad practices what Colebrook terms “concept as method” (Lenz Taguchi, 2016, p. 221). She follows the rhizomatic concepts of ‘diffraction’ and ‘queer’, for example, across physics, gender subjectivity and the ontologies of time space and matter.

ethnography (Wacquant, 2004), discussed further in chapter six. In feminist studies Harding's "strong reflexivity" and Haraway's "situated knowledges" are markers of this boundary position (Bozalek and Zembylas, 2017).

Haraway was dissatisfied with the production of sameness that reflection and reflexivity suggest and looked for ways to attend to the patterns of interference created by difference, disruption and change. She moved on to explore diffraction as a metaphor and as a methodology in her later research. Barad pays tribute to Haraway's bold challenge to the sameness of reflection and her search for "a way to figure 'difference' as a 'critical difference within,' and not as special taxonomic marks grounding difference as apartheid" (Haraway, cited in Barad, 2007, p. 72). But she notes that Haraway refers to diffraction as a metaphor, while for Barad, the quantum physicist, diffraction is "nearly everywhere I look in the world" (Barad, 2007, p. 72). Her quantum mechanical insight into the queer behaviour of the world challenges what we previously understood about materiality (Newtonian physics and scientific realism are both challenged by her theory).

Jackson and Mazzei, drawing on the work of Haraway, Patti Lather, Elizabeth St Pierre and Elizabeth Grosz, propose a methodology "against interpretivism" that uses diffraction as a way to do research that produces "newness" and that can map difference and the effects of difference (Jackson & Mazzei, 2012).

The role of a diffractive methodology in this study will be re-visited in chapter five and performed in the three chapters (seven eight and nine) that are intended to enact a diffractive theorypractice. A diffractive methodology has significant implications for the use of language and the production of meaning in the research process. Diffractions occur in the relations between parts of the world in their complex entangled becomings. As part of the world in its becoming, we also are co-constituted with and in our human and

nonhuman relationships. The “third teacher” of my research question co-produces diffractive effects with and among the complex intra-active assemblage of pedagogic events.

In the introduction to their co-written book, *A thousand plateaus: capitalism and schizophrenia*, Deleuze and Guattari (1987, p.3) say: “Since each of us was several, there was already quite a crowd”. “There are no individual statements, there never are”. So often, in work with young children we recognise the voices of their parents or influential others. Similarly, as members of families, learning communities or religious groups, we repeat or rephrase shared ideas or beliefs. It is a Cartesian ‘habit’ to assign to individual voices exclusive ownership and responsibility. In all the statements I make, the waves of influence, education, belief and sense of belonging meet, diffract and change what I say. Some of the influences are reverberations from a distant past, no longer present in any visible form. Diffraction challenges the metaphysics of presence in which reality is made up of “individually determinate objects” (Barad, 2010, p. 260). Diffraction accounts for differences made and the effects of those differences. The traces, marks or effects of events and doings reverberate across space, time, energy and matter. Among all these visible and invisible forces, where does the human (research subject’s) voice, will, intention fit in? A monist philosophical reality is an ongoing emergence of new becomings as forces, bodies, objects and everything in between, meet, intra-act, affect, and are affected by one another to create and become different. Human intention is only one of the “strivings” of a multitude or “swarm” of forces at play (Bennett, 2010, p.32).

Immanence

The move ‘back’ to realism and against interpretation and reflection is central to the ontology of immanence that is fundamental to both Barad’s agential realism and the relational ontology of Deleuze and Guattari. When

we appreciate the entangled connections we share with the rest of the world, human and non-human, and acknowledge the endless multiplicity of possible futures we have, then we experience immanence (Lenz Taguchi, 2010, p. 15). Transcendence is associated with abstract concepts and assumes the dualisms of “being/nonbeing, unity/plurality, true/false, good/evil, order/disorder, beauty/ugliness, perfection/imperfection” (Deleuze, 1988, p. 47). Unlike in a Platonic worldview, where the virtual represents the ideal form of every concept, in an immanent one, the virtual represents all the potentialities that exist in parallel with the actual (Olsson, 2009, p.191), but which are not governed by simple cause and effect relationships (Massumi, 1992, p. 60-68). Deleuze and Guattari do not set up a binary between immanence and transcendence, but propose a “transcendental empiricism” (Deleuze, 2001) in which both immanence and transcendence work together in the way that micro- and macro-politics do (Olsson, 2009, p. 206). “Thought is here a producer, not a discoverer or an organiser. Thought happens through encounters. It is an effect of life, not a cause” (Olsson, 2009, p. 94). By taking the human consciousness out of the centre and engine of the world’s meaning, Deleuze and Guattari propose a field or plane of immanence in which thought has no fixed containers of time, space or a separate thinking subject. The plane of immanence comes from Spinoza, and his monist conception of being in the world as a “common plane of immanence on which all bodies, all minds, and all individuals are situated” (Deleuze, p. 1988, p. 122). A body’s individuality comes from its capacity to affect and be affected, and its changing states of motion and rest, speed and slowness (Deleuze, 1988, p. 123).

There are far reaching ripples of affect when one recognizes that “boundaries, properties, and meanings are differentially enacted through the intra-activity of mattering” (Barad, 2007, p. 392). In any given situation, there is not one single identifiable cause, nor will the pattern of causality be repeated in exactly the same way ever again. In the words of Barad, there is a

“rich topology of connective causal relations that are iteratively performed and reconfigured” (Barad, 2007, p. 393). Deleuze and Guattari suggest that if we were to rewind and repeat evolution a hundred times, we would end up with a hundred very different worlds (Holland, 2013, p. 19). The present is the story of its particular past, but it could have been otherwise. Chance and possibility are central to this immanent ontology which is compatible with the behaviour of quantum reality and have influenced the way I have documented the play of affect in the preschool site.

To give a sense of the perplexing and unpredictable behaviour of matter, Barad (2010) invites us to consider the world the way an electron does: in a way that confounds our expectations about linear consecutive events and cause and effect. Bohr’s model of the atom differed from that of his teacher, Rutherford, in that the energy of an electron is not continually emitted as it moves to orbits closer and closer to the nucleus, but rather, that the electron “*resides* in one of a finite set of discrete/quantised energy levels, and atoms only emit photons when electrons ‘jump’ from one level to another” (Barad, 2010, p. 246). The light emitted has a colour that relates to the particular frequency of energy. The levels can be called E1 and E2. The perplexity of the process is that if the emission of light/energy causes the jump, the electron should be moving from one position to another as the light is emitted, in other words in a gradual sequential movement. This is not the case. Firstly, the photon is a discrete parcel, the smallest possible unit, not a drizzle, and secondly Bohr assures us that the electron is either at level E1 or at level E2 – nowhere in between. Barad highlights the significance of this in relation to how we conceive of time and space: “The point is not merely that something is here-now and there-then without ever having been anywhere in between, it’s that here-now, there-then have become unmoored – there’s no given place for them to be” (Barad, 2010, pp. 247-248). Not only is the behaviour of the electron dis/continuous, it is also unpredictable and seems to have a mind of its own, jumping without direct discernible mechanical impetus.

Despite this confounding state of affairs, quantum physics is practically applied in a range of technologies including semiconductors, lasers and imaging technologies like MRI and PET scans used in the medical field (Barad, 2007, p. 252).

The concept of the quantum has disrupted our understanding of space, time and matter and the relationship between them. The Newtonian view of matter was one of individuals with inherent properties there for the knowing, there for the taking. Matter is discrete, time is continuous. Place knows its place. Time too has its place. Nature and culture are split by this continuity, and objectivity is secured as externality. We know the story well, it's written into our bones, in many ways we inhabit it and it inhabits us (Barad, 2010, p. 249).

The invitation to re-think time, space, matter and cause and effect requires a profound ontological shift.

Lenz Taguchi discusses pedagogical documentation in the light of a past/present co-existence:

In terms of action, you document what happens, and then you lay out the documentation on the table to re-visit, re-live or re-enact and unfold some of the multiplicities and differentiations of the event, but instead of thinking of such action in terms of a progression from past to present to future, we think about it as an ongoing duration of the event (Lenz Taguchi, 2010, p. 95).

Such a sense of duration sets up a dynamic relationship between past, present and future. Duration, for Deleuze and Guattari, is not the abstracted time of individual, successive, discrete moments or the movement of hands on a clock, but rather actually experienced time in which the whole of the past co-exists with the present and with the virtual. The intensity of experience is what "makes time present" (Massumi, 2015, p. 61) and it is the "affective tonality" that links and "envelops groupings of them", creating a sense of duration.

In chapter eight I play with Barad's notion of spatial, temporal, material diffraction. The three separate notions of space, time and matter do not exist in Barad's posthumanist quantum physical world. They are entangled and intra-relational. The present (of a particular space) is produced by and with the past and cannot be separated from it. Similarly, space does not wait in empty anticipation for material to occupy it. We 'know' the phenomena we are part of through our relational, implicated experience of an entangled spacetime mattering. According to Barad, each moment is "a diffracted condensation, a threading through of an infinity of moments-places-matterings, a superposition/entanglement, never closed, never finished" (Barad, 2014, p. 169).

I temporally diffract with the space and place of the research site. If pasts are always present in the sense that "the world 'holds' the memory of all traces; or rather, the world *is* its memory" (Barad, 2014, p. 182), and the present is the product of so many pasts, then mapping genealogies is important when paying attention and doing justice to the realities of the now. The urban park space is a vibrant assemblage of stories and events that cut across time as a chronology. These stories and invisibilities are part of my, and my human and more-than-human companions' worlding and becoming-with. My work is an effort to produce, with this particular experience of Johannesburg (with a preschool and a park), subjectivities of belonging, ownership and inheritance and more ethical relationships of response-ability.

In opposition to fixed academically justified and linear, goal-orientated models of education, the 'material turn' invites our attention to the spaces in between and among the binaries that persist in our commonly constructed subjectivities and demands an awareness of the unfolding of events and relationships. A relational materialism differs in important ways from the dialectical or historical materialism of Marx, as discussed in chapter two, and more popular conceptions of materialism as consumerism. The relational materialism that Lenz Taguchi and Hultman work with in their intra-active

pedagogy draws from and connects with posthumanism and feminist poststructural positions (Hultman & Lenz Taguchi, 2010, p. 526; Frost, 2011). Phenomenologist Merleau-Ponty is a significant influence on these developments – a move away from the centrality of language and interpretation to the importance of direct engagement with the world (Davis, 2004, p.146). Posthuman thinkers, like Deleuze and Guattari, move away from phenomenology's embodied subject to include the notion of non-human affect (Hetrick, 2014, p. 212). Humans are only part of a more inclusive play of affect across different kinds of bodies, inorganic, organic and anthropomorphic in an emergent becoming rather than determined end point or resolution. The human knower is not the touchstone of this epistemology. The concept of worlding introduced above locates the human in and among the emerging knowing of an intra-active worlding world or in a Deleuzian sense, an emergence on the plane of immanence.

So, my third teacher, even as a metaphor, loses definition more and more and takes on the distributed subjectivity of worlding (as names on a page, as waste paper blowing across a park, and as memories of lived injustices). The metaphor of third teacher in a humanist ontology would separate the teacher from the learner, the learner from the knowledge, the knower from the known. In the notion of worlding, the learner is part of the world making itself known, one part to another: a decentred learnerteacher without organs.

Rhizome and nomadic pedagogies

How do we talk about knowledge in this paradigm of posthumanism and the material turn? Deleuze and Guattari propose that knowing and learning happen in the way that rhizomes sprout: in multi-directional and unpredictable ways. The rhizome presents an alternative to the arborescent tree image of thought in which knowledge conforms to structured hierarchical tiers of ordered categorization. Relating this also to the way we conceive of the human brain, they suggest:

Thought is not arborescent, and the brain is not rooted or ramified matter. What are wrongly called 'dendrites' do not assure the connection of neurons in a continuous fabric. The discontinuity between cells, the role of the axons, the functioning of the synapses, the existence of synaptic microfissures, the leap each message makes across these fissures, make the brain a multiplicity immersed in its plane of consistency or neuroglia, a whole, uncertain, probabilistic system ('the uncertain nervous system') (Deleuze & Guattari, 1987, p. 15).

Aiming for thought with no image, Deleuze and Guattari experiment with this image of the human brain that removes any illusion about systematic and sequential process. There are no fixed systems of knowledge, but rather agentic assemblages. There is no direct or exclusive link between sign and signifier, but they are in constant play, and are multiple. Nor is thought dependent on a human subject. As for Spinoza, so for Deleuze and Guattari, thought is an attribute of the world. We think with the world. In two ways: we think by using the world as a tool for thinking with and secondly, we think alongside the world, thinking in the same way as the world does (Holland, 2013, p. 37). Later, in chapters seven, eight and nine when I diffractively rework some of the encounters and experiences from my research encounters, I will consider how I can think with images and words: use them to think with and also to think like them. This thesis does not propose a pedagogical model but asks the question about what pedagogies might emerge when knowing-as-worlding is at the centre of learning, and what these intra-active pedagogies might produce.

The Rhizome and the root tree, and the map and the tracing are described as opposite tendencies, but not mutually exclusive or 'opposites'. They are on a continuum and often in combination. Rhizomatic thought is more experimental than representational:

A rhizome ceaselessly establishes connections between semiotic chains, organizations of power and circumstances relative to the arts, sciences and

social struggles. A semiotic chain is like a tuber agglomerating very diverse acts, not only linguistic, but also perceptive, mimetic, gestural, cognitive: there is no language in itself, nor are there any linguistic universals, only a throng of dialects, patois, slangs and specialized languages. There is no ideal speaker-listener, any more than there is a homogeneous linguistic community. (Deleuze & Guattari, 1987, p. 7)

This image resonates with Malaguzzi's Hundred Languages. Difference is a positive phenomenon and does not represent opposition, lack, or the either/or but rather the "and..and.. and" of multiplicity (Deleuze & Guattari, 1987, p. 25). A concern for identity, essence and definition is replaced with an exploration of difference, variation, relationality and fluidity. Arborescent thought establishes the notion of being and identity, while the rhizome is always in the process of "becoming". For Bohr and Barad, the simplest unit is the "phenomenon", for Deleuze and Guattari it is the assemblage, which they often refer to as the "machinic assemblage"³³.

Pedagogically, the attention to the environment as third teacher in Reggio Emilia is a relational approach to learning. Tiziana Filippini, one of the ambassadors of Reggio Children, has presented on a number of occasions³⁴, a documentation about an engagement with yellow daisies. The documentation is good example of how her and her colleagues' collaborative practice moves away from the 'art' practice of observation drawing - to a connected, affective, relational experience with the daisies in a field. Young daisies, buds, old dying blossoms, the smell of rotting plants, the bees and insects that live with and pollinate the plants all become part of the emerging story. The diversity and variation among flowers (colour, size etc.) and the durational cycles of growth of decay that are visible cause ripples of thought

³³ Both concepts can be seen to relate to Bergson's "ecology of thought" and more generally to the notion of ecology per se.

³⁴ Presentation by Filippini (2015) at Africa Reggio Emilia Alliance annual conference 2015, St Mary's School, Johannesburg.

and questioning among the adults and the children about their own differences and diversity and their own living and dying.

Rhizomatic thought is nomadic and intra-active. Deleuze and Guattari's "nomadic war machine" is a challenge to the "state apparatus" which is sedentary, a system of stability and settlement (Deleuze & Guattari, 1987, p. 384). The "war machine" is not necessarily making war (there are a number of different forms), but this image creates the kind of outsider oppositionality and non-conformity they are envisioning. The nomadic war machine creates "smooth spaces" that are not predetermined or controlled by set laws, patterns or practices (Deleuze & Guattari, 1987, p. 384). The state on the other hand sets up "striated spaces" in which movement is programmed along set pathways. Lenz Taguchi (2010, p. 82) makes use of these ideas in considering the spaces of learning and the practices of pedagogy. Deleuze and Guattari write about composing music as a moving between and combining the two extremes of smooth and striated (between counting and not counting):

(T)he striated is that which intertwines fixed and variable elements, produces an order and succession of distinct forms, and organizes horizontal melodic lines and vertical harmonic planes. The smooth is the continuous variation, continuous development of form; it is the fusion of harmony and melody in favour of the production of properly rhythmic values, the pure act of the drawing of a diagonal across the vertical and the horizontal. (Deleuze & Guattari, 1987, p. 478)

Although striated spaces are usually the ones that suit our predetermined notions and preset arrangements and therefore can tend to stultify or shut down innovation, like all of Deleuze and Guattari's binaries they are not independent, nor are they polar opposites. Lenz Taguchi points out that striated spaces in the preschool context are often safe spaces where there are routines in place and regular practices. These ordering assemblages can create conditions for smoother spaces to develop alongside. Lenz Taguchi

(2010, p. 97-101) differentiates between two ways that she uses pedagogical documentation which are complementary methodological movements that relate to a non-linear notion of time (Lenz Taguchi, 2010, p.90). The circular movement is a slowing down movement in which we re-look, re-enact and map out “some of the structural discursive time-space-place-material pre-conditions as well as the material-discursive turning points in the events” (p. 98). The horizontal movement on the other hand is a speeding up and an opening up to “unthought possibilities” (p. 99). Children need to know that they are “allowed” to think, and not only in “proper, true or right ways” (p. 100).

In the words of Deleuze and Guattari:

To think is to experiment, but experimentation is always that which is in the process of coming about – the new, remarkable, and interesting that replaces the appearance of truth and are more demanding than it is (Deleuze & Guattari, 1994, p.111)

The point of the exercise is to live in intense and lively engagement with the world and our becoming and to take responsibility for the worlds we co-produce.

Onto-epistemology

The Cartesian dissection of ontology from epistemology is central to the physics of Newton, which depends on the fixing of individually defined objects in specific points of space and time (which is also compatible with the atomism theory of Democritus, 460-371 BCE (Barad, 2007, p. 137-138). The plotting of these positions assumes a disconnected subject, capable of ‘objective’ measurement from a place or viewpoint that does not affect the reading. In this view, while we accept that our knowledge of the world is partial, we ‘know’ that a fixed and prior world exists that conforms to a clear set of natural principles and laws which we only need to uncover to get closer to the truth. The world is bifurcated into physical reality on the one

side and 'us' and our mental awareness on the other. There is reality and then there is our human knowledge of it – limited by our human ways of thinking, ways of describing and ways of being in time and space. According to Descartes, we have better access to our thoughts than to the reality we experience.

Working in the same paradigm, the semioticians and linguists of the early 20th century focused on language as the most reliable vehicle for making claims of truth about the world and also for understanding thought itself. Identity is framed as a construction imposed on the material body. The poststructuralism of Lacan, Foucault and Derrida; and the Feminism of Butler and Haraway open up the space between discourse and experience, language and being to make possible the move to the material. While the poststructuralists recognise gender, race and (in the case of Deleuze and Guattari, childhood) as performative expressions of “discourse-knowledge-power” economies it is not clear just how the discursive and the material are connected (Barad, 2007, p. 64). Foucault’s notion of discourse operates in distinct fields and performs as a dividing mechanism (one example is the discourse of mental illness which defines and separates the “insane” from “normal” society). Foucault’s work was radical in its move towards reconnecting body and mind, theory and practice, knowledge and reality. Barad’s agential realism, which builds on the work of Foucault, Butler and Haraway explains how knowing is an entanglement in and with the world, in which choices and “cuts” are made, each of which make a difference (and produce subjectivities) and that those differences matter in far reaching ways. A posthuman conception of these states is of multiple subjectivities made material through particular relationalities and intra-actions where the material and the discursive are mutually co-constitutive. The work of Barad (situated with Haraway in science studies) and that of Deleuze and Guattari (experimental postmodern/poststructuralist philosophers) share a monist ontology and have been put to work in a material discursive assemblage by

early childhood researchers working with feminist, poststructuralist and posthumanist pedagogies and methodologies.

Ethico-onto-epistemology.

For Barad, ethics are not the preserve of humans with a moral conscience. They are the effect of being entangled in relations of co-responsibility. An extension of the notion of onto-epistemology, in which knowing is being, adding the aspect of ethics refers to the already always implicated connections we share with the other parts, spaces and times of our worlds. So being different or 'other' is not what separates us, but what connects us in relations of "responsibility/response-ability" (Barad, 2014, p. 184). The impact of our being in the world requires our accountability for "marks on bodies" (Barad, 2003, p. 817; 2007; p. 394).

Sounds, waves and resonance

Deleuze and Guattari use a metaphor of music to help us imagine the changes in speed and slowness that Spinoza tells us to use to differentiate between 'bodies'. According to Spinoza, things are not recognised in terms of fixed characteristics but rather their capacity to affect and be affected and by their speeds and slowness or levels of intensity. This relational monist ontology that goes against the Newtonian and Cartesian ontologies of fixed physical bodies in plot-able time and space, is one shared by a range of posthumanist theorisations discussed above, but also by a number of "non-Western, indigenous, and less mainstream constructions of knowledges" (Gershon, 2016, p. 76).

It is the notion of resonance or "vibration", also foregrounded by Bennett (2010) that is particularly relevant to Gershon's claim. Gershon (2016, p. 76) suggests that in framing new materialisms as 'new' we are imposing a "silencing -a remarginalization" of relational ways of knowing like those of many Australian first nations and Buddhists (and we can add the Southern

African Khoisan communities) (Giorza & Haynes, 2018, p. 97). In my use of spatialtemporalmaterial diffractions as method the notion of resonance across and among time space and matter offers a different way of co-producing knowledge(s).

The notion of “thinking strings” (Bleek, cited in Rusch, 2016) comes to us from some of the earliest human inhabitants of Southern Africa, the *khoisan*, who we are aware of in their absence and silence and who like many hunter-gatherer societies have/had a worldview that is/was deeply relational: I think because we are ... not... therefore I am as in Descartes’ *cogito*. Their ‘we’ did not set human life above all else. Theirs was/is a much ‘flatter’, less hierarchical ontology of shared existence with things, plants, animals and people. A posthuman position should not be a sentimentalised returning to pre-industrial pre-modern philosophies, but a “re-turning”, “re-diffracting” (Barad, 2014, p.168). There are important ways in which these pre-modern ways of thinking connect with the postmodern and posthuman. The thought-image of thinking strings (Rusch, 2016) associated with the vibrations and resonances of bow strings, thongs, and rock gongs offers an alternative to our inherited Western thought-image which is a predominantly optical one. Connecting linguistic meaning with the sound of words rather than their ideographical representations in this way, “links sound and thought, elevating sound and foregrounding it alongside thought” (Rusch, 2016, p. 7). Not only human words make meaningful sounds, however. Stars, wind, thunder, beating hearts, breathing animals are all connected in multi-directional perception (Rusch, 2016, p. 8).

Consider the notion of sound-as-thinking. Sound waves are not seen but they set up resonances in and among physical bodies (even when they are not heard). Sound waves also diffract in interesting ways. Sound is ‘vibrational affect’ (Gershon, 2016, p. 75), a connector of human and non-human bodies, through which boundaries are made fluid and disordered. As an image of thought and of pedagogy, sound, vibration or resonance is a

productive conceptual tool but also is present in the actually occurring intra-active and diffractive becoming of the world. The working together with park, children, grass, sound, seeds, trees, table, paper, fence, as well as with the hauntings of past events, and of violent acts of division and exclusion disrupted “listening-as-usual” (Davies, 2014, p.25, 34). A diffraction with time, space and matter allowed a vibrational intra-action that was not bound to the speaker/listener binary we usually deal with in pedagogical work-as-usual. The doing and playing with and among materials, bodies, hands, feet, floors, ground, sky and trees, but also memories, histories, critical events, “marks-on-bodies” (Barad, 2003, p. 817: 2007, p. 394) set up resonances and dissolved boundaries between what could otherwise be named, defined and dis(re)membered as isolated bodies producing individual pedagogical artefacts.

My discussion has moved from linguistic meaning, to discourse, to embodied entanglement and vibration. This creates a circle back to the concept of “affect”. Knowing and becoming with the world produces meaning that changes all of the participants, who affect and are affected. For Barad the collective noun ‘participants’ has to include more than the human, and this is where she diverges from Foucault and Butler (Barad, 2007, pp.145-146). What I explore is the capacity of art-based practices like photography and video to offer non-interpretivist vectors for heightened appreciation of affect in the enactments of pedagogy and research (knowledge production). I am drawing on the work of Deleuzian theorist, Elizabeth Grosz who proposes that visual art, which is not limited to human action (Deleuze & Guattari, 1994, p.184; 1987, p. 315), allows for a slowing down of cosmic forces and an extraction of an intensity and resonance from a particular encounter (Grosz, 2008, p.3). Drawing on the writing of Deleuze on the artist, Francis Bacon (in which he quotes D.H. Lawrence on Cézanne) Grosz tells us: “Art is how the body senses most directly, with, ironically, the least representational mediation, for art is of the body, for it is only art that

draws the body into sensations never experienced in any other way, the sunflower-sensations that only van Gogh's work conjures, the 'appleyness of the apple' in Cézanne, the 'Rembrandt-universe' of affects or the meat-sensations that underlies flesh in Bacon" (Grosz, 2008, p. 73). In an effort to escape the "regime of signs" (p. 3), and access some of the intensity involved in the learning process as encounter with material forces, I will engage with these aspects of art-as-research. The photograph as documentation, performs doubly as pedagogy and as research. Artworks hold the moment of sensation/affect and allow us to access again some of its knowledge:

Art "preserves and is preserved in itself [...] The young girl maintains the pose that she has had for five thousand years, a gesture that no longer depends on whoever made it. The air still has the turbulence, the gust of wind, and the light that it had that day last year, and it no longer depends on whoever was breathing it that morning" (Deleuze and Guattari, cited in Wołodźko, 2014, p. 173).



Figure 3.2: An intensity of experience is held in this image of children responding to a 'caterpillar' of light dancing on the wall. In intra-action with each viewer, the photograph has agency.

I am aware that this thesis has drawn me back into the convention of writing, even if images have forced their way in. The interplay of image and word and living have forged the product that still has a life beyond this moment (you reading it, it becoming an academic paper, being read by others?).

I have spent some pages accounting for some of the posthumanist terms I am using in my writing. I want to draw attention to the material-discursive agency of marks on the page as well. Posthumanist writing uses the formal aspects of type as well as the referential meanings of the words chosen to enable words to perform differently and you will have already noticed some of these. The use of the forward slash (/) is often used to express or perform a binary, for example: “theory/practice and discourse/matter” (Lenz Taguchi, 2010, p. 20). When the binary is undone and an intra-active co-constituting ontology is present, then the hyphen can work, as in “material-discursive” (Barad, 2007, p. 146). Barad also uses the hyphen to cut words, as in her meta-textual “dicho-tomy” and “cutting together-apart” (Barad, 2014, p. 168). But then she also uses a forward slash in a way that both cuts and diffracts: “dis/orienting”; dis/jointed”; “dis/continuity” (2010, p. 240). Hyphens also link words that are intra-active: “becoming-with” is an important term that is different from ‘becoming with’. The ‘becoming’ is because of the state of being ‘with’. What is implied is that there is both difference within and difference between. The meeting of the differences between creates the possibility for becoming different with and within. Brackets add a ‘both-and’ action so that “(re)producing” is both producing and reproducing (Lenz Taguchi, 2010, p. 25) and “(im)possibility” is both possible and impossible (Lenz Taguchi, 2010, p. 136). Barad creates the compound words “spacetimematterings” and “SpaceTime” so that their entanglement is indisputable.

I am not able to list all instances and examples of this material-discursive wordplay, but I am inviting you as reader to consider these marks as possibly more than ‘punctuation’.

Can writing escape the “regime of signs” in any way (Deleuze & Guattari, 1987, pp. 111-148)? This has been the experiment that Deleuze and Guattari have offered us in their creative invention of interlinking plateaus, circular form and fictional/theoretical style in *A Thousand Plateaus*. The project of a/r/tography (Irwin & de Cosson, 2004; Springgay, Irwin, Leggo & Gouzouasis, 2008; Irwin, 2013) draws on the work of Deleuze and Guattari and offers an intra-disciplinary practice that has possibilities for producing knowledge in new ways. Experimenting with the parallel and intertwining practices of making material artworks and working with words and writing, Irwin and Springgay (2008) invite scholars to produce materially and discursively their experiences and encounters in teaching, learning and producing knowledge. A/r/tography is one of a number of moves in the field of research methodology that looks to art making as a enactment of “living inquiry” (Irwin & Springgay, 2008, p. xxi; Irwin, 2013, p. 25) that can offer alternatives to word-based and representational research practices. I will consider these in chapter six when I outline my methodological choices for this project.

4. What is art and how can it work? With a short detour to an Italian city

To reopen the future of our planet to all who inhabit it, we will have to learn how to share it again amongst the humans, but also between the humans and the non-humans. (Achille Mbembe, 2015)

The city of Reggio Emilia and how it works in my study

The 'Development Studies' discourse of North and South, rich and poor, developed and under-developed simplifies a complex and interconnected relationship between entangled partners and physical realities. These binaries of difference seem to suggest that the cities of Reggio Emilia and Johannesburg may have nothing in common and little to share. What could a preschool system in a North Italian city possibly have in common with a preschool in a post-Apartheid South African city? This chapter gives an account of the role that Reggio Emilia and its preschool system plays in my research. Its significance works in number of interconnected modes both actual and virtual: the historical and political; the philosophical and the pedagogical.

The Reggio Emilia preschool system and its pedagogy are connected or entangled in more ways than one (in time, space and matter) with the Johannesburg context of my research. Reggio Emilia's contribution to early childhood education plays an important role in my study firstly because it offers an alternative to the modernist and developmentalist approaches to early childhood education discussed in chapter two. According to Dahlberg, Moss and Pence (2013), the pedagogues of Reggio Emilia work with an image of 'child' that is one of "co-constructor of knowledge, identity and culture" (p. 51). Importantly, 'child' is not associated with 'nature' but already connected with and among materialdiscursive assemblages of, for

example, family, friends, school, language, city. Secondly, the political movement that led the opposition to Apartheid, and who until recently, ran the municipalities of Gauteng province (including the city of Johannesburg) developed close ties to the municipality of this Italian city. The friendship between key individuals like Oliver Tambo and Giuseppe Soncini adds a human-relational and intimate connection but it is the force of anti-authoritarianism and defiant egalitarianism that reverberates through time to connect the two places politically. Thirdly, an art-centred practice of teaching and learning that frames my study is foundational to the practice of the Reggio Emilia preschool pedagogy. And fourth, the two cities (and the locality of my study in particular) are home to a considerable community of immigrant families. These realities work together to create an intensified node of possibility for seeing learning differently.

The community of schools that became the *Instituzione Preschools and Infant-Toddler Centres* of the Municipality of Reggio Emilia had their beginning at the end of the Second World War. A number of citizens of Reggio Emilia, a strongly Communist region, were partisans, and directly involved in combat towards the end of the war. The first school at the village of Cella had been built by worker-parents from the rubble of destroyed buildings. Money was raised through the sale of a captured German armoured tank, trucks and horses (Gandini, 2012, p. 29). The municipal preschool system was founded through collaborative efforts led by Loris Malaguzzi and a group of parents, to provide quality child care for the children of working people and grew into a model of early childhood education that is creative, democratic³⁵, inclusive and appropriate to local conditions and history in particular offering an alternative to fascism. The question arises in this writing about how existing, inherited resources are being repurposed for the production of new worlds. How do patterns of

³⁵ The concept of democracy as a pedagogical principle works to enact an egalitarian, participatory, inclusive practice requiring on-going re-negotiation. It does not refer to a centralized system of representation or deliberations towards a fixed majority consensus.

engagement in our shared spaces, especially education spaces, make decolonisation possible? These are questions and ideas about ownership, belonging and care that I explore further with my data creation and diffraction in later chapters.

The Emilio Romagna region in Italy of which Reggio Emilia is a main city, is considered one of the top economic regions of Europe (Community research and development information service CORDIS) even though the rate of growth has slowed down over the last few years³⁶. Italy, like most European countries is experiencing a serious recession. However, the municipality of Reggio Emilia has a legacy of Communist left-wing politics and sees the investment in early childhood as an investment into the 'commons'. It currently spends 29% of its entire annual budget on early childhood education (Tedeschi, 2013). It is interesting to note that the City of Reggio Emilia signed a collaborative agreement with the African Nationalist Congress in exile in 1979 and maintains a relationship of 'solidarity' with the government of South Africa. In a similar spirit of international solidarity and principled commitment to diversity, the city has a much higher percentage of immigrants than the national average of 9%. Currently the figure is about 16%³⁷. Immigrants are chiefly from Albania, Ghana, Tunisia, Egypt, Morocco, and other African states, China and more recently Eastern Europe (Ukraine, Romania, Moldavia). This situation suggests that there are commonalities shared by these two very different cities (Johannesburg and Reggio Emilia) and that the separations and homogenisations envisaged and enacted by Apartheid and by Fascism and Nazism have been disrupted to some extent.

The response to local conditions, histories and people is only a part of what the Reggio approach models. The Reggio Emilia pre-school programme can

³⁶ Similarly, Johannesburg, as the economic powerhouse of the province of Gauteng, contributes about 35% of the country's GDP and draws the highest number of migrants (see 2016 Gauteng Provincial Government Socio-economic Review and Outlook).

³⁷ Council of Europe, Intercultural Cities programme website: https://www.coe.int/Democracy_Intercultural_cities accessed 13/03/2018.

be described as an extensive and durational research project into the role and potential of art practitioners in the learning environment with its *atelier* and *atelierista* system. The system was introduced at the end of the 1960s (Vecchi, 2010, p. 12) by the founder, Loris Malaguzzi. Vecchi expounds on it in her long-awaited 2010 book on the subject:

I will try to argue how sensory perception, pleasure and the power to seduce – what Malaguzzi called the ‘aesthetic vibration’ – can become activators of learning; how they are able to support and nourish kinds of knowledge not based uniquely on information; and how by avoiding simply definable categories, they can lead to the sensitive empathy and relation with things which creates connections (Vecchi, 2010, p.6).

The *atelierista*, is an artist/pedagogue who works alongside the teachers and creates a studio or *atelier* within the school environment. The atelier is increasingly described as a way of thinking more than an actual physical space³⁸. The *atelier* and the *atelierista* are envisaged as a “guarantor for the freshness and originality of an approach to things” (Vecchi, 2010, p. 1). Rather like a large evolving art installation, the learning spaces communicate the centrality of children’s complex ‘thinking work’ to the whole education project going on in the classroom. The use of an artist’s gaze is a profound shift away from the 19th century scientist’s gaze that Montessori employed even though there are close parallels in the practices of observing, listening and recording of children’s responses and activities.

The kind of listening required in an ethically-aware pedagogy of encounter, such as that proposed by Vecchi, in her account of the role of the *atelierista*, above and in the same quotation that opens chapter one of this thesis, coheres with the notion of a sympoietic, posthumanist experimentation. An

³⁸ Demonstration *ateliers* established at the Loris Malaguzzi International Centre are offered to families, local community members and visitors as “playful spaces of research and invention open to people of all ages” www.reggiochildren.it.

openness to the seduction of an “aesthetic vibration” can connect us in an empathetic relationality with human and non-human others.

Much of the writing about the Reggio Emilia theory/practice is framed in humanist, socio-constructivist terms and is concerned with the notion of ‘meaning-making’ and cultural mediation (see for example Gardner, 2012). Rather than taking a solely language-based approach to meaning-making, the Reggio approach refers to the “hundred languages of children”³⁹ and educators follow and support the meaning-making practices of children. Children tend to recruit from the environment whatever is most eloquent for their purpose and constantly switch between modes and expressive ‘languages’ (until they are schooled into using the one dominant, acceptable one- the written, verbal language). As Rinaldi notes:

The metaphor of the hundred languages is represented by the *atelierista*'s professional education, with a background which is geared toward visual languages. The theory of the hundred languages was already emerging in the 1970s and the *atelier* – it may not have been so clear in the beginning - asserted its identity primarily as the place of the hundred languages: the graphic, pictorial, sculptural, plastic, mathematical, poetic languages and much more; including the languages that arise from the dialogue with different disciplines and cultural worlds, as we were to understand better later on (Rinaldi, 2006, p. 121).

The *atelierista* plays a central role, not only because artists have a good command of a range of expressive materials and processes, but to be “guarantor(s) of freshness and originality” (Vecchi, 2010, p. 1) suggesting that a certain kind of artist sees familiar things as if for the first time and

³⁹ The Hundred Languages of Children was the title of a poem written by Loris Malaguzzi. It is also the title of the first ‘Reggio’ international exhibition that went on tour in 1981 and thirty years later is still travelling. It is also the title of a book of essays first published in 1993 by the municipal company, Reggio Children, in collaboration with the North American Reggio Emilia Alliance, now in its third edition (Gandini, 2012). An English translation of the poem is accessible at: www.innovativeteacherproject.org/reggio/poem.php

responds in the moment to the possibilities of the moment and the material. This “freshness” is a disposition that needs further theorizing as it appears to be central to the pedagogy. Its ephemeral or slippery nature and the rigour it demands in terms of fluidity, openness to change and to being affected makes it a difficult pedagogy to describe and enact. Its influence, however, is often dramatic: the accounts of “life-changing experiences” and “conversions” (Johnson, 1999) represent a genuine desire on the part of educators newly introduced to the approach to pass on something of great value, but the enthusiasm can be off-putting to those who are new to the practice or to those on the fringes of the practice. The “freshness” of the *atelier* can be compared to the unpredictability of play: another core element of learning for young children that always risks being managed out of existence (Bruce, 2004; Leach, 2011). A posthumanist reading of the work of the *atelierista* adds depth and complexity to pedagogical relationships and foregrounds issues of ethical response-ability to and with environments and the situations we inherit.

Progettazione

Aspects of Reggio Emilia practice may be familiar to art educators who work in an interdisciplinary way and use contemporary art practices as inspiration for their pedagogies. Art and visual culture education proponents (Rogoff, 1998; Duncum, 2001; Eisner, 2002; Maharaj, 2009; Andrew, 2011) have documented the valuable thinking and learning processes offered by direct engagement with materials and involvement in extended (durational) projects which unfold in their making. It is these kinds of open-ended and recursive practices that embody a welcoming attitude to the unfolding of the two-way conversation between artist and material (Maharaj, 2009, p.2). Multimodal education theorists (Kress, 1996; Stein, 2003, 2006; Olshansky, 2008) have recruited the power of the material and performative affordances of ‘making’ in their literacy and language work. However, Kuby and Rucker (2016, pp. 4-5; 13-14) discover, through their own literacy work with primary

school children, that the multimodal and multiliteracies framing of the pedagogical relationships between human and non-human co-producers of literacy centres the human and their intentionality in the production and design of texts. This is an anthropocentric enactment in which a wealth of unexpected, intra-active richness is lost.

Intra-active pedagogical conversations are potentially an intertwining of the inside and the outside, the seer and the seen (Merleau-Ponty, 1964 and Abram, 1988, cited in Davis, 2004, p. 146) and in other words, the knower and the known (Barad, 1999, p. 3). Acknowledging the agency of the more-than-human welcomes the experience of wonder that accompanies our encounters of new and fascinating experiences, things and places (Dewey, 1934; Greene, 1996; Jackson, 2000). This 'wonder' is the impetus for learning and changes us and our thinking continually.

The Reggio approach does take multimodal performativity out of the silo of the 'art room'⁴⁰ and makes it the centre of an interdisciplinary or holistic learning project. There is a possibility for on-going dialogue between child, children, material, spaces, teachers, *atelierista*, *pedagogista*, parents, community, negotiating, in varying permutations, the unfolding of the project through visual, linguistic, embodied and performative means. However, there is always a pull towards a humanist centering of intentionality and a pragmatic meaning-making impulse that reminds us of our stubbornly persistent anthropocentric epistemologies.

Montessori's inspiration was science – the direct observation of 'nature' and its inherent laws. In periods of sensitivity, children would show an interest in a particular aspect of life, and this would be the cue for the teacher to introduce more of the same or similar concepts and content to make the most

⁴⁰ Focus on 'art making' in early learning often undermines the creative learning project. Modernist 'art-for-art's-sake' practices that impose adult assumptions onto children's complex activities tend to stultify and control rather than free and enliven the learning experience of children (Kindler, 1999; Lind, 2003 cited in Dahlberg & Moss, 2005, p.116).

of and build on this interest (Montessori, 1966, pp. 37-39). This can be seen as the beginnings of the emergent curriculum. Malaguzzi acknowledges Montessori's work, suggesting that her writings should be 'meditated on (in order) to move beyond them' (Gandini, 2012, p.38). Malaguzzi has harnessed the potential of contemporary art practices to create a more open engagement with the world which is less prone to the 'fact' driven curricula that Montessori herself was so critical of. He extends her practice of note-making and observation and rather than focusing on individual children, he promotes the collaborative thinking possible in groups. There is some awareness of the importance of non-interference at critical moments, but the Reggio Emilia theorypractice places the teacher at a closer position as co-thinker with the children. The teachers take responsibility for provoking and extending thinking through questioning or designing tailor-made interventions as follow-up. Both Walkerdine (1990) and Burman (1994) critique the "impossible dream" (Walkerdine, 1990, p. 25) of the modernist 'child-centred' educational project which expects teachers to nurture the independence and freedom of each individual child through "non-interference" while being directly "responsible for children's learning" (Burman, 1994, pp. 165-166).

In the Reggio Emilia approach, the term, *progettazione*, contains within it the process of designing the project collaboratively as you proceed, and while optimising its value for everyone in the community. The teachers, *atelieristas* and *pedagogistas*⁴¹ attempt to 'make learning visible' through on-going interactive (and potentially intra-active) documentation. This documentation enables both reflection on and decision-making about the learning and the learning environment and how to proceed. *Progettazione*, which projects into

⁴¹ Part of the network of municipal early childhood provision, pedagogistas give support and leadership to a group of pre-schools. They all have masters level qualifications in pedagogy.

open-ended futures and is accompanied by on-going documentation, co-constitutes the pedagogy.

In the course of my research enquiry, an engagement with seeds became a major focus for the children in the Grade R group. It began with a routine curriculum theme of Spring in response to which the teacher suggested a walk into the adjacent park to see the spring leaves. The children noticed that in fact while there were indeed new pale green spring leaves emerging, there were quite a lot of dry autumn leaves still hanging onto the trees. We talked about what would get them to fall off and talked about wind. We found seeds on the ground as well, and made a collection of these, sorting them into types. Serendipitously, the following day a strong wind did blow in. Not only did it blow off many of the dry leaves, but also from the west side of the crèche where the municipal swimming pool is situated, it blew in a multitude of winged seeds from a large tree growing in the pool garden (an alien species *Tipuana* from Brazil) (Figure 4.1). These seeds provided raw material for the construction of all kinds of creatures and creations: birds, bees, aeroplanes, flowers, butterflies as well as choreographed object animations. One boy created a story told through a sequence of movements, using both of his hands and an arrangement of seeds and seed pods. It was about mulberries falling from a tree and being picked up and put into a basket (Figure 4.2).



Figure 4.1: Collecting winged seeds.



Figure 4.2: Choreography of mulberry movements.

The materials suggested ideas and motivated focused and purposeful making and storying. The idea of seeds and their rich diversity as well as their potential to grow into new and different plants entered the conversation and motivated a gardening project. A year later, when I

returned to do some Saturday morning art activities, we re-visited some of the documentations of our earlier work via powerpoint. We ate rusks at tea time and the sunflower seeds in the rusks prompted one child to excitedly propose a follow-up seed collecting foray. This durational engagement with seeds could not be anticipated as it depended on an intra-active series of encounters and emergences. This is the way that *progettazione* works as a process of (not)planning.

Documentation

The Reggio Emilia theorypractice grapples with the problem of how to support and mediate the unpredictable processes of learning, “(g)iving voice to the child as a co-constructor of culture and knowledge.... (and) to further challenge children’s processes of learning” (Rinaldi cited in Lenz Taguchi, 2013, p. 72). This is an inversion of the practice of using observation to measure children’s performance against a set of predetermined, expected, predictable achievements. Alongside ‘*progettazione*’ (extended iterative project work), documentation is a key element of the theorypractice. Children recognize and often visually track their own thinking and learning in the physical space of the classroom (Rinaldi, 2006, p. 68). Teachers can reflect on and assess progress but most crucially, use the documentation collaboratively in on-going review and planning with fellow teachers, *atelierista* and *pedagogista*⁴². Parents are invited to follow the developments of the projects by viewing displayed documentations over time. Parent workshops are often part of the learning programme. Parents are invited to collaborate on projects very similar to the ones their children are engaged with. There is a constantly changing balance between the planning, providing, guiding by the teachers and their watching, waiting, listening,

⁴² The *pedagogista* role is played by a municipal deployee who has a Masters degree in pedagogy and supports the work of a cluster of preschool teachers and *atelieristas*, often participating in joint curricular planning processes. These collaborative practices and revolutionary-sounding titles have been adopted and put to work in preschool systems in other parts of the world, as described for example by Nxumalo (2016b, p. 2).

and asking. They negotiate spaces between being and not-being the teacher, disrupting and merging the subjectivities of learner/teacher/researcher.

Lenz Taguchi further theorises the practice of documentation drawing on the ontological immanence of Deleuze and Guattari and the agential realism of Barad. These ideas have been discussed in detail in chapter three, but what is relevant here is that the purpose of documentation in this practice is to allow us to go beyond habitual patterns of thinking to learn and become something new (Lenz Taguchi, 2010, p.94.). An incident from my research instantiates this strongly. The Grade R teacher had invited children to make drawings of two of their peers who had volunteered to be models. The two models were required to strike expressive poses that the other children were then invited to represent through drawing. We talked about the fact that children on opposite sides of the room would see different views. I walked around with my camera on the video setting, hoping to record the unfolding scene in the classroom, views of the developing drawings, as well as conversations going on. I came to a group of boys who were sitting together. I could see that their drawings included more than just a human body. Lawrence's drawing had a grid drawn over it. I asked him to tell me about his drawing. In the general hubbub of the classroom and his quiet voice and possibly his unfamiliar (to me) accent, I couldn't hear him. He repeated his explanation several times and his brother also tried to get me to understand. Eventually he took up his felt pen and added detail to explain through the act of drawing what he was trying to say. What he had drawn was the gate behind him. He had drawn the model in the room as if he was looking in from outside the door (Figure 4.3).

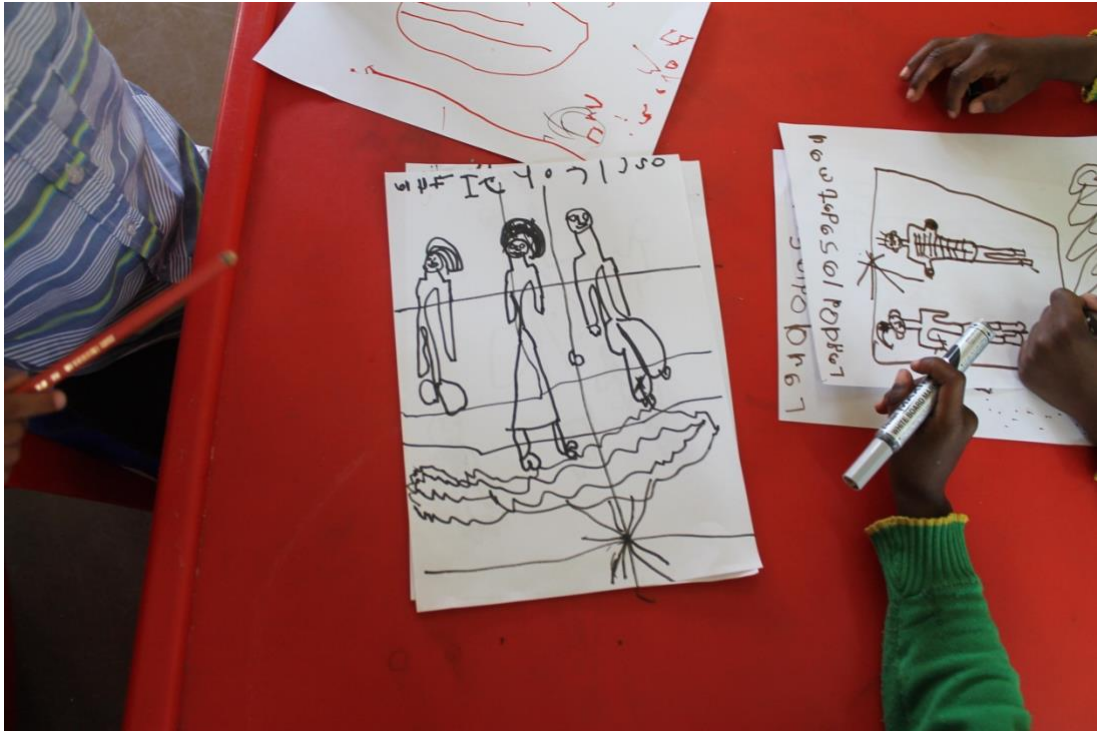


Figure 4.3: A view, through the security gate, of children posing to be drawn.

The door of the crèche building has a security gate which he had drawn over the entire image creating depth as well as an interesting viewpoint. In order to communicate visually with me, he added a lock onto the gate and a key into the hand of the person in the drawing. In revisiting my documentation, I could appreciate my slowness to recognize a very visually competent message. My expectation of the same made me resistant to recognizing an innovative and different response to the drawing task. The practice of documentation and its use in collaborative teacher learning, as well as in planning responsive, relevant and appropriate curriculum allows for the (re)marking and re-turning of such encounters in which the new and unanticipated emergences are noticed. An encounter with difference in this case was made possible through the pedagogical practice of documentation.

Reggio Emilia and teacher education

The issue of so-called 'transferability' of the Reggio Emilia approach has been the focus of a number of studies as the approach is globally recognized

as an important 'rights-based' educational innovation (Gardner in Edwards, Gandini & Forman 2012, pp. xiii-xvi). Project Zero, based at Harvard University in the United States, enjoys a productive collaborative relationship with the Reggio community and the international networks of Reggio Emilia inspired schools around the world is growing year by year. There is a growing interest in the Reggio Emilia approach in South Africa and a local network organization (Africa Reggio Emilia Alliance [AREA]⁴³) was formed in 2010. An increasing number of schools describe themselves as 'Reggio-inspired' and most early childhood education specialists based at the major tertiary institutions are aware of the approach or are actively engaged in sharing and theorizing the approach.

A Reggio Emilia Institute is based at Stockholm University in Sweden where pedagogistas are trained through accredited courses. Early childhood specialists in a number of countries have developed Reggio Emilia inspired approaches: 'Mirrors way', developed by Naama Zoran in Israel (Zoran, 2000), and the 'Mosaic approach' developed by Peter Moss and Alison Clark in the United Kingdom are two such systems (Clark, 2010). Few international studies engage centres in the developing world and in poorer communities – but the work being done by the Latin American *Redsolare* network is an exception and offers interesting possibilities of sharing and collaboration. Malaguzzi and others stress the importance of recognizing the Reggio approach as one that emerged from particular circumstances (Edwards, Gandini, & Forman, 2012, p. 15). The approach is not one that can be transported unchanged into new terrain. Rather, it promotes a responsive attitude to particular circumstances, interactions, and events with a deep ethical commitment to experimenting with the possibilities for local democracies and challenging patterns of inequality. The Reggio approach does not claim to have the monopoly on this way of working and some

⁴³ Africa Reggio Alliance website: <https://reggio.co.za/>

studies from within the Reggio network choose not to name their connection to this Italian system rather positioning themselves in relation to their philosophical and political standpoints (Hultman & Lenz Taguchi, 2010; Johannesen, 2013). Political realities and economic relationships in the member countries are reflected in the ways the theory/practice is taken up.

Reggio and its relationship to 'artist-in-schools'

'Artist-in-schools' programmes that have been introduced in a number of countries around the world have the potential to deeply challenge more stultified forms of teaching and learning through interdisciplinary and socially-engaged practices (Thomson, Hall & Russell, 2006; Hall, Thomson & Russell, 2007; Griffiths & Woolf, 2009). These programmes, however, range very widely in their nature and apart from recognizing that they share some features and concerns with the Reggio approach, they do not form a major part of this study. The Reggio Emilia *atelier* system is very clear about the kind of engagement they expect from the artists who will become *atelieristas*. Vecchi warns that some artists might "not manage to enter into a close dialogue with a pedagogy that embraces the languages of art and is also aware of and respectful of children's strategies" (Vecchi, 2010, p. 36). It is not 'art' per se that will bring the freedom, freshness and openness to learning, but the particular enactment and practice.

What counts as art?

Gaztambide-Fernandez, in his important 2013 article, "Why the arts don't do anything: toward a new vision for cultural production in education", works his way through some complex and far reaching current arguments about what counts as art to whom and how inherited "Eurocentric conceptions" and "liberal humanist discourses" of the arts reproduce patterns of inequality (Gaztambide-Fernandez, 2013, p. 224-225). He acknowledges the work done by Duncum (2001), Carpenter and Tavin (2010), and Freedman (2003) with regard to reconceptualising art education as visual culture

studies.⁴⁴ He himself (a music educationist) proposes a broader interdisciplinary conception of 'cultural production' rather than 'art' or 'visual culture'. The incorporation of locally significant cultural production into the teaching and learning project is what Gaztambide-Fernandez (2013, p. 227) calls for: "the arts should be central to how we conceptualise learning for all students, not because it *improves* learning but because it *is* learning. Opposing what he terms "the rhetoric of effects" in which arguments about the value of art in the curriculum are repeated again and again, he suggests that: "Rather than thinking about the arts as *doing something to people*, we should think about artistic forms as *something people do*." (Gaztambide-Fernandez, 2013, p. 226)

Creative expression and symbolic work abounds in the lives of ordinary and extraordinary people, artists and non-artists alike. Some of these forms fit the commonly held humanist definitions of 'art' and some do not (Gaztambide-Fernandez, 2013, p. 215). Gaztambide-Fernandez believes that art advocacy (what 'art' teaches and why we need 'it' in schools) is not helpful as it buys in to stultified ideas about what counts as 'art' and excludes the more meaningful creative and inventive experiences available to people in and with their everyday lives and local cultures. Deleuze and Guattari tell us that art is not "good" or "bad": "In no way do we believe in a fine-arts system; we believe in very diverse problems whose solutions are found in heterogenous arts. To us, art is a false concept." (Deleuze & Guattari, 1987, p. 300).

I do believe that once we get beyond these limiting definitions and look at how the creative encounters actually work, we can conclude that something *is* doing something to something else: that between the material of the cultural product and the participant, there is a resonance or an 'affect' that

⁴⁴ The historical roots and unfolding of visual culture in art education is described in detail by Freedman and Stuhr (2004) and the emergence of visual culture studies as a distinct field of study within art theory is reflected in Mirzoeff's (1998) *Visual culture reader*.

changes things. Andrew claims that the semiotically bounded multiliteracies discourse in education could be deepened by the addition of an element he calls the “artist’s sensibility” (Andrew, 2011) and I sense that this has resonance with the Deleuzian notion of meaning in material that produces aesthetico-ethical affects in encounter, affecting and being affected (Deleuze, 1988, p. 49). Tim Ingold (2013) writes about the practice of the anthropologist (the participant observer) as being this kind of learning through encounter: “knowing from the inside” (p. 5).

So, central to the work done in Reggio Emilia schools is this thing called art which defies definition as a “naturalistic phenomenon” (Gaztambide-Fernandez, 2013, p. 211), but which may be used strategically and in combination with other “non-art” practices to heighten experience and to decode and re-code commonly held ideas through direct and intense intra-action with materials and spaces⁴⁵.

There have been a number of initiatives in the Gauteng Province to promote the engagement of artists in schools. In 2012, for example, The Gauteng Department of Education introduced its own “arts-in-schools/creative classrooms” policy (Gauteng Provincial Government, 2012) that included artist-in-school type interventions. Not directly inspired by the Reggio Emilia approach, and aimed at formal schooling from Grade R - Grade 12, the policy nevertheless makes space for accessing official support for *atelierista* programmes locally. More significantly, in October, 2017, the Premier of the Gauteng government made a public endorsement of the “Reggio Emilia approach” at a South Africa/Italy Early Childhood Summit

⁴⁵ For example: food and related concepts can be explored through the deterritorialising/decoding/moving away from concerns about ‘goodness’, nutrition’, and functionality through lines of flight enacted by responses to colour and aroma, or sounds of eating. These may be re-territorialised /coded into striations of colour combinations, shapes of vegetables or pasta, attractive place-settings, or rhythms. These ‘codings’ use an ‘art’ language to engage in material-discursive ways with everyday practice.

(Molefe, 2017).⁴⁶ Indications are that efforts are being made by both South African and Italian officials to promote a partnership between The Gauteng Province and the City of Reggio Emilia.

The 'culture' of early childhood education in Reggio Emilia is not monolithic. It has evolved and continues to evolve through the active participation and intellectual engagement of scores of practitioners, academics, municipal officials, teachers, *atelieristas* and parents. It is not a fixed set of rules or practices and is open to change and difference. The fact that it is an official municipal programme and yet succeeds in remaining fresh and free from stultification is perhaps the most surprising part of the story.

Finding materials

Similar to the "what counts as art" question is the "what counts as art materials" question and the provision of adequate art materials and equipment is an obvious next challenge for policy and implementation. Ideas about what constitutes a 'rich' environment is challenged by innovations seen in otherwise 'poor' schools (Taylor, 2006; Kamper, 2008) in environments commonly designated as "under-resourced" (Andrew & Neustetter, 2008). Limited funding in pre-schools (and an ethical response to waste, found materials and the environment) has the potential to stimulate creative use of found and waste materials for creating stimulating learning environments. The Reggio Emilia schools in Italy have developed a recycling system (REMIDA) that makes industrial off-cuts and other waste available to pre-school teachers at centralized depots run by volunteers. Odegard (2012) theorises the use of "junk materials" using the Foucauldian notion of heterotopia and the Deleuzian concept of lines of flight. Her research with

⁴⁶ Report available at: <http://www.bridge.org.za/reportopinion-italy-sa-ecd-seminar-rex-molefe/>

young children and junk materials suggests that this kind of material offers open, uncategorised possibilities for inventive encounters and engagements with and among children and seem to be able to short-circuit adult pedagogical expectations, prescriptions and their need to understand. The use of waste and found materials as learning resources alongside the digital documentation processes available to children in the Reggio centres and schools mirrors the visual culture contexts that pervade urban life in the 21st century. The approach therefore offers at an early childhood education level, the possibility for an exploration of ways of working within visual culture practices as opposed to modernist models of 'art education' that ignore contemporary and local cultural forms and discourses.

The intra-active pedagogy proposed by Lenz Taguchi depends on an "ethics of immanence and potentialities" which values "inter-connections and intra-actions in- between human and non-human organisms, matter and things, the contents and subjectivities of students that emerge through the learning events" (Lenz Taguchi, 2010, xvii). This accords with the "ethics of an encounter" expounded by Dahlberg, Moss & Pence (Dahlberg et al, 2013, pp. 40-45) and can be seen operating in different ways, between and among children, between teacher(s), researcher and children. Encounters with moments, places, objects and with the complex inter- and intra- activities that emerge. Davis relates this pattern to the concept of 'ethical action' as emerging in ecological discourses (Davis, 2004, p.231), and articulated in Felix Guattari's three ecologies of the social, mental and environmental (Guattari, 2000). Considering an ethical response to current realities of Early Childhood Education in South Africa I propose that instead of looking for answers to performance problems in teacher inability and lack of knowledge (Taylor, 2013), key learning is to be gained from working to develop the 'listening' pedagogies of Reggio and P4C (explored further in chapter five), and to create opportunities for educators and parents to enter into continually negotiated relationships and subjectivities with the children in

their care. The research is concerned not with finding ‘what works’ (Biesta, 2007), in order to prescribe better programmes or alternative performance criteria but rather with offering examples of already occurring ethical encounters that take into account human and non-human players.

Citizen suburb

The city of Johannesburg, and more particularly the inner-city suburb in which my study takes place, is an important agent in the story of my research. The fact that this suburb has attracted migrants and refugees for most of its life has made it what it is today and will create futures that are not likely for other places. Threads of connection enabled by this geographical place are present in my work on this research project.

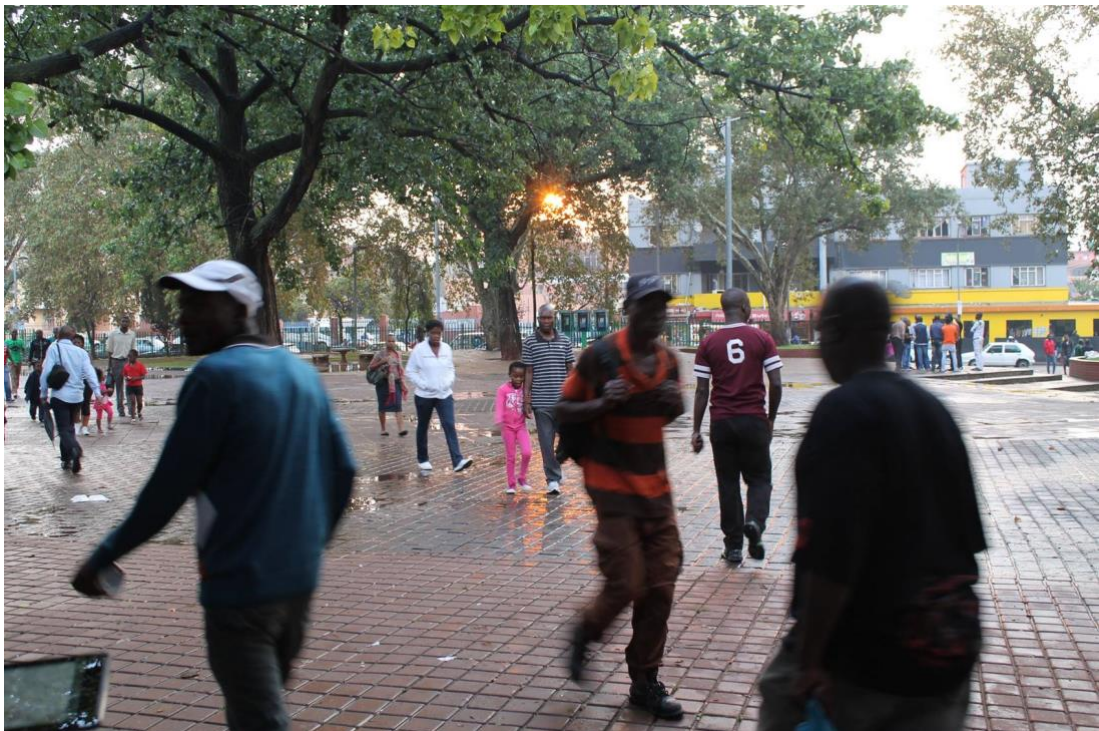


Figure 4.4: The public park as thoroughfare.

I am connected in many different ways to the people, places, things in this area. Friendships, political ideas, dependencies, commitments and habits tie me into patterns of living and being in this place and enable my learning and changing (becoming). One example of this was a connection made through

my involvement in a local community development initiative which included an organization of Congolese refugees.

In early 2011, I led a 'community of enquiry' (this pedagogical approach is discussed in detail in the next chapter) with members of a gathering of non-governmental organisations in Lubumbashi. We used a photograph by a local photographer, Georges Senga, as the starting point or provocation for our thinking together (*Footprint* Fig 4.4). The photograph shows a disturbed piece of ground. Visible in the picture are a playing card, a bank note, a chicken feather, sand. The enquiry which emerged from the group revolved around ideas about what lay beneath this visible surface on which some fracas had obviously taken place. The issue of colonial pillage was the focus of the questions raised. Why were the people of the DRC so poor when right beneath their feet, there lay untold wealth?



Figure 4.5: *Footprint*, by Georges Senga, 2013. Courtesy of the artist.

Senga's framing of a small seemingly arbitrary piece of ground seemed to me like a powerful methodology for thinking with the world and resonates with Jane Bennett's vital materialist reading of some Baltimore litter, "a dead rat, a

plastic cap, a spool of thread” (2010, Bennett, p. 3) and with Barad’s notion of temporal and spatial diffraction: “spacetimemattering” (Barad, 2014, p. 168).

Could this methodology help me to think with my small place: the preschool near the park in the Johannesburg inner city suburb? Could a framing of sections of this place help me to think with the ground, the earth, the surface, and what it hid? (Figure 4.5). What layerings, both(multiply) spatial and temporal (and material) could prompt me to some new ways of thinking and being with the world? These questions are explored with some documentations (data) in chapter nine.



Figure 4.6: Marks and traces left by the human and nonhuman participants in pedagogy.

Achille Mbembe (2015), when addressing students at the start of the Rhodes Must Fall uprising, spoke of the need to renegotiate public space. A brief account of this series of events is useful for contextualising Mbembe’s call which resonated with some of my emergent data.

A remarkable expression of active citizenry marked the year of 2015 in South Africa. Students at the University of Cape Town called for the removal of a large and imposing statue of a seated Cecil John Rhodes positioned at the main entrance to the university campus. It sat at the base of the steps and

piazza below the main building, Jameson Hall (a building styled as a classical Greek temple). Rhodes, part of whose considerable fortune went into creating the university and established ties with Oxford University in his home country and centre of the envisaged colonial empire, was the patron of the University of Cape Town until his death. Rhodes owed his wealth primarily to his monopolization of diamond production and distribution through his DeBeers company. His hagiographies claim a visionary commitment to the extension of a unifying imperial project and a progressive vision of progress and industry. More recent and alternative histories depict a ruthless and amoral businessman who conflated personal and political ambition for the amassing of wealth and power. In 1894, as Prime Minister of the Cape Colony, he introduced the notorious Glen Grey Act which effectively forced Africans into wage labour on the mines. As for their status as citizens, he announced that “the natives are in a sense, citizens, but not altogether citizens ... they are still children....”⁴⁷. Conflating children and the colonised in this way is only possible in a world in which ‘man’ and ‘white man’ specifically is recognised as the only truly ‘human’ subject. In their protest against colonised education and the assumptions of privilege and whiteness, the Rhodes Must Fall movement were drawing attention to these humanist genealogies underlying the academy.

The Rhodes Must Fall movement occupied the administration building of the university for three weeks until the statue was removed. Other demands relating to student accommodation, increased employment of black academics and the in-sourcing of all workers remained partially unresolved.

The Rhodes Must Fall movement lit a spark of protest and anti-colonial mobilization among students across the country and even to Oxford University in England. Initial formations of diverse groupings expressed an intersectional analysis of dominant power structures calling for a

⁴⁷ Rhodes’s 1894 speech in parliament www.sahistory.org.za/people/cecil-john-rhodes

commitment to a knowledge production and university management framed in new ways. Much of this debate continues in different forums and is broadly associated with the 'Fees Must Fall', or 'Fallist' movement.

Students aligned with the ruling African National Congress have been accused of undermining the movement and turning the struggle into a narrower focus on nationalist and elitist demands. Nevertheless, it is recognized as something of a turning point in ideas about active citizenry and political agency (Chinguno, Kgoroba, Mashibini, Masilela, Maubane, Moyo, Mthombeni & Ndlovu, 2017).

Mbembe's appeal to the students at the height of the protest was for an ongoing decolonization of public space: a move they had started with efforts towards the co-production of a different kind of university.

By decolonising our public spaces we would be changing the patterns and habits of ownership and entitlement we have inherited. What could this mean for children in Johannesburg? What access do children have to public spaces? How welcoming and accessible are public parks and playgrounds? To what extent do children co-own these spaces and what responsibilities of care does ownership entail? These questions were relevant to my study especially because the preschool I was working in makes use of a nearby public park. I knew that most preschools in the area did not share the ease of access to such a large and relatively well managed open green space. The lessons from the city of Reggio Emilia are strong on the insistence that the environment is our teacher and that our own place and our community if listened to, will guide us to the most appropriate and authentic style or system of early childhood education and care. The common public spaces of parks provide a crack through which energies can flow between inside and outside; private and public; school and home; work and play.

Politics and desire

The Reggio Emilia early childhood system works as a political and ethical project responsive to the complex histories and geographies of their presents. There is recognition of all children as members of a social and political constituency and citizens in their own right capable of ethical choices. The unique and generative role of the *atelier*, the *atelierista* foregrounds the role of connection, the senses, affect and desire.

The postmodern philosophical position expressed in the writings of Rinaldi and other current theorists associated with the municipal programme and the public private partnership of Reggio Children explicitly decentres the child. Scholars and pedagogues working with the ideas set in motion by Reggio Emilia have moved a far distance from the notion of child as the individual learner of cognitive science. Taking up from where socio-constructivism leaves us (with a still hierarchical onto-epistemology that foregrounds the intentionality of thinker, mediator, facilitator, designer, writer) a re-framing of pedagogy as a posthumanist experimental encounter invites us to consider the learner (ourselves) as part of any number of possible phenomena but always paying attention to the ways in which our entanglements bring responsibilities. In each diffractive and intra-active encounter all parts affect and are affected by one another. There is no world that precedes these encounters that is then brought into focus or revealed through representation. So, “the ethical subject is not the disembodied rational subject of traditional ethics but rather an embodied sensibility, which responds to its proximal relationship to the other through a mode of wonderment that is antecedent to consciousness” (Barad, 2007, p. 391)

Deleuze, whose monist ontological worlding inspires so many contemporary posthumanist scholars, calls us to eschew the intention, thought, identity and interpretation of the human participant as the beginning of all attempts to philosophise (Colebrook, 2006). Perception is life. There is not first life and

then the perception of it (p. 5). But to philosophise is the capacity for life to create new concepts through encounters with what it is not; with difference.

Lenz Taguchi (2016), building on Colebrook's Deleuzian notion of "concept as method", follows the neuro(n) to learn from its insistent presence in the discourses of early childhood. Performing a "doubled movement of a tracing-and-mapping exercise" (p. 221), Lenz Taguchi maps the concept's workings in the producing of particular educational and research interventions but also follows "line(s) of flight" to enact "asignifying ruptures" to move away from "taken-for-granted and common sense significations" (p. 220). Semetsky (2009), also working in a Deleuzian paradigm offers an image of thought that puts percept, concept and affect into an inseparable triad. She proposes that affect provides the in-between of percept and concept, or the intensity of sensation that produces thought.

The posthumanist challenge to multimodal and multiliteracies discourses is precisely this foregrounding of "sensibility" (Andrew, 2011), resonance, seduction, and affect untethered from purely human experience. The semiotic underpinnings of the above discourses make human intention, design and expression their focus and purpose. Meaning, in a posthumanist ontology is found in relationality: "Meaning is not a property of individual words or groups of words but an ongoing performance of the world in its differential intelligibility" (Barad, 2003, p. 821). The physical and the conceptual, or the material and the discursive are bound up with one another and continually co-constituting one another.

My use of 'concept as pedagogy' builds on the notion of concept as method and is an invitation to follow the concept or the idea, rather than 'the child' of a 'child-centred' pedagogy. The next chapter is an extended exploration of ways of working with concepts, taking the lead from the theory and practice of philosophy with children. Some of the concepts (all connecting rhizomatically to the concept of environment) that are taken up and followed

in rhizomatic ways in the later chapters of the thesis include the concepts of names and naming and how these connect with ideas of literacy but also with relationality (chapter seven); the concepts of fairies, mermaids and their power to make children into storytellers (chapter eight); and the concepts of the commons, of violence and of taking care (chapter nine).

Current political and environmental conditions require a new attentiveness to instances of injustice, lack of care or indifference. We also require new pedagogies. We need to decentre the human subject and pay attention to the agency of matter (living and non-living), space and time and its discursive power to intra-act, diffract with one another and continually create new worlds. The loss of our central and commanding position in the uni(pluri)verse does not absolve us of responsibility. A posthumanist ethico-onto-epistemology (an always already implicated knowing-in-being) invites us to become more aware of our connections and our responsibilities. It makes us able to respond and therefore become “response-able” (Haraway, 1997; Barad, 2007)

Reggio Emilia and Johannesburg are entangled in temporal, spatial and material ways. To pay attention to these connections and what they do, is to remain open to local possibilities for change and difference and to co-produce a phenomenon of ethically response-able pedagogies.

5. Philosophy *with* children, the community of enquiry and the centrality of concepts

Walter Kohan (2014a, p.3) uses the term, “falling in love” when he talks about his relationship with philosophy. When I consider that the word ‘philosophy’ contains the word love, I wonder why this should seem unusual in an academic text? Our enlightenment legacy insists that mind and body, head and heart are separated. Having separated our thought from our feeling bodies, there is an obvious extension to separating ourselves as individual thinkers from our fellow co-thinking humans and from our ‘companion species’, surroundings, and environment. This enlightenment and modernist tradition picks up and reinforces Platonic notions of knowing and being. In contrast, Kohan, in the company of a growing community of poststructuralist and posthumanist thinkers, challenge this position through materialdiscursive engagements with the world in its own becoming – of which we (in our mindbodies) are an integral part (Haraway, 2016, p. 30; Braidotti, 2014, p. 60; Barad, 2007). For Kohan (2014a, p.39), “To learn has to do with loving and dying”: meeting the other in oneself and self in the other and losing one’s sense of homogeneity⁴⁸. Like Kohan, I ‘fell in love’ with philosophy with children although in a western academic sense I was not already a ‘philosopher’ like Kohan is (I have not formally studied academic philosophy as a subject). I had come to the community of enquiry and philosophy with children via my search for art education pedagogies that

⁴⁸ Loving is also an important motivator and a connector much in the same way that the concept of ‘desire’ works in the writings of Deleuze and Guattari. It is an a-sexualised love and connects with Spinoza’s notion of affect (the capacity to affect and be affected). Vecchi (2012, p. 310) sees beauty and aesthetics working in this way as a “connector”. Drawing on the thought of Malaguzzi and Bateson, she sees aesthetics as creating “new maps that can combine logical and emotional processes, and connect technique with expressiveness” (Vecchi, 2012, p. 310).

could offer dialogical and interactive practices with less hierarchical power/knowledge relationships. What began as a humanist concern for democratic practice and empowering relationships has led to an awareness of the classroom as assemblage (Deleuze & Guattari, 1987; Hellman & Lind, 2017) or entanglement (Barad, 2007), or a “work of art” (Guattari, cited in Andrew, 2011, pp. 11, 12, 25). The ‘flattened’ ontology of posthumanism puts discourse and material, mind and matter on a level and interdependent (Frow, 2001; Hultman & Lenz Taguchi, 2010; Lenz Taguchi, 2011; MacLure, 2013). Human and non-human co-create the becomings of new concepts whose meanings are contingent and tied to direct experience and affect (Murriss, 2017).

Dialogue and negotiation have become important processes in art classrooms, since the emergence of postmodern practices in which the space between the verbal and visual is increasingly significant (Rainey & Holland, 2000; Maharaj, 2009) and the relational ontologies demand an aesthetics to fit (Irwin & O’Donoghue, 2012; Bourriaud, 2002). Relational aesthetics moved attention away from static art objects to active spaces between maker and viewer, and often viewer became co-creator (Podesva, 2012). The relationality, it must be said, focuses on the *social* connection between the people involved. In these enactments, artmaking becomes pedagogy. Formal assessment processes in the arts have also been challenged by more interdisciplinary and collaborative approaches that offer more meaningful learning experiences for students (Newfield, Andrew, Stein & Muangedzo, 2003). Teacher education, however, lags behind the practice and state curricula tend to perpetuate the pattern of “evaluation from above” (Rainey & Holland, 2000, p. 40).

Increasingly my engagement with contemporary art-making is through my philosophical wanderings motivated by my interest in early childhood education and the ‘decolonising’ project. My interest is increasingly in public art projects that link the aesthetic with the ethical.

I find myself moving some distance away from a clear identification with the role of art educator to continue becoming artist/educator/researcher (Springgay, Irwin, Leggo & Gouzouasis, 2008). I need to continually decode that reality and that subjectivity and recode it in newer ways. Diffracting art and education through the philosophy with children lens creates a more 'response-able' pathway through the entanglements of preschool life and "living and dying well together" on the planet (Haraway, 2016, p. 29).

This chapter is the last one in the sequence that lays down the theoretical framework of my study and although it is a separate chapter, this one connects closely with the Reggio Emilia chapter (chapter four) as well as the posthumanism one (chapter three). It also connects closely, as do the others, to the next chapter on methodology (chapter six). The threads that run through and connect all of these sections of the thesis are those of emergence, immanence, affect and enquiry, all features of a relational ontology.

Philosophy for/with children and working philosophically with children.

Thinking about the world and our place in it has been the concern of philosophers for centuries (Foucault, 1988). The work of the Philosophy for Children (P4C) movement is to create a space for people of all ages to play with concepts and ideas in a creative, collaborative, critical and caring way (Haynes, 2002, p. 43; Haynes & Murriss, 2012, p. 99). The approach was initially developed by Matthew Lipman and Ann Margaret Sharp in the United States in the 1960s. Developed as a formal curriculum, the approach made use of carefully constructed narratives and guided exercises for enquiry in the classroom (Sharp, 1984; Lipman, Sharp, & Oscanyan, 2010). The Institute for the Advancement of Philosophy for Children (IAPC), the centre that Lipman and Sharp established at Mendham in Montclair, still offers residential trainings in the practice of Philosophy with Children to teachers from the United States and from countries all over the world. Their

approach is based on the Western philosophical tradition and aims to give school children an experience of thinking through many of the key philosophical questions that have become central to academic philosophical study.

Drawing directly on the work of Dewey (with whom Lipman studied), P4C creates the possibilities for learning as intense experience (Leckey, 2017, p. 138), reconstructing the 'subject' of philosophy as "public and collaborative construction of meaning through face-to-face dialogue" rather than "private construction or interpretation of formal written theses" (Lewis & Sutcliffe, 2017, p. 201). The curriculum is made up of specially-made short fiction texts that are followed by a series of provocative questions around which classes or groups conduct an enquiry. Since the deaths of Lipman and Sharp, the programme has been reassessed and significant changes made (Vansielegem & Kennedy, 2011). The *Routledge International Handbook of Philosophy with Children* published in 2017 is a useful collection of accounts of current theory/practices from around the world (two chapters are referred to above).

While some approaches to P4C are more structured than others to scaffold the understanding of key philosophical concepts, the central element deciding their success is the skill and disposition of the teacher in the early stages, and the collaborative commitment of the group as they become a community of thinkers. Murriss, and later in collaboration with Haynes, developed the practice and pedagogy of P4C to be more multimodal and visual, including drawing and a range of non-language-based methodologies. Narratives and the visual imagery of picture books are important aspects of their approach to philosophical enquiry (Murriss, 2000; Haynes, 2002; Haynes & Murriss, 2012). Sara Stanley whose practice is grounded in her interest in children's literature, works in Norwich UK, with children aged between three to five years. She has built on the work of Haynes and Murriss and developed an approach that she calls "philosophy

by children” (Stanley & Lyle, 2017). Recently she has extended the reach of her work to refugee centres in Europe and preschool sites in South Africa including ECE centres in townships and informal settlements in her regular work with PRAESA.

Considerable effort has gone into developing and extending the guidelines for provocative and sensitive facilitation of this process of enquiry and a large literature is available on the subject both from Lipman and Sharp but also from associated scholars and practitioners including Maughn Gregory, Laurance Splitter, David and Nadia Kennedy, Walter Kohan, Karin Murriss, Joanna Haynes and Phillip Cam. They continue to promote and extend the programme of P4C internationally.

Some of the scholars and practitioners in the field have moved away from the set texts and curriculum specially written by Lipman and Sharp. Most importantly, it is the generation of one’s own questions that takes centre stage in the process. As Kohan (2014b, p. 8) and others clearly point out, although Lipman placed importance on questions and centred his curriculum around questions, he undermined his own project by creating a programme in which the questions are pre-set for the participants (Murriss, 1997; Haynes & Murriss, 2012). Since Kohan’s (1995) critique of the Lipman curriculum for its seemingly neutral notion of democracy, and its avoidance of topics relating to political issues, contemporary advocates of the approach have taken on the challenges of race, whiteness, power, and gender as they emerge in the community of philosophical enquiry (Gregory, Haynes & Murriss, 2017).

Troubling democracy

Current critiques of western democracy coming from Marxist, feminist, postcolonial and ecological scholars draw attention to the direct relationship between American and other western democracies and the advance of global capitalism and the creation of an ecological disaster (Cock, 2007; Pillay, 2013;

Burawoy, 2013). The rational, evidence-based justifications for developmental programmes often mask the exploitative, extractive, hegemonic agendas of powerful nations. Experts from outside are trusted with decisions that affect lives and livelihoods in profound ways. Over-confidence and certainty of “mechanical transmission of innovation from the top down” needs to give way to “democratic experimentalism” (Unger, cited in Moss, 2014, p. 137). Even when ‘participatory’ processes are planned into development projects, they happen within very limited parameters of possibility (Cornwall & Gaventa, 2001, p. 34). The kind of citizen we need now is unknown. The kind of systems that we can invent to better manage the earth and the sharing of its resources are also still to be and always contingent. The predetermined vision of modern western democracy is a template for a colonising programme: the end is in sight – it is teleological. A preferred form of democracy according to Mouffe (2000) would include an anticipation of conflict: an agonistic pluralism, rather than a majority decision or consensus. Haraway (2016) asks us to think in “response-able ways”. We must think – not with the “human exceptionalism and utilitarian individualism of classical political economics”, but more like a compost pile of fermentation in which we find ways of “living and dying with responsibility in unexpected company” (Haraway, 2016, p. 38). Child, as one of the ‘others’ of the enlightenment humanist project, is included in this unexpected company.

Haraway makes the important observation that neither Marx nor Darwin saw history proceeding in a consecutive and predictable way. Marx did place ‘Man’ in the centre of his theory, as “the motor of human history” (Braidotti, 2013, p. 23) but he did not propose a programme: “Marx was not a Marxist” (Wheen, cited in Pillay, 2013). The process of natural selection which is at the heart of Darwin’s theory follows no programme of ‘progress’ or ‘development’ towards a higher state (Gould, 2003, p.245; Haraway, 2016, p.50). The element of chance and the complexities of entangled existence

which may include conflict and confusion create unexpected events. So while the theories of both Darwin and Marx depend on the binary of nature and culture and are solidly modernist in their notions of progress and developmentalism, they offer a non-teleological vision of the universe.

Kohan and his colleagues introduce this sense of the unexpected and the open-ended into the practice of P4C. They keep re-turning to the practice of questioning and wondering.

Deleuze and Guattari (1987) in 'A thousand plateaus', the second book in '*Capitalism and schizophrenia*' enter the complex machinery of capitalism and its genealogy to propose a nomadic philosophy to counter what they call 'State philosophy'. The wild and unpredictable tendencies of late capitalism are part of the way our world is operating. How best to respond to this ever extending machine? Marx's dialectical theory of historical materialism had to be complexified to provide the tools for thinking about advanced capitalism. As Massumi (2005, p. 20) discusses, in late capitalism, the state has relinquished institutional power (prisons are privatised, mental hospitals are replaced with community home-based care projects). Capitalism now uses the power of markets to produce variety. New niches for generation of profit are generated, no matter how short-lived or bizarre. Braidotti (2013, p. 56) tells the story about the philosophical work that the French Marxist philosophers in Althusser's circle were doing in the 60's and 70's to resolve some of the "contradictions of Marxism". It is from within Marxism that the many notions of new materialism and vitalist materialism emerge. Moving away from a dialectical ontology, philosophers like Deleuze, Macherey and Negri propose a positive and affirming monism based on the ideas of Spinoza (Braidotti, 2013, p. 56).

A monistic versus a dualistic (Cartesian) ontology sees all matter as one intra-acting system. The world is an interlocking system of codes that self- or co-manage. Humans make up one contributing part of that complex

emergent system. A monist conception of the world invites an affirming and hopeful attitude, if we can move beyond the dialectic of thesis and antithesis, as the thought we think with. Braidotti (2014) compares the two ontologies in terms of their ideas about power. The dualist view has a negative sense of power as control and effecting inclusion or exclusion (as with schools, prisons, asylums). This is 'Potestas'. Potentia on the other hand is a positive sense of power as possibility. As Foucault puts it: Power is distributed, it moves and flows and can be used productively (Braidotti, 2013, p. 26-27). When both, Potestas and Potentia are used to think with, theory does not stop with a disabling critique (Braidotti, 2013, p.141). Thought takes on a fluid and open-ended movement. Deleuze and Guattari challenge "the traditional image of thought" (Deleuze, 1994, p. xvi) and propose a vegetal one: that of a rhizome that sprouts in all directions and pops up in unexpected places. The rhizome replaces the arborescent image of thought that we are familiar with: the single trunk of thought that branches in sequence creating finer and finer distinctions. Thesis and antithesis fits this tree image. Thought links directly with knowledge, so if we use this image, we can see that knowledge also breaks free from the predictable fixed categories of "normal" science as we know it (Kuhn, cited in Urban, 2014). In the descriptions of "normal" science, thought and rationality operate as organisers of empirical practice and experience in the world. Olsson (2009) draws from both Deleuze's (1994) *Difference and repetition* and Deleuze and Guattari's (1994) *What is Philosophy*, to bring an alternative notion of thought into pedagogical work in early childhood settings. Thought in this philosophical sense does not represent, discover or organise: it *produces* (Olsson, 2009, p. 94).

Malaguzzi's image of the "tangle of spaghetti" (Moss, P. 2012, p. 359; Murriss, 2016, p. 178) works in the same way: stick your fork in – when you encounter some other part of the world (other than yourself), knowledge presents itself in uniquely connected ways – there is no neat categorization into subjects,

fields, topics or disciplines. Our thought follows the pattern of our experience of knowledge. There is little use for a pre-existing hierarchy of ready-made knowledge. I have to follow my shoot, root or strand of spaghetti in order to know what I want to know or what there is to know. Following the instruction of a teacher is likely to lead me nowhere in terms of my own thinking. In *Difference and repetition*, Deleuze (1994) says that “our only teachers are those who tell us to ‘do with me’, and are able to emit signs to be developed in heterogeneity rather than propose gestures for us to reproduce” (Deleuze, 1994, p. 23).

How does learning happen?

‘How does learning happen?’ has been a perplexing question for millennia and remains central to the notions of curriculum and pedagogy. For Plato (in *Meno* in Guthrie, 1956) learning is the recognition of already held prior knowledge, and for Descartes, processes of learning and understanding are gradual improvements on the accuracy of the picture of pre-existing fixed reality through trial and error. Constructivist thinkers such as Piaget, Vygotsky, Chomsky and Bruner stay with this notion of inside and outside (of human brains) and pose questions about how our internal mental structures develop to represent our knowledge of the world and by what mechanisms these structures can de- and re-construct themselves toward higher and higher levels of complexity and truth (Bereiter, 1985). All of these notions are in conflict with poststructuralist and situated notions of knowledge and meaning. Inna Semetsky (2009) tackles the idea of the learning paradox. The learning paradox is expressed as a double-bind... how can you look for something you don’t know, but what, other than what you don’t already know, do you want to find out? In offering a monist solution to the paradox, Semetsky notes that Deleuze and Guattari’s “nomadic inquiry is experiential and experimental” (Semetsky, 2009, p. 451). The epistemic process is the reading of signs, and the semiotic triad of “affect, percept and concept” provide a ‘middle’ that is missing from Cartesian images of

thought. Cartesian models of thought place the thinking subject on one side of the equation, and the thought or perceived object on the other, creating a dualistic system of representation. Deleuze and Guattari's Spinozist view places the thinker inside the world she/he experiences. We are our experiences. Affect connects us physically to our perceptual experience and creates new concepts from what "does not yet exist" (Deleuze, 1994, 139 in Semetsky, 2009, p. 451). Creativity makes the learning paradox generative.

Creativity's power is generated from our strong aesthetic connectivity with the things that attract us and it connects us to what matters. Ranciere's proposal that we can "teach what we do not know" depends on this strong impulse on the part of the learner. He calls this the "will". For Ranciere (2001), in his description of Jacotot's successful teaching of a language he himself did not know, it is the teacher's provision of relevant texts, the intelligence of the learners, and their will or intentionality that effects learning. For Deleuze, desire is the driver and it goes beyond will, as desire is not limited to the human subject. It exists on the "plane of immanence" and exists as the force of becoming⁴⁹. Learning happens through the experience of an aspect of reality of which we ourselves are an integral part. That reality emerges from a plane of immanence on which the virtual is actualised (the possible is not realised) (Deleuze, 1994, p. 212)⁵⁰. The realisation of the possible is a sameness, whereas actualisation is always new, "always a genuine creation" (Deleuze, 1994, p. 212). The experience of this new reality is an experience of difference, an "encounter" (Deleuze, 1994, p. 139) and produces a noticeable "shock" (Semetsky, 444; 450).

⁴⁹ Guattari freed the concept of desire from the libido – and sees it rather as "all the forms of the will to live, to create, to love, to generate a different society, a different perception of the world, other values" (Guattari, cited by Fichtner, 2005, p. 11)

⁵⁰ In contrast to a plane of transcendence where selves and things are "already set, already defined, already positioned" (Olsson, 2009, p. 190), the plane of immanence is made up of forces and bodies "with different speeds and slowness entering composition with one another or decomposing each other". In relation to the image of child, she notes: "A virtual child is a perfectly real child, but one that we do not yet know, one that is never given, one that is in the process of actualisation" (Olsson, 2009, p. 192).

Semetsky contrasts this with “the currently popular social constructivist approach that aligns with essentialists in considering the objective world as inert, amorphous matter, which is subjugated to the power of human categorisation” (Semetsky, 2009, p. 446).

The notion of the learning paradox depends on a subject-centred epistemology, but we might still see a ‘paradox’ in the mystery of the emergence of new concepts, and newness per se. At the centre of the notion of the learning paradox is the modernist (and Platonic) arrogance of ‘knowing’ or needing to ‘know’, explain, understand and own thought (Snaza, Appelbaum, Boyne, Carlson, Morris, Rotas, Sandler, Wallin, & Weaver, 2014; Dahlberg & Moss, in Rinaldi, 2006, p. 7). There may still be a paradox, but it is always different. It is made different through creativity. For Massumi (1992, p. 5) the concepts created by nomadic thought do not “merely repeat the eternal form of a legislating subject but are defined by a communicable force in relation to which their subject, to the extent to which they can be said to have one, is only secondary”. This kind of thought breaks down “the artificial division between the three domains of representation, subject, concept, and being” (Massumi, 1987, p. xii). So, concepts don’t “reflect” the world but are “immersed in a changing state of things” where the concept is a “vector”: a line of movement or flight (Massumi 1992, p. 6). As with Barad’s notion of intra-action, the concept is active and multiple. Nomadic thought, “rather than analysing the world into two discrete components, reducing their manyness to the One (=Two) of self-reflection, and ordering them by rank, it sums up a set of disparate circumstances in a shattering blow”. The blow of the “agential cut” for Barad (2007), allows for a particular and specific iteration of the concept or subject/object as part of a phenomenon which for Deleuze is a set of circumstances or a “volatile juncture” (Massumi, 1987, p. xiv). This is the theory which underpins the posthumanist projects in the field of early childhood education which seek to

complexify rather than understand (Pacini-Ketchabow, Nxumalo, Kocher, Elliot & Sanchez, 2015).

Rather than seeking to fix and finalise concepts and ideas about things in the world as finite identities with predictable characteristics and qualities, our quest in education is to come to an awareness of shifts and disruptions and changes in our experiences shared with human and non-human, living and non-living co-creators of meaning. This is the purpose of the empirical aspect of this research in which I spend time in and with a learning environment and the human and more-than-human components that make up that particular becoming of the world. These components did not pre-exist as fixed entities with particular qualities or identities but were (are) produced through intra-acting in the 'cuts' I am part of. In resisting the urge to fix and finalise ideas, I offer specific events as phenomena and encounters that matter and make a difference.

Change occurs when things are affected by something else. Spinoza considers this change in terms of bodies in the world – not bodies as in human bodies but in terms of parts of an integrated system that is the universe. He conflated this all-encompassing universe with the idea of God. "Affectus" is the word used by Spinoza and by Deleuze in his writings on Spinoza, for "the passage from one state to another" and "an increase or decrease in the power of acting" (Deleuze, 1988a, p.49). Thus, affect is not equal to emotion, although emotion is a strong indicator of affect in human bodies and can trigger an increase in the affecting of other bodies. Affect is materially physical and connected with sensation and intensity of experience. Grosz (2009, p. 3), notes that "sensations, affects and intensities...link the lived or phenomenological body with cosmological forces, forces of the outside, that the body itself can never experience directly. Affects and intensities attest to the body's immersion in nature, chaos, materiality". For Deleuze and Guattari, "Affects are precisely these nonhuman becomings of man, just as percepts – including the town – are

nonhuman landscapes of nature" (1994, p.169). Human and non-human are entangled in phenomena in which boundaries are fluid and shifting. Where does the string end and the vibration start?

Forces of meaning and matter(ing)

The idea of chaos versus the order of thought is useful when considering the processes we call learning, and the creation of the new. Grosz (2009) devotes a small but powerful book to the exploration of how art, philosophy and science draw from the "provocation posed by the forces of the earth" to produce meanings of particular kinds. Science gets less attention as she considers it the "more serious sibling", while art and philosophy are "twin rafts over chaos" (Grosz, 2009, p. 8). With the help of Deleuze and Spinoza she makes a case for art and philosophy as sharing a similar relation to both the earth and to the "living body" and in the "ways they divide and organise chaos to create a plane of coherence, a field of consistency, a plane of composition on which to think and to create" (Grosz, 2009, p. 4-5). An openness to emergence is an openness to chaos as it is through a willingness to be and stay in moments and places of confusion, disruption, uncertainty and even fear, that allows us to be affected by the world and to change with it. The forces of the earth express themselves through the earth's materiality (including our own). These are the forces that make up the "thing-power" that Bennett (2010) writes "to give voice to" (p.2).

How do the 'laws' of science and nature fit into this view of the world and its forces? Just as Kuhn noted in his 1970 work on paradigms, they are impermanent, situated and contested. Fröbel's and Montessori's efforts at giving children a mediated access to the underlying laws and patterns of life and material need to be acknowledged as relevant to the science and thought of their times. Children also deserve an experience of the wildness and wonder of our wacky uni(pluri)verse. If we appreciate the universe's "queer performativity" (Barad, 2011), I believe we will acknowledge the importance

of including the emergent and unexpected into our learning spaces. But isn't this Malaguzzi's legacy perhaps? In his poem, *A hundred languages*, he offers a critique of formal schooling as presenting "the world as already there" (Malaguzzi, no date, see chapter four). His introduction of *atelieristas* into the early childhood system in 1970 was his inspired way of inviting more of the unformed, unpredictable, and creative to play a part in the lives of both adults and children. When early childhood practitioners work in this way, they are most likely to find that the challenge is for them to increase their own awareness, sensitivity and openness to invitations from the material environments they find themselves in. These environments include both inside and outside spaces, the preschool as well as the surrounding public spaces that children navigate daily.

Grosz (2009) wants to propose a more equal relationship between art and philosophy in which philosophy's role is not one of judgement over the arts as in aesthetics, but rather a side-by-side relationship that seeks commonalities in the ways that they relate to the business of living on the earth. The arts as practiced in educational settings can break free of the confines of particular aesthetic standards and established notions of beauty (not just any artist can work in this environment). Malaguzzi's "radical and courageous choice" was to include people with artistic backgrounds without assigning them a specific role limited to the "languages of art" (Vecchi, 2010, p. 36). Vecchi warns that while two options are possible: to "specialise certain teachers in this area" or to "request that artists contribute or come in and teach", both have possible limitations (Vecchi, 2010, p. 35-37) due to insufficient understanding of the processes of "a pedagogical philosophy intent on embracing poetic languages for their fundamental role in learning and knowledge" (p. 37). The arts in these contexts can work alongside the explorative thinking and meaning making happening in the direct relationships and intra-actions between materials, spaces, children and 'their' adults. In the conversations and negotiations around the makings and

doings in the preschool environment, philosophy and art are well matched companions.

In discussing the ordering of experience on the plane of immanence, Deleuze and Guattari draw on the musical theories of Pierre Boulez in which he refers to contrasting smooth and striated spaces (Deleuze & Guattari, 1987, p.371). Deleuze and Guattari apply his ideas to thought more generally and show that thought, like music, has the capacity for the strictest form of order and counting, as well as the most open improvised unpredictable non-counting. Space can either be striated – counted and following set patterns and tracks, or fluid, smooth and unexpected (Deleuze & Guattari, 1987, p.371). The smooth and the striated exist in variable permutations (already introduced in chapter three). Lenz Taguchi (2010) diffracts her pedagogical research in Swedish preschool sites through these notions of difference. She notes that the striated forms of preschool routines offer stability and a sense of security to many children while the freedom and openness invited in by the practitioners or claimed by particular children cuts across this order to allow “lines of flight” that disrupt and renew the lay of the land. Similarly, she uses the ideas about the speeding up and slowing down of intensities that Deleuze brings from Spinoza, to draw attention to the subtle changes that take place in the affective experiences of different children as they encounter new knowledge (surprise, wonder, realisation, amazement) and then revisit, repeat, reconsider, rework these ideas.

The discussion in this chapter has sought to draw a picture of the ways that theorypractices of both Philosophy with children and the *progettazione* of the Reggio Emilia approach work with enquiry. They both enact a nomadic process of pedagogy in which art-making and philosophy work together with each other and with the materialities of learning spaces that are also always discursively negotiated.

The way that Philosophy with Children is usually introduced to practitioners is through the community of philosophical enquiry. The format of this practice can be seen also as a subtle combination of striations and smooth space. It will be helpful here to outline the commonly used format of the Community of Enquiry (CoE) as it gives an insight into the pedagogy and the 'thinking moves' that are modelled in the practice. Presented here is a sequence of processes commonly followed. They are then discussed further in the narrative below.

A conventional community of philosophical enquiry

- Agreement about shared rules to support a respectful, democratic dialogue
- Presentation of a stimulus or starting point
- Thinking time
- Creating questions (writing down, or drawing a picture)
- Sharing questions in pairs (Discuss, combine, re-work, select)
- Choosing one question as a pair to present to whole group
- Gathering questions centrally
- Analysing/ grouping questions
- Selecting one question to focus on for the enquiry
- The enquiry
- Closing/summing up/where to next?

A starting point or provocation that can be used to initiate an enquiry might be an artwork, a newspaper, a film, an article or an everyday object, such as a bunch of keys, or a question that has arisen out of the daily experience in the learning community (Haynes, 2001, p. 21). Stanley's 'Philosophy by

Children' depends on the gathering of provocations from the children's play (Stanley & Lyle, 2017). Practitioners play with the basic model and may include a range of activities to enhance the explorations and experimentations (drama activities, artmaking, games). Practitioners working with younger children who do not write yet, or who work in modes other than purely language, will adapt the process and find ways to work with concepts more materially.

The presentation of the provocation is the point at which one puts the fork into the mess of spaghetti and performs an agential cut (Murriss, 2016, p. 178). The picture books that P4Cers select are generally those in which pictures deviate from the direct meaning correspondence of the words and that usually leave things unresolved. Books and other starting points are chosen for their possibilities for ambiguity, puzzlement and depth of response: their capacity to perplex (Haynes & Murriss, 2009; Gregory, 2007, p.160; Fisher, 1998, p. 62). They are presented as an invitation or a welcoming. In the commonly used sequence of the CoE, once the provocation has been introduced to the group, a quiet time is given for individual thinking. Each participant is then charged with coming up with one question relating to the provocation. Creating philosophical questions is an important goal of the pedagogy and attention is paid to considering the way that different kinds of questions work. The impulse to ask questions that we don't already know the answers to is possibly more common among children of four, and much less common among older children and their teachers who may have been schooled in a desire to accumulate already established facts. Questions that have kept people thinking for centuries are the ones that revolve around central, common, contestable topics like 'love', 'death', 'existence', 'truth', and 'justice' (Kennedy, 2012; Murriss, 2016, p. 188). 'Friendship', 'dreams', 'what animals know', 'how many toys are enough'? All these and similar perplexities are connected to deep philosophical issues and are likely to emerge among young children and their play. The community of

philosophical enquiry provides a place in which to play with these concepts and to practice dialogue, disagreement, contestation, changing our minds, convincing each other, building on each other's thinking, knowing and not knowing (Lipman & Sharp, 1978; Fisher, 1998; Splitter & Sharp, 1995; Murriss, 2008, 2009; Haynes, 2002; Kennedy & Kennedy, 2011).

The circle is a non-human physical element in the pedagogy of the community of philosophical enquiry which has extensive affective power influencing all participants. Even though in early stages of using the approach a facilitator may need to invite and encourage better listening by some and bolder participation by others, conversations traverse the circle in random patterns that track lines of dialogue and connection among participants rather than the continual deferring back to the teacher as arbiter and gate keeper. These patterns attest to the power of the materialdiscursive arrangement to impact positively on the levels of authentic participation or co-production (Haynes & Murriss, 2012, p. 53).

The teacher or facilitator's goal is to recede from the position of expert to whom all questions and comments are referred or deferred. The space created does have striations but the lines of flight are essential and eagerly anticipated. The striations of the agreed rules of engagement (talking one at a time, careful listening, etc.) provide the rhythm and structure that allow for the bold and creative thinking. The community of philosophical enquiry is a cycle of territorialising and de-territorialising.

Thinking time and energy are put into developing fresh questions. For the facilitator the focus is above all on listening and in a posthumanist theorypractice this listening is not only to human voices. An open attitude and anticipation of the "new" is the transformative aspect of this pedagogy that continually transforms practice. Here the parallels with Reggio Emilia's documentation are apparent. They are both 'listening' pedagogies that seek to complexify and attend to the birth of new ideas, questions and concepts

(Haynes & Murrells, 2012, p. 214). Meaning emerges from the muddle of experience, intuition, affect, and memory where the unconscious and conscious meet. The Reggio project-based approach has as an element of the process in their daily “assemblies” in which the larger group congregates and assesses progress, developments, emergent ideas and possible trajectories before returning to their smaller group projects. Physical spaces, like stepped platforms and circular seating have co-productive agency in these assemblies.

As with the project-based approach of Reggio Emilia, the CoE approach challenges the behaviourist ‘outcomes’ approach that relies heavily on pre-planning and on measuring the end-products/outcomes of a learning activity. Enquiries are ‘planned’ to create open-ended opportunities for ‘lived’ experience in which chance occurrences are seen as opportunities rather than obstacles (Burbules, 1995, p.94). Dunne refers to this as the “rough ground” (Dunne, 2001). The facilitator of an enquiry (and the teacher or *atelierista* in Reggio Emilia) needs to be awake to the direction of the enquiry and be open to possibilities for all kinds of further explorations through various media (Fisher, 1998, p.63). The legacy of Lipman and Sharp is a humanist practice that values both the learning and practicing of skills and the development of a particular quality of mind by participants (Echeverria & Hannam, 2017, p.3). The skills taught include those of deliberation, reaching of consensus and making judgements around the particular subject of enquiry subject-based topic. The quality of mind achieved is an internalisation of cognitive and affective skills and dispositions (including self-correction and fallibilism). Most proponents of the approach combine both of these purposes that are seen as a parallel and complementary programme of ‘education for democracy’ (with a set of clear prescribed principles) and ‘democratic education’ (the actual in-the-moment enactments of democracy in the classroom) (Echeverria & Hannam, 2017, p.4). It may be said that an even broader and more intra-active outcome is

the enacting of relationships and negotiation of practices conducive to the ongoing development of such shared dispositions and attitudes. This resonates with Benhabib's claim that it is not only the dispositions that enable democratic practice, but the practices and systems that need to be established to sustain these dispositions. She writes: "We are not moral on our own... so the concern is not only about teaching individuals how to be rational, reasonable thinking people, but rather to get agreement about the kinds of relationships, practices, processes and contexts we need for 'reasonableness' to flourish" (Benhabib 1992, p.38). In a posthumanist framework, this means seeing the CoE as human and non-human assemblages or apparatuses in which we as the human participants pay attention to the ethical implications of our enactments. The community of enquiry offers a model for a classroom environment and practice for the sustenance of reasonableness, but also for taking responsibility and being response-able. In this way, it can be seen to be creating the material conditions for ethical and response-able learning experience. The daily routines of preschool life are the systems that can challenge our ethical choices about things like what we eat, how we speak, and who decides. Agency and structure are in constant diffractive intra-action.

The concept of 'reasonableness' as explained by Burbules (1995) and Splitter and Sharp (1995) is central to the CoE approach "and, arguably, of education itself and the ideal of democracy" (Splitter and Sharp, 1995, p.6).

Reasonableness is rational and humanist, but not in a Cartesian sense. It does not attempt to reach one universal truth through purely logical means but attempts to negotiate a pragmatic contingent truth through dialogue and the inclusion of difference and difficulty. This is why the community itself is the arbiter of truth in CoE. This notion of reasonableness is humanist or 'human-exceptionalist' in that the reasonableness is located in the individual (albeit in dialogue). The posthumanist challenge to P4C and the CoE is to include the more-than-human in the negotiation of 'truths', knowledge and action.

The principles and practice of a democracy are enacted through agreeing on procedures and practices, choosing a question, taking turns etc. The South African curriculum attempts to put forward a similar proposal about the “kinds of teachers and learners we envisage” in the Overview section of the National Curriculum Statement (NCS) (pp.8-9) and in the critical and cross-field outcomes. In the community of enquiry learners live their values in the present in the community (as citizens)- they are not being prepared only for future citizenship (Lipman & Sharp, 1978). As such the CoE, while containing the word ‘children’ is age independent.

As discussed above, the idea of democracy is ‘troubled’ by the postmodern, poststructuralist and posthumanist frameworks as are all dualisms. Democracy is the other side of autocracy and assumes that ‘majority’ has an intrinsic positive value of representation:

Let us suppose that the constant or standard is the average adult-white-heterosexual-European-male-speaking a standard language. It is obvious that ‘man’ holds the majority, even if he is less numerous than mosquitoes, children, women, blacks, peasants, homosexuals, etc. That is because he appears twice, once in the constant and again in the variable from which the constant is extracted. Majority assumes a state of power and domination, not the other way around (Deleuze and Guattari, 1987, 105).

In a relational ontology, democracy is a fluid and shifting force rather than a fixed concept that has pre-defined effects and characteristics (good is good for whom, what, when and where?). Postmodern writers have created the concept of “violent democracy” (Von Holdt, 2013) to describe the conflicts waged over access to state resources by competing elites in modern constitutional democracies like our own. The competition for the control of the preschool described in chapter one can be seen as an extension of this pervasive corruption. A noticing, listening and acknowledging of the implications and often invisible connections between parts of the world and uni(pluri)verse is an ethical responsibility towards our ever expanding

family of “oddkin” (Haraway, 2016, p. 2) and lively “nonhuman nature” (Bennett, 2010, p.113).

In CoE practice, the motivation for participants to commit to the procedures and to the purpose of the enquiry is the sense of being respected as capable of contributing towards the co-construction of meaning. The role of the teacher as co-enquirer, but also as “guide” and “guardian” of the space of enquiry enables this commitment (Haynes & Murriss, 2009). When working with young children, the teacher’s beliefs about childhood and disposition toward the children in her class in particular will influence the way in which she includes and consults each learner as a “co-enquirer”. As a guide, her role is to push for intellectual depth and rigour, as a guardian, to protect the safe space for taking risks with ideas and for disagreeing.⁵¹ Evidence points to a commonly held deficit view of the capabilities of children among South African educators (Fleisch, 2008, p.122) which works to limit and curtail the achievement levels of learners in school.

In my context, working with young children with a range of language proficiencies other than English, my attitude towards the expression of power, equality, voice, is crucial. A deficit view can be held about children with low levels of language proficiency. To what extent does this mean that they cannot be invited to think? This is similar to the provocative question that French philosopher, Jacques Rancière asked in his 1968 account of the methods of Joseph Jacotot. He asks, “Who has the right to think?”. Jacotot, a nineteenth century teacher, proposed that the assumption underlying our approach to teaching should be equality, not inequality. Explication and instruction only function to entrench inequality. In the voice of a hypothetical teacher: “You will only understand once I have *explained*. You will become more and more intelligent depending on whether you pay attention to

⁵¹ The less instrumentalist approaches to P4C (Echeverria & Hannam, 2010) work with notions of democratic practice that have much in common with Mouffe’s agonistic pluralism: undecidability, conflict, unresolved dissensus.

my explanations". On the contrary, "Intelligence is: observing, comparing, and combining, of making and noticing how one has done it" (Rancière, p. 36.), and therefore, a teacher (or parent) only needs to stimulate the will (or desire) of the learner to learn (or teach herself). "Explication is the myth of pedagogy" (Ross, 1991. p. 67). Rancière's examination of the workings of the discourse of education and his remarkable narrative account of Jacotot's life and work was prompted by his critique of the theories of Bourdieu, Althusser and Milner who he saw as making a science of the inevitable cycle of inequality created by modern industrialisation. Similarly, we may ask: what do we do with the revelation of the self-perpetuating mechanisations of the powerful discourse of education that constructs its subjects as "ignorant, mystified or naïve"? (Ross, 1991, p. 62).

Our will or desire connects with the affective register of our connection with the world of which we are a part. As with Semetsky's account of the learning paradox, dependent on the in-between of affect, Rancière's equality of intelligence ascribes learning to the force of wanting to find out. The energy and vitality of the encounters and assemblages that emerge from pedagogical enactments need to be balanced and tempered by an ethical and response-able witnessing. The enactments of philosophical and artistic response-ability towards lived encounters lead this research. The following chapter (chapter six) explores the materialdiscursive underpinnings of the practice of creating data in and with the time, space and matter of the research site.

6. Methodology, methods, strategies and apparatuses.

Objectivity, instead of being about offering an undistorted mirror image of the world, is about accountability to marks on bodies, and responsibility to the entanglements of which we are a part. (Barad 2012b, p. 52).

For Barad (2007; 2011), a claim to objective truth depends on contextualization and connection not on distance. An agential cut is made by a situated phenomenological accountability for temporal, spatial, material and discursive reality. What comes to matter and what difference does difference make?

Drawing on Barad's challenge to traditional notions of causality, I see research methodologies as apparatuses⁵² and as such they work as "boundary-drawing practices" (Barad, 2007, p. 140). They have their histories, cultures and geographies and re-configure the world in specific ways. The moves made over the last century in empirical educational research, in and amongst positivist rationalist experiments and tests; structuralist anthropological ethnographies (still a dominant trend in qualitative research); and post qualitative, non-representational strategies practiced by a growing community of posthumanist early childhood researchers are relevant to my methodological account. The latter are premised on the ontological flattening of a monist philosophical position and an ethically conscious entanglement of interdependent worldings. As researcher, I am a co-constituting part of an apparatus that has agency in the

⁵² Barad's use of the term 'apparatus' refers to a working relationship including equipment, materials, time, space, human and non-human. Ontologically Barad names the simplest 'unit' in reality as the 'phenomenon' which is a particular arrangement in a particular moment in time that can produce an internal 'objectivity' or 'agential cut'.

world. I separate out some instantiations of my intra-activity as ‘cuts’ or situated views of particular phenomena even though they are connected and affected by wider and interconnected realities.

In a counter move of resistance against the humanist strangle-hold of “child-centredness”, the commonworlds research collective, mentioned previously in Chapter two, use Latour’s concept of worlding in which all “species, entities and forces” are included in a re-conceptualisation of the social (Pacini-Ketchabaw, Taylor, & Blaise, 2015, p. 3). Initiated by Patchini-Ketchabaw, Taylor, and Nxumalo, the commonworlds research collective have articulated the working of a “common world and multispecies ethnography” through a collaborative intercontinental research project (Pacini-Ketchabaw, Taylor, & Blaise, in press). Their collective, according to the website, currently has sixty-seven members. Barad’s notion of worlding and its ethics is one that I attempt to express in the accounting of my research process (Barad, 2007, p. 302). This notion of worlding includes the “queer performativity”⁵³ (Barad, 2011) of the world at an atmospheric, cellular and atomic level⁵⁴ in which time, space and matter express themselves in an iterative intra-active relation of becoming. Matter is not held in the fixed and separate containers of space and time. The “world’s worlding itself” is the expression of this entanglement (Barad, 2011, p. 133).

Ethnography and its related discipline of anthropology are recruited by researchers in education who align themselves with non-positivist epistemologies. In the field of anthropology, Bourdieu’s contribution was his shift from the structuralist coding of cultural practices to a post-structuralist lived awareness of social relations between bodies (Wacquant, 2004). Using insights from his own French village in parallel with the North African

⁵³ Latour’s actor network theory (ANT) conceptualizes networks of human and non-human “actant(s)” (Latour, 1998, p. 369). Barad’s agential realism has a more fluid conception of entities, whose ‘nature’ and performance can only be described in particular phenomena or ‘cuts’ (as discussed in chapter three).

⁵⁴ Barad dispells any idea that different laws of science apply to the micro world of atomic physics; the macro of human-size, and the planetary cosmos (Barad, 2007, p.109-110).

community he was studying, he effectively practiced an ethnographic diffraction of his own experience through that of his research subjects – however, he called it “epistemic reflexivity” (Wacquant, 2004, p. 389). This valuing of and attention to one’s place inside the field one is studying is close to Bohr’s notion of the scientist as an integral part of the phenomenon or “that nature that we seek to understand” (Barad, 2007, p. 26; 67) and is a post-structuralist position, if not broadly postmodern. While Barad considers Bohr’s position on the relation between language and reality unresolved, she holds that his realism is neither idealist nor relativist (Barad, 2007, p. 129) and it is her insight into the ontological nature of the issue that is the basis for her theory of agential realism. For Barad, “language has been granted too much power” (Barad, 2003, p. 801). What Barad’s agential realism offers to research is the notion of entanglement and diffraction (introduced in chapter 3) and the equal and inter-connected knowledge-producing power of the material and the discursive. The rigour of Barad’s theorizing lies in her ability to look beyond description and into the performativity of the human interventions in and with the experiments and the agency of the apparatus. The human-made apparatuses have their own agency sometimes at odds with our own intentions and have to be given that credit. Discourse and material are mutually configured – a description/interpretation does not represent a pre-existing entity. The entity as presented comes into being with the particular configuration. This means that any part of this configuration is always already implicated in what it produces. In my study, a public park takes on major significance at some point. The park is not a single defineable entity, but part of a complex set of constantly and mutually co-constituting forces that include: historical, colonial conceptions of cities and recreational spaces; a climate that supports the growth of grass and trees; city parks and zoo management; people of all ages who make use of the park; fences that mark off the space from streets and private homes; oxygen and carbon dioxide in cycles of exchange; legal documents and plans that govern land use in the city.

This is Barad's ethico-onto-epistemology. Barad's ability to call us back from the distancing position so familiar to us as thinkers primed in Descartes' "I", and to invite us to acknowledge our entangled connection with our world resonates with Ingold's (2013) argument for a closer relationship between the practices of anthropology, archaeology, art and architecture. This chapter gives a genealogy of the methodological aspect of my project through accounting for a rich and interconnecting network of methodological projects in education, the humanities, social sciences, early childhood and the arts. A genealogy is always a political reading that pays attention to erasures and presences; pasts and presents.

The practice of the participant observer (Ingold claims this is the prime role of the anthropologist) is one of "knowing from the inside" (pp.1-15) rather than the rear view of the ethnographer who collects data and retrospectively assigns codes and meanings. Pink (2006), drawing on the ethnographic filmmaking work of MacDougall, writes about the practice of visual anthropology needing to engage with "sensory embodied experience" (Pink, 2006, p. 49) – a return to the basics of empiricism. A focus on the senses may be seen to be anthropocentric perhaps, but a posthuman empirical praxis extends beyond the anthropocentric modernist empiricism to include in the conception of sensory experience, the worlding of the world in all its queer diversity and unpredictability. It posits a clear dissociation from the mind body split of the rationalist Cartesian subject and a positioning as an "in-between", along and within the inside/outside connection that is the foundation of a monist ontology. While the empiricism of Bacon and its modernist developments recognize the senses as the only source of knowledge, its underlying dualistic ontology creates the problem of objectivity, and the notion that reality is predetermined, fixed and universally verifiable (Davis, 2004; Kuby, 2017).

For the posthuman participant observer, research is a making-with, an entangled sympoiesis (Haraway, 2016, pp. 58-98). The feminist new

materialism of Barad, Haraway and others troubles the subject/object binary and de-centres the human in the process of “complex worlding” (Haraway, 2016, p. 29) that flattens the ontological, epistemological and ethical implications of “living and dying well together” on the planet (Haraway, 2016, p. 29). There can be no separation of ethics from knowledge. The humanist nature/culture binary is disrupted and the material world and the materiality of bodies are acknowledged equally as sources of knowledge along with language and other human systems of meaning making. Scholars in a number of academic centres around the world, often in cross-continental and inter-disciplinary collaborations, are developing new ways of thinking compatible with a posthumanist relational ontology that take on the ethical implications of being, knowing and becoming different. These developments are decolonizing moves against the individual, centred, autonomous, western, male “I” at the heart of classical humanism, imperialist progress and modernist constructivism (Braidotti, 2013, p. 16-25).

Post-qualitative research

The efforts of post qualitative methodologists like Lather (2016), St. Pierre (2014), Lather & St. Pierre (2013), MacLure (2013), Jackson & Mazzei (2012), Mazzei (2013), St. Pierre & Jackson (2014) and Jackson (2017) in their practice and their teaching, are to refuse the pull of the ethnographic processing methods of coding and categorizing that privilege ordering, alignment and predictability at the expense of difference, newness and creation. Their observation is that too often, evidence and meaning are sought directly in collected primary data (very often the spoken words of interviewees), outside and separate from the vibrant intra-active processes of their on-the-ground generation. In addition, the words and insights of the researcher’s chosen theorists are only permitted to function at a secondary level. Thirdly, the knowledge, insight and experience of the researcher her/himself is included only to declare any undue bias or prejudice. They recognize that these habits stem from the continuing dominance of a rationalist modernist

approach to empirical study. Their work suggests two parallel lines of action: firstly, to make use of what the poststructuralists made available. The French post-structuralist thinkers offered some “post” analytic tools more than fifty years ago, namely, “Foucault’s *archaeology, genealogy and power/knowledge reading*; Deleuze and Guattari’s *rhizoanalysis and schizoanalysis*; Derrida’s *affirmative deconstruction*; Lyotard’s *paralogy* (Spivak, 1993, p. 274)” (St Pierre, 2014, p. 3).

A second line of action is the use of diffraction as a methodology. A materialdiscursive notion of knowledge demands that we pick up on resonances and refractions⁵⁵, change and disruption, rhizomatic sproutings, rather than faithful reproductions and reflections that are not helpful and too much of the same (Haraway, 1997; Barad, 2007, pp. 71-72). What is required is a return to the rock face, the encounter, the “art of enquiry” (Ingold, 2013) where world and word are in direct and intra-affecting communication. Rather than being able to take any exterior or birds-eye view, this means being right inside relationships and experiences that affect the senses and thought (of not only the human) and offer new ways of being and going forward. So, a posthumanist “method” if we have one, is a sensitive instrument that responds to subtle fluctuations and nuances of intensity. This is a re-working of the position of “modest witness(ing)” (Haraway (1997) of the positivist (white male) scientist who claims a culture-less, detached viewpoint.

Jackson (2017) offers an alternative to the “outside” of a contained and stratified method. Her alternative is the dynamic and pragmatic of “strategy”. Strategy according to Deleuze (2007 cited in Jackson, 2017, p. 2) is not predetermined: just as a spider does not have a preset plan or method for making a web. She draws from Deleuze’s (1994) notion of “thought without image” in which thinking is not something we do but rather something that

⁵⁵ A refraction is a disruptions of, for example, the path of light as it passes through material other than air, which changes its path and makes a difference.

happens to us “by chance and by force” from the outside. Inside and outside flexibly interchange. Being on the outside edge of method then is a place where method is undone but not abandoned. The pedagogy of the community of philosophical enquiry is also a ‘method’ that I practice in a de-territorialised manner alongside and intra-secting with diffraction-as-method and concept-as-method. Although in the course of the research period I led some enquiries around picturebooks with the children and on particularly perplexing topics (like the apparent connection between fairies, moths, butterflies and caterpillars) the research attitude and openness to enquiry and provocation operated more like an escape route, a line of flight that could happen at any opportune time as concepts emerged from daily pedagogical intra-actions. Striated and smooth spaces worked in concert. Some of these moments are captured in the narratives of the following chapters.

Pedagogy as research

The methodological stance and practice I have taken up in this project owe a considerable debt to the pedagogically-led research work of a number of early childhood protagonists, most of whom explicitly acknowledge their productive engagement with the collaborative and evolving philosophical project that is ‘Reggio Emilia’ while establishing their own research communities: Olsson, (2009); Lenz Taguchi (2010); Hultman & Lenz Taguchi (2010); Taylor (2011); Blaise, (2013); Kind (2013); Kuby & Rucker (2016); Pacini-Ketchabaw, Nxumalo, Kocher & Elliot (2015); Pacini-Ketchabaw, Taylor & Blaise (2016); and Murriss (2016). Some like Lenz Taguchi, Nxumalo, Olsson and Kind work as *atelieristas* or *pedagogistas* and have forged a way forward in this “probe head” rhizomatic fashion (Deleuze & Guattari, 1997, p. 190). Some scholars based in post-colonial contexts are contributing to a growing body of work in the area of decolonizing the material discourses of childhood. Their work, though not directly referencing the work of Irwin and her colleagues resonates with their Deleuzian a/r/tographical approach

in that it connects pedagogy, art-based or living inquiry and research in an exploratory and generative intra-active process (Irwin, 2013).

A/r/tography

A/r/tography offers a diffraction with pedagogy that many research methodologies do not. As such it has close parallels with the project-based approach of the teachers, *atelieristas* and *pedagogistas* of Reggio Emilia and those enacting these practices in other parts of the world. Writings on the method of a/r/tography include: *A/r/tography: rendering self through arts-based living inquiry* (Irwin, & de Cosson, 2004); *Being with a/r/tography* (2008) edited by Springgay, Irwin, Leggo and Gouzouasis and Irwin's article: *Becoming a/r/tography* (2013). The theorypractice is positioned in a threshold between arts practice, education and social science research methods and values these three ways of "knowing, doing and making" (Pinar, 2004, p. 9; Irwin, 2004, p. 27)⁵⁶. Although it is centred on a community of collaborative and shared practice, a possible misinterpretation is the foregrounding of the person of the artist, researcher, teacher which may suggest a humanist ontology. It is important to consider the serious attention a/r/tography pays to the agency of the material practices of various artforms in the researcher's practice and the recognition of art as a border space between and among lives and worlds. A/r/tographers inhabit the borderlands between "intellect, feeling and practice". There is a lively cross-contamination between theory and practice: "(t)heorising rather than theory, and practicing rather than practice, transforms the intention of theory and practice from stable abstract systems to spaces of exchange, reflexivity, and relationality found in a continuous state of movement" (Irwin, 2013, p. 199).

Irwin's 2004-2008 research, conducted in collaboration with Gouzouasis, Grauer and Leggo, produced among their teacher participants strong

⁵⁶ Irwin refers to Aristotle's attempt to equalize the relationship between philosophy and the arts. He proposed three forms of thought: Knowing (theoria), doing (praxis), and making (poiesis).

commitments to new ways of being. Learning to teach lost focus in the desiring of learning to learn through a “practice based on collective assemblages and experimentation” (Manning, 2007, cited in Irwin, 2013, p. 202).

A/r/tography therefore offers a welcome deviation and disruption to qualitative research practices that depend predominantly on the written and spoken word and that separate theory from practice. It is a provocation to education and humanities research-as-usual and to traditional forms of art teacher education.

A shortcoming or limitation of my research design is the singular voice of the research narrative. Collaborative projects like those of Lenz Taguchi & Hultman (2010), Kuby, Rucker & Kirchhofer (2015) and Kuby & Rucker (2016), which diffract teacher and researcher insights have a richness I could not attain and suggest possible trajectories for more collaborative future projects. The teacher, Alina, with whom I worked in the period of data creation played a valuable role in creating the context for my research. She has since left the school to work in a different part of the city, but her interest in our initial collaboration and her commitment to furthering her own learning and qualifications suggest possibilities for future work.

A/r/tography, the project-based approach of Reggio, and the processes of post qualitative research as outlined above, all depend on a de-centred posthuman symposium. This is also the impulse that motivates the move to art-based methodologies in the social sciences (Thrift, 2008; 2011; Vannini, 2015; Sheller, 2015; Manning, 2015). The framing of this thrust is around the move away from representation.

Arts-based methodologies in social science research.

In his 2015 edited volume entitled: *Non-representational methodologies: Re-envisioning research*, Vannini describes non-representational theory as “now

widely considered to be the successor of postmodern theory, the logical development of post-structuralist thought, and the most notable intellectual force behind the turn away from cognition, symbolic meaning, and textuality" (Vannini, 2015, p. 2). Vannini's introductory chapter draws heavily on Thrift, whose 2008 work became an "instant classic", cited 646 times at the time Vannini was writing his introduction. Thrift (2008; 2011 cited in Sheller, 2015), builds on the traditions of Lefebvre, James, Dewey, Bateson and Deleuze and Guattari. Thrift "links his call for new social science methodologies specifically to arts-based practice" (Sheller, 2015, p. 135). Although he proposed seven core principles, he intends them to offer potentials and "exercises in creative production" (Vannini, 2015, p. 3) rather than a territorialising system. Thrift's seven principles are briefly: 1) A capturing of the immediacy and "onflow" of everyday life 2) Complexity and relationality rather than singular, autonomous biography or autobiography 3) Practice, action, performance (doing) 4) relational materialism and the agency of material 5) Experimentation, playfulness 6) Bodies in affective relations of intensity; forces and velocities in more-than-human phenomena 7) Being alive to unexpected and unusual ethical choices that have the potential to transform existence.

In short, these seven principles are intended to awaken a responsive sensitivity in social scientists and to add a lighter, more imaginative mood to research and theory. In the same volume, Erin Manning (2015) and Mimi Sheller (2015) expand on examples of such arts-based knowledge production under a collection of terms: "Research-creation", "live methods", "mobile methods" among others. All of these proposed strategies give the material and conceptual arts a prominent place in knowledge production. Viewed from an art historical vantage point they can be seen to build on the histories of experimental, non-representational art practices from dada performance in the 1920's to the art happenings, Fluxus movement and Situationist International of the 60's and 70's all of which were radical critiques of the

urban, consumerist, art market and took on dialogical and participatory forms connected with everyday life (Sheller, 2015, p. 134).

Contemporary art makers and critics, who work in an anti-modernist paradigm, have established the “dialogical” as an aesthetic form (Kester, 2005). The artists explore the edges and the in-betweens of agreement and disagreement, equality and difference, rather like in the CoE. Different labels have been given to this conception of art and they vary in scope and approach. Kester lists these: “Littoral” art (UK-based Ian Hunter and Celia Larner); a “relational aesthetic” (French critic Nicolas Bourriaud); “conversational art” (Homi K. Babha); or “dialogue-based public art” (Tom Finkelpearl) and chooses the term “dialogical” to describe all of these trends in which “the artwork itself is an open-ended exploration of a socially-embedded reality” (Giorza, 2013). The dialogical approach does something very different from the avant-garde. The avant-garde seeks to shock us, the viewer, through images, objects, films and performance, and move us out of our comfort zones. It intends to disrupt and confuse, but may equally leave us untouched, unmoved and unaffected. The dialogical artwork involves us in a “durational” engagement, whose meaning depends on our direct and embodied contributions (2005, p.14). Drawing on the theories of Bakhtin on dialogue (2005, p.10) and on Habermas’s concepts of discourse and the “ideal speech situation” (2005, p.14) Kester explains how these “socially-engaged” forms of art create conditions for collective, democratic action. How would the notion of dialogicality work if we included the more-than-human? Could the environment along with humans also benefit from social justice projects? The boundaries between art and the art-based methodologies of the social sciences are increasingly blurred and this is a welcome state of affairs if it makes visible a relational ontology in which the workings and capacity to change things are what give entities their significance and subjectivity rather than definable fixed characteristics as ‘art’

or 'not art', in other words, "a classification of beings by their power" (Deleuze, 1988, p. 45).

The examples of work Kester discusses in the text include one by the Austrian Arts Collective *Wochenklausur* whose art form is described as "boat colloquies". Part of the 'work' is a conversation on a boat on Lake Zurich between politicians, journalists, sex workers and activists. Over several weeks similar conversations were held all focussing on the day-to-day challenges faced by homeless and drug-dependent sex workers who due to their situation are vulnerable to abuse by both clients and law enforcement agents. The creation of this dialogical space outside of official interaction, enabled a pragmatic consensus about the need for a shelter (which was subsequently established) and gave value to experiential, practical knowledge rather than to outside explanations and judgements about the "drug crisis". As in the CoE approach, an enquiry of this kind may lead to extended and applied actions, as long as the central place of open-ended dialogue is protected from technicist and goal-oriented problem-solving by a commitment to an ethical listening.

The extended process of writing this account has occasioned intense moments of change and learning. At the outset, having the tool of ethnography as one reliably flexible and tentative-enough method at my disposal was reassuring. It was with this idea that I embarked on my journey, note book in hand. A well-practiced diary keeper, I looked forward to and enjoyed reflecting on my experiences and writing my field notes while the experiences were still fresh in my mind. Sometimes I wrote while the children had their afternoon rest and sometimes I made drawings of things that were there. The children added to my pages with their own drawings. On one fateful day I left my bag, note book and ipad in my car as I rushed in to pick up a child at the urgent request of a friend. The entire bag was stolen from my locked car and the note book suddenly attained value

way beyond that of the electronic device it disappeared with⁵⁷. What stands out for me now though, was that after about a week of desperation and systematic interviewing of all the car guards working the street of the crime scene, there arrived a slow dawning realization that so much of what I had written, had been a processing of my shifting subjectivities and while they would be interesting to read, the real learning and research production would be found in the new ways of *being* and *being with* that were being gradually forged through the diffractive waves of intra-action within the phenomenon of the preschool site. It is not that the diary-writing is not useful - but more that the words written had limited value as shared distributed knowledge. My solitary, introspective practice of journaling, developed over years, creates meaning for the "I". What I was being invited to consider now by my posthumanist readings and research community was a new way of engaging with the evidence of relational experience that would be more the knowing and being of a distributed "iii" (Murriss, 2016 and first introduced in Chapter two). I became more and more convinced that creating and re-viewing still shots, video clips and the transcriptions of verbatim conversation would offer insights into the ways that the environment, spaces, things and time were working and could work in playful, productive co-creation with people, forces and ideas: fluid and intra-acting subjectivities that affect one another.

In relation to the perpetuating positivist traces that linger in the academic form of the PhD proposal, I still have research questions. Do I move tentatively into the posthumanist post qualitative space with a toe keeping the door to the familiar slightly open? Or do I resist the stratification and move to the outside of the method (Jackson, 2017) where method does not structure my thought. Here I can live with "the possibilities for being otherwise" (Grosz, 2011). I do have the research questions that framed my

⁵⁷ Some weeks later, the 'find my apple' application notified me that my ipad was now in Accra, Ghana.

research proposal and I re-turn (to) them in my changed states, allowing the agency of time, space and matter to express themselves.

Research question:

- What happens to learning when materials work as a third teacher in a Johannesburg preschool?

Sub-Questions:

- What is the role of the artist/educator when materials work as a third teacher?
- How is the contribution to learning that is made by the material environment noticed, acknowledged and reflected on in this site? By children? By teachers? By the researcher?
- How does the establishment of a community of philosophical enquiry enhance listening, documentation and reflection in an intra-active pedagogy?

These questions opened the way for the study to commence. They were a place from which to dive or jump. As I returned to the questions again and again during the data creation and writing phases of the project, the questions offered different things to my narrative. The questions responded to the settling-in of the chosen framework and became different in themselves. The “third teacher”, for example, initially worked as a humanist metaphor that anthropomorphised the powerful impact the non-human places and things had on me and my human pedagogical companions. As the research proceeded, the agency of the more-than-human increased in importance through the diffractive workings of the documentation. The material-discursive intra-actions enacted through learning-as-worlding transformed my notion of ‘teacher’.

The a/r/tographical research practices I enacted gave me a way to co-create with the children, teacher, human and non-human, living and non-living pedagogical collaborators. Local, situated possibilities for an *atelierista* role were experimented with and an enquiry-led 'concept-as-pedagogy' extended the notion of 'listening' into an intra-actional and diffractive resonating.

Apart from the research questions, my other concessions to a positivist research agenda are terms like 'data' and 'field' and while I acknowledge that these terms assume a separation of subject and object and a container space in which research takes place, these notions remain and haunt my methodology. I know I need to "find a different way of writing" (Ingold, 2015, p. viii).

Response-abilities and honest accounting

My research was a collaborative adventure, but it was also carried out with a direct outcome in (body)mind, which was a PhD thesis. I followed the required protocols with regard to obtaining ethical clearance from my university before embarking on the research work. There was some overlap between the ethical requirements of the university and my own sense of respectful and non-exploitative practice, but there were also some conflicts.

It does feel like a compromise on ethics to anonymise children's art works and to make the creators of the documentations vanish from the story. I know there is a contradiction between the ethics of accreditation and the ethics of anonymity. The bio-medical model of research is the one that has set the agenda for the research protocols in university research so that humanities research follows the same formats as the more positivistic and invasive kinds of research 'on' rather than 'with' other humans. A shortcoming of the research then, in my opinion, was the failure to find a way to formally acknowledge the children and their teacher by name as my co-researchers. As a PhD candidate I must claim the research as my own and offer confidentiality and anonymity to my 'subjects'. This distancing and

positioning of the 'I' of the knowing expert contradicts my philosophical approach in many ways.

I requested informed consent from parents and children as well as from the staff and management committee of the preschool. Consent covered the agreement for the children, parents and teacher to participate, permission to be photographed, and to be video-recorded and to participate in discussions and enquiries. Permission for the use of the children's pedagogical artefacts was also requested. The information sheets, letters and consent form formats are included in Appendix I. Approval was granted by the ethics committee of the Humanities Faculty of the University of Cape Town.

Pedagogical documentation was an important element in the ongoing engagement in the learning space and central to the research methodology as discussed above. Midway through the research, a selection of material was shared with parents in a parents' meeting. The theory/practice of documentation is a commitment to making visible the thinking and the learning of the children. Documentation makes the learning visible to the children themselves as well as to the parents and to the community. In this context, maintaining internal confidentiality would undermine the collaborative learning project. Particular contributions made and friendships and collaborations that emerge are important in the celebration of the learning going on in the preschool. For external confidentiality and anonymity, I undertook to only use images in which children were not recognisable.

Part way through the research, I made a second application to the ethics committee. The data I was working with which is presented in chapter seven, involves a video transcript that features the chanting of names. Where I could I converted the names to pseudonyms, matching the syllable patterns and rhythms. There was reference in the transcript to a rhyming game that one child in the class used to play with his friend's name, linking the name

with a television character. The game depended on a close matching of syllables and the consonant sequence. I felt that I needed to be able to use the child's actual name. The ethics committee agreed to my requesting this permission and so I subsequently obtained the relevant consent from the child and parent. The child is not visually connected with the name, and the preschool is not named, so it could be argued that the anonymity was maintained. However, as I had promised to offer anonymity and confidentiality through the use of pseudonyms, this process was necessary.

Photography and video

Sylvia Kind (2013), *atelierista* and contributor to "Being with a/r/tography" (2008), discusses photography as method in ECE research. She writes: "The language and conventions of photography tend to emphasise images that are 'captured' and a gaze that objectifies", bringing with it "a history of voyeurism, othering and violence" (Kind, 2013, p. 427). This colonial practice of collecting, categorizing, typing, and exoticising is always a possibility. However, the undertaking, in my ethics agreements with parents, children and teachers, was not to include clearly identifiable images of individual children. The selection of images and the generation of stills images from the video footage was guided by this commitment. Interestingly this practice has generated a collection of images that have relationality and intra-action as their subject. Seldom does an individual stand out as the 'subject' of the picture. Even in one image where a child is seen crouched over and writing on a piece of paper on the astro turf near the outdoor play equipment, the light effects have created a diffractive energy swirling around her. The concern for the adherence to the promise of anonymity unexpectedly gave me a new way of looking at images: a new aesthetic framework.

Once I had presented a documentation to the parents and teachers in a Saturday meeting, I felt it was important for the children to have access to these particular images as well. I printed a selection of images in A4 format.

The many photographs I printed and brought in to the preschool classroom were claimed very quickly. They were immediately identified by individuals who recognized them, named themselves as legitimate owners of them and took them home. I re-printed a selection for display at the Grade R graduation, and these too, had been claimed by the end of the event. I see this an important emergence of authorship and experience of 'intellectual property' on the part of the children. Photographers are considered 'owners' of the pictures they take, but in a more in-between, relational sense, the subjects of their pictures can also claim ownership. In the case of the documentations, much of what was featured in the images were objects and artefacts constructed by the children and their thinking.

Kind (2013) interests herself in "a seeing that recognizes partial views and ambivalences", "embodied and located understandings", one that "gives attention to the temporal and transitive, troubles the binary of creation and consumption, self and other, and allows for a continuum of complexity and resistance" (p. 429). Drawing on the decolonizing work of Rose (2004), and the feminist situated ontologies of Haraway (1988), Kind looks for a postcolonial photography that inhabits an in-between space, neither in or outside, but "*with the world*" in a collaborative, mobile engagement that looks for disruptions and difference and goes beyond the notion of evidence and "indisputable recordings" (Kind, 2013, p. 429). This work and the writing of Grosz (2011) on the affordance of the "art" image to capture moments of intensity drew my attention to the way that particular images marked instances of change and disruption and continued to work in the world long after their making. In particular cases the significance of these images only emerged through later images that called back to them. In chapter seven for example, the cut images made by Thulani perform in this way. The first images of his fairy cut-outs speak across months and across the gulf between preschool and Grade one to the images of his population of

new cut-outs. A spatial and temporal diffraction is made visible through this narrative. As Ingold (2011) puts it:

The work invites the viewer to join with the artist as a fellow traveller, to look with it as it unfolds in the world, rather than behind it to an originating intention of which it is a final product. (p. 126).

The on-going or “itinerant” (Kind, 2013, p. 437) life of a photographic image or artwork is also explored by Gillespie (2016). Apart from their extended durational agency, she considers the photograph and its “public” as a co-constitutive phenomenon. Drawing insights from the work of contemporary visual culture scholar, Ariella Azoulay, and the political theorist, Adi Ophir, she gives an account of the making and extended life of Bob Gosani’s photograph of the courtyard of the notorious Number Four prison in central Johannesburg on an afternoon in 1954. This image has particular relevance for my study (notably in chapter nine) and its power has influenced the learning and knowledge produced in and producing this thesis.

Johannesburg artists Mocke van Vuuren and Teresa Collins produced a short video piece called “*Minutes*” in 2010. It features the recordings from cameras installed in strategically high positions in public spaces around the city (a taxi rank with endlessly moving cars; a high-rise building’s roof with washing lines; a street corner with newspaper vendors and constant street life of various kinds). What makes the patterns and rhythms of the city visible is that the artists have speeded up a sequence of still photos taken over a period of 24 hours every 10 seconds and played them in a video sequence. The work makes visible the agency of the technology alongside the human artist and the city. The work is ‘made’ in the physical absence of the artist by the camera, by the phenomena of the spaces of the city. The making for the artist is a setting up of an apparatus (of which they are part) which is both a science experiment and a creative act. The apparatus is what creates the result. This view of the city is produced by this particular arrangement of cameras on these particular hours in the stretch of endless time.

The use of video in post-qualitative research is a growing practice (Pink, 2007; Mengis, Nicoloni & Gorli, 2016) and the workings of camera angles, lengths of shots and other filmic devices are drawn from film practices predating digital technologies (Mascelli, 1965 cited in Mengis et al. 2016, p. 6). Mengis, Nicolini and Gorli (2016) report on an organizational study using video and “Barad’s notion of apparatus” (p.24) in which the finding is that the apparatus of video “produces space” (p. 24), and “does not simply record it” (p. 19). The process is one that makes use of socio-material aspects of intra-action and the diffractive practice of “reading insights through one another while paying attention to patterns of difference” (Barad, 2011, p. 3). Diffracting a Lefebvrian view of space, cinematographic discourse, and Barad’s agential realism, the researchers examine the products of four different camera lens angles: a panoramic view; an American-Objective view; a roving point-of-view and an infra-subjective view. To summarise rather simply: the results of their study into the spaces of medical practice showed that the different angles produced different kinds of spaces. The panoramic view produced spaces that worked like containers for movement and patterns of work flow (most like Lefebvre’s conceived geometric space with aspects of perceived space of power relations). The American-objective view produced intimate and dialogical spaces of interaction between actors and foregrounded experience and some affective responses (This relates most to Lefebvre’s lived space). The roving view produced intra-active spaces that constituted unexpected relational connections between human and non-human elements unanticipated by the researchers (a view of the intra-action of human and non-human aspects that pushes the boundaries of Lefebvre’s framework). The webcam mounted on one individual’s head (the infra-subjective view) produced confusing and disconnected images that had a machinic quality and provided limited use for the study. They recommend that spatial research could be better practiced by using a range of angles in combination to produce different kinds of spaces for analysis (Mengis et al., pp. 23-24). Mengis and colleagues work in the field of organization studies

and focus on the spatial aspects of the video productions. In addition to the way that the lens angles produce different kinds of space, I am also interested in the way that the video as apparatus produces time.

My camera worked as an extension of my body and I became the cyborg of Haraway's natureculture consciousness (Haraway, 1991). I mostly used a single lens reflex camera with a video facility and sometimes I used my cell phone. The camera may well have been a more visible intra-vention than the smaller cellphone would have been, but the children and teachers seemed equally comfortable with my moving in and out of their spaces with either of the devices. The children took turns trying out the devices. They were more successful with the cell phone as they weren't practiced at holding the camera steady and holding down the button. They would have needed some more time with this but it seems likely that cell phone cameras with touch screens will be the technology they will make most use of in the future. When spending time with the class and the teacher I would often keep the video facility turned on but still try to engage with people and things as necessary, using the "roving view" described by Mengis, Nicolini and Gorli (2016). Just as I am unconscious of what my feet are doing while I am watching children doing cartwheels in the park, so I became unaware of the camera continuing to record while I talked to a child. While my footprints have vanished from the surface of the grass, the camera has preserved its products in its memory for me to re-visit at a later time. Unlike my words, these re-playings carry a sensorial experience and allow me a second and multiple chances to re-visit and diffract and in the process create new data. The data do not 'represent' aspects of a world out there and separate, but rather, the data are new sedimentations in the world that I and the children are part of.

Time

Working with the camera and its products meant re-visiting and re-playing clips from beginning to end to middles and repeating and slowing down to extend some 'hard to catch' glowing bits (MacLure, 2013). I created still images from the flow of the video footage, wanting to hold on and re-visit moments, often moments of intra-action between camera and event (my involvement coming later in a diffracting re-turning). Rather than being able to detect links, patterns, codes and systems, the re-playing creates a re-living which recruits my senses, thoughts and feelings all over again and the experience's power works on me in a powerful working of affect. Experience and time diffract to produce new experience and new thoughts. The video camera in my research produced results independently of my direct intention just as Mengis and colleagues describe.

Two children, Pogiso and Miriam are drawing with chalk on the paving outside the preschool building. I overhear their conversation and it is about monsters. They are creating an image of a monster together. The creature has a huge head with pointy teeth and frightening eyes (Figure 6.1).



Figure 6.1: Camera-eating monster.

I sit next to them as they draw and am invited into the game of imagining this awful beast. I take a photograph of the drawing and then turn on the video application. "Why is this beast so frightening?" I ask. Pogiso reads my vulnerability and my privilege and substantiates a monster that is after my camera. This monster will take my camera and break it into a million pieces! Reality and fantasy are fused in this moment. The loss of my iPad is so fresh in my sensorial being. The feeling of loss combined with the knowledge of my visibility as a holder of resources: a car, a computer, a camera. I am prey. The experience of this intra-action between me, Pogiso, the camera and the drawing is a transformative experience. It brings with it a new insight into my sense of being part of the world and into the precariousness of my role as white, middle class, resourced participant observer.

How to listen and attend to the new knowledges made through the engagement with the spaces, places, materials, human and non-human participants in the study – the in-between? How to "*carry on*" (Ingold, 2013, p. 6) as part of the world and do justice to the relationships between these children, their families, the community, the spaces and the learning? This is both a written and a visual account, and the workings of the writing, images, the being and the doing of the pedagogy create lines of flight that deterritorialise notions of learning with spaces and material. But also some emissaries (in the form of large reproductions of some of the research images) move into the wider space and the near future, making more widely visible the thinking and creative researching done by this group of children. The images made into wall papers have been left on walls in the neighbourhood to continue the conversation between human and non-human; material and discourse; word and world (see Chapter nine and a half).

My experience of being participant observer was a continually surprising one. Every day that I spent in the whirling worlding preschool environment brought new ways of being and knowing for me. Gradually I felt myself

becoming part of the working of the shifting entanglements and noticed small changes in the ways that different members responded and intra-acted. The intra-actions were affected by connections, my compatibilities and my differences. I could be seen as older, whiter, for example, but I was first referred to as Don's mother (Don was the child in the group who was closest to the designation "white"), then as Mbali's granny (Mbali's parents are close friends and I would often be the person she went home with at the end of the day), eventually, at Mbali's instruction, to 'Auntie Theresa'. I worked alongside the well-loved teacher, initially a tentative presence in the established routines and patterns of friendship and playfulness. When the time was right, I was welcomed in. I read stories, lead artmaking activities and enquiries. I attended parents' meetings where I presented documentations of our activities, enquiries and discussions.

I evolved from visitor to co-participant. I was an adult presence, alongside the other teachers and staff members: a pair of eyes, a body, arms and hands, a lap, sometimes deaf and speechless due to my stubborn English monolingualism⁵⁸. Noticing. Commenting. Asking questions. Reading. Telling. Listening. Doing. Researcher as maker. Making notes, writing, drawing, making photographs, making videos. Printing pictures. Photographing children's artworks and doings.

How do I put to work the theories I have recruited for my project? The following three chapters are the diffractive disturbance patterns created through thinking with and in-between the materialdiscursive realities of my encounters as artist/teacher/researcher/ethnographer in that time and space that was the research experience. The reader will see repeated waves of movement across the surface of the account, some larger, some smaller, some crossing over one another and setting new patterns in motion. Important

⁵⁸ I speak better isiZulu than Croatian (my mother's mother tongue). In language I feel both colonized and colonizing at the same time, having lost my parents' languages and culture and internalized an English colonial heritage. I have become 'white English-speaking' but with some 'outsider' positionality in relation to both Black and White subjectivities.

theoretical ideas, previously introduced in the introductory five chapters, are put to use here. Chapter seven works with a transcribed intra-action between three children a pile of papers and myself the cyborg camera-person. I enact my desire to make a posthuman reworking of familiar humanist thinking tools like Flavell's metacognition and Vygotsky's zone of proximal development by doing justice to the agency of the human and non-humans in the entangled pedagogical phenomenon that plays out. Chapter eight is principally about the power of things and materiality to think with us humans, and 'affect' and 'desire' are central concepts that come to the fore. Chapter nine is about worlding and takes seriously Foucault's challenge to the practice of critique:

Critique is not a matter of saying that things are not right as they are. It is a matter of pointing out on what kinds of assumptions, [on] what kinds of familiar, unchallenged, unconsidered modes of thought the practices we accept rest (Foucault, 1988, cited in St. Pierre, 2014, p. 4).

I take up Karen Barad's invitation to avoid negative, dismissive othering critique but to respond creatively and to "[read] diffractively for patterns of differences that make a difference" (Barad, 2012b, p. 49). I create a spatial temporal diffractive mapping of an urban Johannesburg park space and instead of repeating negative accounts of the realism of inequality, injustice and deficit views of current mainstream pedagogical practices, I endeavour to look how things have landed as they have, and how we can look at them differently to be able to carry on living-with response-ably.

7. **Diffractive encounters with names**

“I love you, Auntie Theresa”. “I love you, Pogiso,” I reply. “But Auntie Theresa, do you know my other names?”

What is a name and how does it operate in the practice of loving? Is loving and being loved important in becoming learner? As Kohan makes clear, learning is about both loving and dying, two of the deepest and most intense experiences we can have (Kohan, 2014a, p. 39 as discussed in chapter five). The dialogue above was an unexpected intra-action on a library visit with the Grade R class. The conversation got me thinking about how unaware I was about the working of names, but it also made me notice this particular child and our one-on-one connection. I thought about how knowing more about his names and what his names meant to him might add to my ability to make a connection with him and learn from him and his five-year-old view of the world. Considering the few real possessions that children are seen to have⁵⁹ (Lipman, 1990) I acknowledge the importance of this precious possession, this semiotic artefact. I am reminded of the ways in which this possession (a name) can be stolen, abused or denied in colonial practices of re-naming, mis-pronouncing and re-allocating (Epperson, 1990; Moyo, 2012). I started to consider names as materialdiscursive agents in the world. Names are central to the life of a pre-schooler. There are names on charts and names on bags and shoes. Names on fee payments and names in games and rounds. Names on drawings. A name is a threshold between our separateness as bodies in the world and an invitation to a more intimate connection. The first letter of their own name is often the first meaningful phonemic sign for young children. This paper revisits an intra-active encounter between three children, names and drawings on paper. The names on the pages invite them

⁵⁹ Lipman refers to it in the (1990) BBC series “The Transformers”. He says that children own so little, but at least they have their own thoughts.

to recognise letters, recall the names of their peers and create syllable rhythms. Apart from sounding out names, the trio of readers engage in complex practices associated with literacy practices.

The thinking that precedes, supports and accompanies reading and writing involves rich visual and affective intra-actions. I engage here with an event that provided an opportunity for diffractive encounters with their own and peers' classwork and provided these three preschool children with a context for strengthening meaning making through intimate and recursive playful intra-activity. 'Diffractive encounters' is a term offered in this account as a materialist response to more Cartesian notions of 'metacognition'. Rather than a 'stepping outside' of thought and experience to 'review' it, the revisiting or "re-turning" (Barad, 2014, p. 180) of experience is considered as a diffraction through space, time and matter. As I discuss in more detail in chapter eight, modernist constructions of knowing have rendered time invisible (Lefebvre, 1984, p.95-96). In her quest to take note of how time matters in the worlding of the world, Barad introduces the notion of "timespacemattering" (Barad, 2010, p. 264). I suggest that the notion of metacognition can be framed as a diffracting of experience through the gratings of one's composite experience and knowledge of world and self. Rather than stepping outside of one's thought in order to examine it, this diffractive notion of metacognition places the thinker inside the experiencing of thought. It is both a material and a discursive process. This is the doubling quality of affect: "The experience of a change, an affecting-being affected, is redoubled by an experience of the experience" (Massumi, 2015, p. 4). Deleuze (1994) says that "wonder, love, hatred, suffering" are all possible "affective tones" through which the world grasps us through an encounter and forces us to think (p. 139). So, we have direct experience of the world, which sets up resonances of thought and feeling in ourselves and human and nonhuman others. The diffraction of these waves of affect create new patterns of being for all the intra-acting agencies. Being a part of the world's

worlding is the nature of our existence (Barad, 2007, p.392), but being aware of the experience is a diffractive, affective, learning consciousness and an ethical responsibility and response-ability. It is not helpful to claim this kind of knowing exclusively for humans. A posthumanist (and decolonising) position leaves unanswered questions and sits with mysteries such as these, remains and dwells with inequalities and injustices rather than seeking solutions and answers that leave existing power relations intact (Cannella & Viruru, 2004, p. 151; Tuck and Yang, 2012; Haraway, 2016).

Notes on posthuman notions of knowing

The Cartesian subject is positioned opposite the object of his/her gaze. In this model, the optical metaphor for knowing is dominant and the eye links directly to the brain/mind in which all thinking happens. The body is disregarded in the thinking process and represents a base and conscious-less 'nature' from which rational thinking separates us as 'subject'. For cognitivists, better thinking requires a distancing from the object of our knowledge. This empirical and separate knowing is at the centre of the modernist project and is built on the principle of permanent critique, that Foucault considered one of the key defining qualities of Enlightenment thinking (Dahlberg & Moss, 2005, p. 53). Modernist democracy assumes the presence of a centred and separate individual capable of weighing up choices for the 'common good', and individually responsible for critical and reasonable decisions. It is important to notice that this 'reason' existed alongside practices like slavery and the oppression of women, defining universal 'man' as a certain kind of 'white man' (Cannella & Viruru, 2004) and was central to the exclusive constructions of 'human' essential to the colonial project. When the Enlightenment critique is taken to its logical next level, the critique of the modernist project is possible. Marx's important work in conceptualising a world in which 'men' are equal transformed modern thinking just as Darwin's natural selection gave humans an unpredictable and precarious future, equally vulnerable to biological and

ecological changes. The science of the enlightenment, however, served the destructive and chauvinistic impulse of capitalism to the detriment of the planet all in the name of 'progress', selectively distorting much of Darwin's science (Burman, 2008, p.16). Similarly, the partiality and short-sightedness of the colonial project is made manifest by the material reality of our current condition (Cannella & Viruru, 2004). The posthumanist paradigm is a decolonising one that puts us back into the world we are coming to know- in ethically conscious relationships (Barad, 2007).

Poststructuralist feminist thinkers like Judith Butler and Donna Haraway (and also influenced by Foucault) moved the body and performativity to centre stage. Thinking for them is part of being and being is relational. Being is not 'identity' but rather a pattern of intersecting discourses into which we move and negotiate our becoming. In this becoming, we affect and are affected. For posthumanists like Barad, also a feminist philosopher and scientist, Butler and Haraway opened the way but do not go far enough in recognising the agency of the material and the non-human in our entangled and implicated becomings-with-the-world. The poststructuralist shift in thinking in the mid- 20th century places importance on 'deconstruction' as opposed to 'construction' in knowledge production⁶⁰. Foucault's notion of 'discourse' introduced a more performative notion of knowledge which has contributed to new materialist formulations. Feminist philosophers have extended the work of Foucault to claim embodied forms of knowledge and have opened the way for monist ontologies like the agential realism of Barad. Barad's materialdiscursive conception of knowledge acknowledges the co-constitution of material and our knowledge of it (our discourses or explanations). Her monist philosophical position has affinity with that of

⁶⁰ Piaget's early conceptions of structures, equilibrium and disequilibrium are Cartesian in form and suggest processes happening in the brain alone. He proposed the basics of the 'constructivist' paradigm that sees the learner as the active constructor of his or her own knowledge, placing all agency in the human actor. The constructionist notion of learning (attributed to thinkers like Vygotsky and Dewey) acknowledges the reciprocal relation between learner and reality- we both construct and are constructed by our realities (Davies, p.121).

Deleuze and Guattari. Brian Massumi, translator of Deleuze and Guattari's *Capitalism and Schizophrenia* and a Spinozist scholar in his own right, writes:

...our experiences aren't objects. They're us, they're what we're made of. We are our situations, we are our moving through them. We are our participation – not some abstract entity that is somehow outside looking in at it all.
(Massumi, 2015, p. 14)

We are diffracted through and by the encounters and mutually influencing agencies we are part of. Drawing on Deleuze's notion of "affective knowledge" (Semetsky, 2009) and Barad's intra-active onto-epistemology and diffraction as methodology (Barad, 2007; 2010; 2014; 2018), I explore the implications of this discursivematerialist process as practiced by three children in the recorded incident. I then respond to a still image showing the Grade R group filing their work into their personal portfolio files as the teacher hands them out to each child. I go on to look at the implications for our ideas about the role of the teacher and the conceptions of child inherent in the proposed concept.

The first incident I present here in the form of an audio transcript with some accompanying still images, is an incidental intra-active engagement between three Grade R children and a pile of their peers' drawings on the subjects of 'Spring' and 'People who help us'.

The class focused on the theme of Spring for some time and went outside to see the spring shoots and new leaves, made their own leaf print and made drawings about spring clothes and spring food. I was present for some of the Spring activities which led to an extended exploration of seeds and planting. The theme of 'People who help us' is a theme that gets children to consider people in public service, like nurses, doctors, police officers and fire fighters. The work from these theme-based activities is often displayed immediately after production and then filed. The work is often hung very high on the display wall in the common area of the centre and it seems that it is mainly

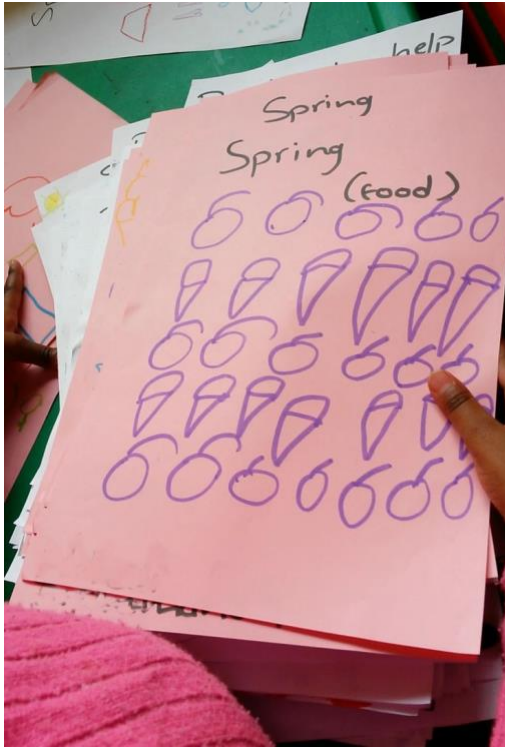
for the benefit of parents. The practice of looking at the work of one's peers is not considered a necessary part of learning in this preschool and it is not mentioned in the Grade R curriculum. Looking at one's peers' work while in production is sometimes discouraged as there is concern about 'copying' and also peer products may be seen as 'not ideal' (or 'wrong') responses to the task and therefore better not dwelt upon. Models done by the teacher are more often the focus of ("stultifying") instruction before the children attempt an activity (Ranciere, 1991, p. 9). What follows is the conversation (transcribed from a video clip) between the children as Koketso pages through the work of her peers and Bokamuso and Thulani look on, participate and contribute to her commentary. There is a series of photographs that are stills selected from the video clip of the event. I offer a narrative of the event before going on to discuss the learning I have gained from the documentation.

Transcript story



Koketso, Bokamuso and Thulani are sorting through a pile of papers belonging to their Grade R class. It is after lunch and the tables have been piled up and it will soon be time for the children to have their afternoon sleep. There is a gap in the routine that allows for this intra-action. Koketso takes the lead and pages through the pile of papers, reading the name on the sheet and reading/describing/naming what is drawn or written there. "Apples, ice-cream, ice, cookies, and... I love you". She reads a name, "Michelle", then repeats it, adding a suffix of endearment: "Michellie!"

Figure 7.1: Sorting names.



Bokamuso wants to play a game and asks her to close her eyes. She is not interested in that game and refuses. Bokamuso keeps on insisting that she closes her eyes. As a last effort, he tries to insist, "I won't disturb you!". Koketso continues with her reading sorting activity. The two boys have to fit into her programme.

Figure 7.2: Sorting names.



Thulani continues with his job of wiping the tables but joins in the reading now and then. He puts the cloth on his head to create long hair. He is enjoying this "dress-up" game. He decides to show me (researcher) his drawing of spring clothes. He pages through the pile of papers that Koketso is holding. Koketso allows this. They page through together. Eventually they find the one they are looking for.

Figure 7.3: Sorting names.



Figure 7.4: Sorting names.



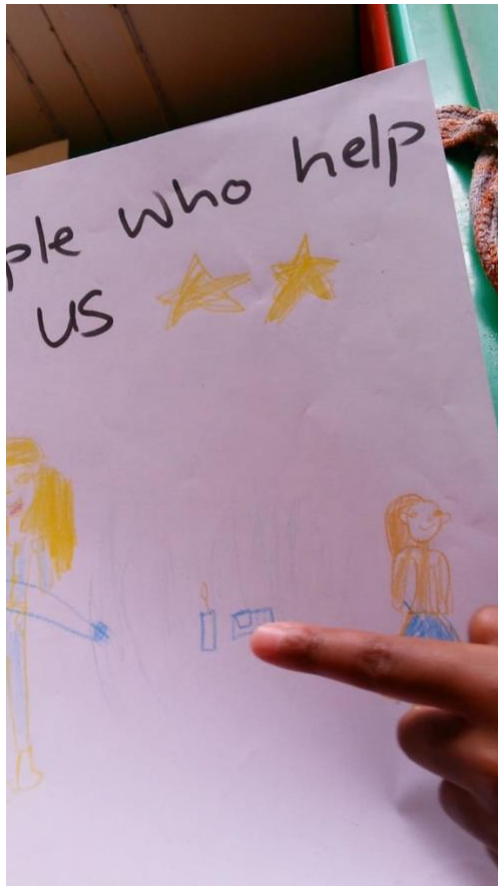
He takes the page out of the pile, leaving Koketso and Bokamuso to continue paging. He points to each item and names them for me; “This is a skirt, this is a dress, this is also a dress.. this is a quaiquai” – a colloquial onomatopoeic name for high heels that he acts out for me by walking on his toes.

Figure 7.5: Sorting names.



Koketso finds his drawing of “People who help us” and we then look at that one together. The fire fighters look like blonde Barbie dolls, but there is the requisite hose pipe in one of the figure’s hands.

Figure 7.6: Sorting names.



There is also, in the centre of the page, a drawing of a candle and a box of matches. Thulani explains that this is about “playing with fire”.

Figure 7.7: Sorting names.

Koketso finds Bokamuso’s drawing of people who help us. Bokamuso dismisses his drawing as “ugly”. Koketso reads out names as she comes across new names. “Nandi!” she reads. “Where, where is Nandi?” asks Bokamuso. But it is not Nandi. I correct the reading: “That’s Nokupiwa”, I say. Bokamuso repeats the name, turning it into a rhythmic chant, with long, short, short, long syllables: “No-ku-pi-wa, No-ku-pi-wa”. Koketso is now hunting for her own page. Thulani takes over reading the names: “This one’s for Mavis”. Bokamuso makes a rhyme: “Mavy, Mavy, Mavis!”

“Where’s my own?” asks Koketso. Thulani reads: “This one’s for Thandi!”. Bokamuso reads: “People who help us”, his ‘p’ in ‘help’ exploding in his mouth. Koketso notes the angled arms in Thandi’s drawing: “Every day Thandi loves to make square hands!”. Bokamuso repeats in agreement: “Square hands”.

They go on reading names together. "Ade" comes up next. The following one also begins with A. "Aphiwe," they say. I point to the name and read: "Arthur". They recognise the name but they also know that Arthur's name is not used like this in the class. He is Emedi, or Meredi or Mercredi. They go through all these various possibilities. Bokamuso pronouncing a beautiful French, Mercredi, with guttural 'r's. As they go through the pages, I sound out names they don't recognise. I follow their lead and sound out the syllables. When Dorcas comes up again, Bokamuso builds on his previous chant: "Dorca, Dorca, Dorca, Dorcass".

Thulani reads: "Dineo", Koketso sounds out syllables, but then adds in an extra one: "Di-ne-e-o".

"Bokamuso!", we all read together. Thulani immediately adds: "Goggamonster!", referring to a version of Bokamuso's name used by John (a boy in the class who has English as his mother tongue and according to the teacher, could not pronounce Bokamuso). It is interesting to note that the name has the same number of syllables and three of the four consonants are common (if you accept that the 'gg' and the 'k' are close enough).

Now we see a name none of us recognise. It looks like Chetiwe. Koketso tries an isiZulu 'c' sound: 'sts'.. I then see that it is a K written hurriedly:

"Khetiwe! It's Khetiwe."

The next one is an 'N'. I sound out the 'N'. Koketso guesses: "Naledi".

"Nhlanhla" I say. "Oh!" says Koketso, and they all repeat in unison:

"Nhlanhla". Then comes Princess. I sound out the 'P' and they all say

"Princess" in unison. Bokamuso repeats the name, doing something interesting with the last syllable. He flaps his tongue so the sound spills out, "Prin-ceess".

The next one is Koketso's. "This one?" I ask. Koketso reads her name;

"Koketso! For me!". She doesn't stop, she carries on paging. Thulani's is next.

He has drawn a mermaid, one of his favourite things to draw. "A mermaid

again,” I say. “Are you a mermaid? “, I ask, referring to some past conversations. “Yes!” he replies. “Yes, huh?”, I nudge him for some detail. “The mermaid is gone” he says. Koketso has moved on and is reading the next name followed closely in unison by the other two. Thulani says: “Rapunzel”. He and koketso laugh, Bokamuso is bemused, “Rapunzel?” he asks.. “Yes, look at the long hair,” I say, pointing to the drawing (Figure 7.8).



A drawing of a person with very long hair. The name of the artist has been erased from the page in accordance with ethics protocols.

Figure 7.8: Sorting names.

The next time Nhlanhla comes up, Bokamuso starts saying Naledi, but Koketso jumps in with the correct name “Nhlanhla,” she reads.

Worlding conscious

According to Lyons, a scholar of reflective inquiry, the self-awareness of a learner is a pre-requisite for self-directed learning and ethical practice (Lyons, 2010, p. 41). Is this the 'proper thinking' as described by the Greek philosopher, Plato. He distinguished between this and "mere opinion" (Semetsky, 2009, p. 453). Proper thinking was thinking that connected experience with the concepts of the ideal realm of pure forms. The theory and practice of reflective inquiry accords agency to the human knower and may be critiqued for using a reflection metaphor that suggests sameness (Barad, 2007, p.88-89) and regarding experience as an object (Massumi above). For Barad, concepts derive their meaning from particular instantiations and relational intra-actions (Barad 2007, p. 147) and knowing depends on the diffractive transformations inherently active in the worlding of the world or versing of the multiverse. More than merely experiencing thoughts and ideas, 'better thinking' could be said to involve diffracting embodied experience through a grate of conceptual thought, prior experience or memory. It involves thinking about one's thinking not in isolation but in the company of the timespace happenings of our experience always generating difference rather than sameness. One could say that it is a process of diffracting action and thought through a second sieve of time, and of recursion. Diffractive moves made by the three children in the clip include: Judging one's own product: "I need to finish colouring in!". A response to work done previously, seen in relation to an idea of a differently completed one, one that is virtual and imagined. "Mine is ugly...". A response that suggests a strongly affective relation to the work of others and a self-critical position. This reflexivity is prompted by the work itself which recalls the activity and holds within it the memory of the doing. Rather than taking a position of distance in order to gain clarity of thought, a closer and more entangled relation to the material reality of one's experience generates new meaning.

Embodied and entangled

Thinking and knowing are embodied, they are not done 'by' us but *are* us. Just as our experiences are not "objects", but "(t)hey're us, they're what were made of" (Massumi, 2005, p. 14). Our experiences are an expression of our being and becoming learner. Koketso establishes and holds her physical space. She is holding the pile of work and paging systematically through it. She resists the efforts of Bokamusu to engage in what sounds like a far less rational activity of closing her eyes and seeing whose work comes up – rather like 'snap'? He seems to have picked up on Koketso's excitement about encountering new pages. He is suggesting a way of heightening the shock value of the game. Koketso's body is positioned as if against an invisible orientating window onto the object of learning. The pages are held straight and in direct relation to the 'desk' surface. Their flatness allows them (invites them) to be piled and paged (Grosz, 2008, p. 20-24; Deleuze and Guattari, 1994, p. 183 cited in Grosz, 2008, p. 20; Cache, 1995, p. 2 cited in Grosz, 2008, p. 20). Thulani points with his finger, modelling figure/ground differentiation and practicing non-verbal literacy behaviours like isolating single pieces of information and sequencing them (Werstch, 2012, p. 82). Teacher/researcher repeats the pointing out. Thulani has a self-conscious manner of doing this, with an introductory teacher question: "Can you put the picture?" in a sing-song voice, as if modelling 'teacher talk'. I recognise the tone and the body language. The choice of words is confusing to me and I suspect he is struggling to remember the correct English terminology used by the teacher. It was more likely "can you see the picture?", or "can you spot the picture?".

Assigning personal meaning to direct experience is a non-Cartesian practice that requires affective response and a closing of the space between 'subject' and 'object'. Affect and one's personal choices, preferences and reactions are what preselect 'knowledge'. For Deleuze percept, concept and affect are a triad of philosophical thought in which affect "bridges the dualistic gap in

which the Cartesian subject is situated” (Semetsky 2009 p. 444). In my study children engaged in playful and personally significant activities centred on the work produced by themselves and their peers. An awareness of names, sounds, and letters was integrated with an awareness of each individual child’s product, their interests, their style and way of working. As seen in the transcript: "Thato likes to make square hands"; Thulani has an interest in women’s fashion. In both of these examples, relationality is an important part of the game: loving and learning are affective entanglements.



Figure 7.9: Filing.

The still image (Figure 7.9) which shows the Grade R class seated in a circle on the floor with their files, is an excellent visual record of the more flexible spaces common in Grade R environments. This kind of arrangement differs from most South African Grade one classrooms and more formal education more generally (in some cases, Grade R classrooms are little different from Grade one classrooms). The affordances of this kind of flexible space are many. Firstly, they are using the floor. The children can sit and move in a range of ways, as compared with the more rigid desk and chair arrangement in formal schooling (Dixon, 2011). What does this flexibility offer? A child can choose to face her neighbour and play a clapping game while she waits

to receive her next pages. Children can position themselves by the door which allows for watching the world (one group in the picture is fascinated by something outside). A toddler who walks in from the baby bunnies' class is at 'the right height' to engage directly with a Grade R child – and to explore his dreadlocks (see Figure 8). We need to ask how much the desk and the chair limit the movement, flow and connection that floors, and this particular floor, offer(s). The circle arrangement also sets this particular setting apart from a more formal teaching set up. The children can all see one another and the teacher, unlike in a formal arrangement of rows of desks where the focus is on the teacher and no effort is made to enable children to see each other, or where children sit in small groups of inwardly facing desks. Ironically, circle time or ring time in the preschool is usually the most formal and teacher-directed part of the preschool day characterised by direct instruction but has the potential for intra-active co-constructive processes. It is in this spirit that the Reggio school day typically includes an 'assembly' which is used for re-visiting documentation or proposing new directions for enquiry. The room shown in the image (Figure 8) is not the Grade R group's usual classroom space: their everyday classroom is a small, cramped space filled with plastic tables and chairs. This is a 'third' space of commonality and is a piazza of sorts (common in the preschool architecture of Reggio Emilia). The room offers very different relational possibilities from what the classroom offers.

I claim that what I have diffracted through these two pieces of documentation extends what is referred to as "an emergent literacy or whole language perspective" (Bloch, 2006, p. 7). It instantiates an intra-active materialdiscursive approach that depends on both the affective phenomenon of emergent collaborative sensitivity as well as an awareness of "text-based realities" (Wertsch, 1991). This move is one that changes the human-centred socio-cultural practice of social constructionism to a more flattened onto-

ethico-epistemology that acknowledges the agency of the nonhuman as well as the human in encounters such as these (Kuby & Rucker, 2015).

In accordance with the official curriculum, the daily products of the children's learning endeavours are collected and filed. They record the progress of drawn 'body images', the writing of names, their ability to colour in the lines, and cut along the line. The teacher in this site anticipated visits from the provincial education department representatives and knew what to show and what to hide. She tells me: Grade R children "should not be writing and should not have exercise books" (personal field notes). A delicate game was being played in which responses to parents' and government officials' conflicting expectations were carefully choreographed. In the space between the everyday emergent curriculum and the official published versions of it, valuable learning was occurring⁶¹, but much of it was missed by the official recording processes.

What actually happens on the "rough ground" of preschool practice (Dunne, 2001)? The teacher of this Grade R class had limited early childhood training. She was in the process of doing her Level four accredited course which is set at the level equal to a matriculation or school leavers' certificate. However, her relationship with the children and her open and welcoming personality led her to trust the children as unique and capable members of her community. She dealt with the overwhelming demands of filing each child's work by marshalling their assistance with the task, thereby providing an opportunity for them to re-visit and re-consider the work they had already accomplished and engage in collaborative comparisons and sharing – effectively 'flipping the classroom'. The circular and floor-level seating allowed for a comfortable and convivial mood, as well as a connectivity

⁶¹ Examples of this learning include the following: The teacher and I performed as scribes to write down the stories children told about their drawings during our seed enquiry. In breaks and after formal school time, many children joined in paper aeroplane making which involved geometric folding. On one occasion I walked into the Grade R room to find one boy leading the entire class in a rhythmic performance of a popular rap song. He was playing the complex rhythm on the table with his friend's lunchbox lid.

between the children in other parts of the preschool (see the small visitor in Figure 7.9) and with the outside (the view of the outside and the nearby city park). This pedagogical encounter disrupted the boundaries between teacher/child, learning/playing, inside/outside.

The documentations presented in this chapter are a small selection of performative encounters of being and becoming in place, time and mattering, be/coming together with human and nonhuman companions in intimate intra-activity. Heraclitus (in Kohan, 2015) offers the idea of time as intensity, as opposed to chronologically occurring moments. It is a durational notion of “un-numbered movement” (Kohan, 2015, p.57). Time is a child playing and, in this playtime, time is lost as in periods of intense focus. Both Gussin Paley (2004) and Lenz Taguchi (2009) talk of a process of slowing down in their pedagogical processes with children.

The transcript is a performance of human and non-human elements in intra-action, creating anew the lived and experienced concept of ‘reading’. Children, hands, bodies, names, pages, drawings and ideas together enact a literate becoming in an in-between space and time outside of the planned programme. The image of the children doing their filing is a frozen moment of intensity made visible and available to be re-visited and re-considered.

Reconceptualising metacognition

Metacognition is a term that in itself suggests that it has its roots in cognitive science which follows a developmentalist and neurologically based approach to learning. Flavell, who introduced the term in 1976, referred to metacognition as “the individual’s own awareness and consideration of his or her cognitive processes and strategies” (Flavell cited in Fischer, 1998, p.1). Ideas about ‘cognition’ are essentially Cartesian and assume a knowing subject capable of separating from the object of his or her knowledge in order to gain an ‘objective’ and rationally scientific view that can be proven or described accurately and repeated for purposes of proof. Metacognition

would then describe the self-reflexive process of examining one's processes of rationality *from the outside of them*. Vygotsky's earlier contribution to the metacognitive debate (though not yet named) was the notion of unconscious, social and externally learnt behaviour followed by internalised and more conscious behaviour. Donald Schön (1987) introduces the term "knowing in doing", referring to mindful action as opposed to reflection after the event. His descriptions of potters and other practitioners in close relation to their materials prefigures the notion of the agency of material although he places agency solely in the realm of the human, as does the reflective inquiry of Lyons discussed earlier in this chapter. The idea of metacognition as 'thinking about thinking' is also recruited by philosophy with children proponents (Lipman, 2008; Fisher, 1998; 2007; Haynes, 2012; Murriss, 2016). The way that thinking is made the focus of thought in the CoE is discussed in chapter five. Metacognition has been a useful term as it suggests a turning point or disruption to ordinary thinking so often assumed to reside inside a human's head and *about* the world. The critical and creative thinking valued by the P4C community involves a recursive and diffractive aspect in which concepts are followed, examined, interrogated through examples and exceptions. The term, metacognition, needs re-visiting and re-turning to include the affective and intra-active more-than-human aspects of thinking being becoming. These aspects include the agencies of space and time as well as matter. A non-subjective notion of knowing-with, and becoming-knower requires a sense of the intra-active agency of human and non-human, organic and inorganic entanglements of the world coming to know itself: its "worlding" (Barad, 2007, p.392).

A posthumanist ZPD

I want to claim that Lev Vygotsky's work with social constructivism prefigures a posthumanist approach. Kennedy and Kennedy (2011, p. 271) discuss "his notion of learning as a process whereby what happens between us is internalised so that it happens within each one of us". If we take

seriously his important principle: that when one looks at social interactions like speech, one must pay attention to much more than the words or language (Wertsch, 2012, p.79), we need to go beyond the human agents. The language used is part of an integrated system of social relation, but the language is part of a bigger system. What would happen if we were to look beyond the relations between the humans having the conversation? What non-human elements play a role in the “game”? His theory of the zone of proximal development is still useful if it can include these agential entanglements of human and non-human: pages, pencils, floors, names, hands, voices. As Wertsch reminds us: “Vygotsky was primarily interested in the dynamic aspects of human activity rather than static representational systems” (Wertsch, 2012, p. 95). On the threshold of the humanist/posthumanist boundary we can consider the shared intra-active zone of our capacity of change (development) with timespacematterings (not just human others).

Re-use, re-cycle, re-late

The spontaneous, incidental and intra-active engagements shown in the transcript and the image point to the importance of timespacematter affordances in preschool contexts and make clear the value of documentation for creating increased opportunities for children and adults to revisit these generative encounters. How can this kind of engagement be supported? In three ways:

1. By adults creating opportunities for child-led intra-active pedagogical encounters.
2. By teachers relinquishing power over administration of products of learning e.g. files, portfolios, displays, documentations.
3. By adults supporting the on-going use of the products of learning (children's responses, drawings, artefacts) in follow-up activities and processes.

Through this we can reconceptualise the material products of learning. They will then not only be seen as evidence of learning, as in forms of assessment of past, completed activities, but also as artefacts currently and always still active in the learning processes. These artefacts can be re-visited, as documentation to use, and re-use, allowing these artefacts to affect us in an on-going way, documenting and having agency in our learning. There are both inward and outward movements between the micro and the macro of becoming reader, with names performing at a threshold between the sounds of belonging and recognition (our personal names) to the world of letters, words and meaning.

Both Philosophy with Children and the Reggio theorypractice nexus challenge the Cartesian dualism of knowing and knower. Both acknowledge the entangled nature of knowing which connects affect and physical reality through the phenomenon of experience. Everything is connected in a material intra-active way. But the most commonly assumed connection needs to be unsettled and possibly dis-connected. We need to emancipate learning from the notion of teaching by creating times (routines or programmes) and spaces (classrooms, inside and outside spaces, piazzas) that have affordances for small group collaborations and unmediated intra-actions with the products of pedagogy.

Thresholds operate in between. They are passages and processes that invite, beckon, open, close, squeeze, transform what passes through or what meets 'other' at this in-between place of becoming. Deleuze and Guattari propose that it is in the threshold spaces between 'milieus' that action happens, and newness is generated: as in the twilight between night and day, and in the changes from one state to another (Deleuze & Guattari, 1987, p. 313-314). Living things have interior (composition), exterior (material circumstances), intermediary (limits and boundaries between) and annexed milieus (energy sources and action/perceptions), all of which become coded through repetition, but are continually transcoding, setting up rhythms within chaos

(Deleuze & Guattari, 1987, p. 313). Barad and Bennett extend this capacity for action to bodies we consider non-living, as in the “liveliness” of mountain ranges (Barad, 2014, p. 168) and the impact of omega-3 fatty acids on human moods (Bennett, 2010, p.vii). In my example above, the action and rhythmic encounters between the insides, outsides, limits and energies of children, names, images, papers and sounds create new patterns of practice. Names in particular invite the children into relational language games and operate as thresholds to literacy becomings.

8. Learning as desiring: Fantasy beyond the corner

Bennett's preface to her book, *Vibrant matter: a political ecology of things*, frames her project as the "worrying" of the modernist separation of life and matter (Bennett, 2010, p. vii). She acknowledges that this modernism that occludes any notion of vital materiality is not necessarily shared by children nor is it refuted by Western philosophical traditions. There is a strong thread of "vibrant materiality" linking thinkers such as Spinoza, Nietzsche, Thoreau, Darwin, Deleuze and Bergson (Bennett, 2010, p. viii). These philosophers have been part of a less dominant stream of thought in the last two centuries but have much in common with the agential realism and "composting" theories of contemporary feminist philosophers Barad (2007; 2011) and Haraway (2015) respectively and the philosophical work of philosophers of education, Kennedy (1997; 1998; 2013), Kohan, (2012) and Murriss (2016). In the following pages I explore the notion of vital materiality present "in childhood experiences of a world populated by animate things rather than passive objects" (p. vii). The way that certain objects attract our attention, make us think, increase in significance and stay with us and become part of us is an aspect of sensory experience and 'bodymind' (Murriss, 2016, p. 8) experience that is important to include in thinking about learning. My sense is that there is a threshold timespace between not-being and being literate in which matter matters inordinately. This threshold is a timespace we need to guard fiercely and be able to defend as formal instruction creeps into increasingly earlier phases of education.

The direct engagement of children with environments, objects, and materials provide the doorway and the entrance hall to the huge and many-roomed house of learning: the learning about the world that "autonomous", skills-based, phonics approaches see as quite different from the kind of learning related to knowing how to read and write (Bloch, 2006, p. 7). Importantly,

these are the connectors that provide the impetus and the motivation to read and write and the contexts that make the learning meaningful. Whole language contextualized models of literacy acknowledge this (Street, 1995; 1988) but their purpose-driven language and literacy orientation still downplays the richness of real world encounters. Murriss (2016), makes the point that the “adult hegemonic scientific Cartesian world-picture that favours language and literacy and a particular kind of rationality and subject/world relationship”, excludes the “oral, aural, visual” domains of the child and the artist, “where no real knowledge is located” (p. 172). The structured and product-oriented training that goes into the teaching of reading and writing currently in South Africa leaves little room for these ‘other’ knowledges, “takes away the ninety-nine” other languages (Malaguzzi, nd), and frames ‘child’ as ignorant.

Taking the notion of learning beyond the metaphor of language (a hundred languages, multi-literacies) to one of *desire*, I acknowledge the connectedness and affective entanglement of ourselves and our worlds that make living meaningful and our expressiveness an impulse of learning as desiring. In this threshold, changes occur, and differently for each participant. “Literacy desiring” is a term offered by Kuby and Rucker as a way of challenging the multiliteracies discourse that tends to focus more on the products of pedagogy than on its processes (Kuby and Rucker, 2016, p. 5). Using the verb, rather than the noun, ‘desire’, they draw attention to the “intra-actions, movements, and surprises” (Kuby and Rucker, 2016) that are produced by students, materials, space and time in a Foundation Phase multiliteracies language learning environment. I introduced Deleuze and Guattari’s central concept of “desiring” in Chapter four in my discussion of the learning paradox and, in this chapter, I diffract with documentations of what I recognise as *learning as desiring* in a Grade R context. The material and the discursive, but also the rational and the irrational, work in co-constituting patterns of emergence.

Early childhood educators and carers enjoy the privilege of witnessing on a daily basis the wonder and perplexity that early encounters with the physical world generate in and with children. When toddlers begin to verbalise their responses to physical experiences we get some sense of how powerfully vivid and affectively moving these early experiences are. Mbali, one of the characters in my data storying, and the child of an acquaintance, was swimming with me in a small pond in my garden when she was about two years old. When we climbed out she remarked: "The water has made me heavy!". In an interesting way, she was inverting the logic of the water making her light (supporting her weight), by applying cause and effect. She had been in the water and now she had the sense of being heavy (a feeling she did not have before entering the water). Her knowledge of the world is distributed between her body and its weight, her inner sense of her body, the force of gravity and the density of water.

In non-verbal ways, children also use objects to communicate ideas before they have verbal linguistic competence, or when they don't share the same language with their companions. Hamid, a recent immigrant from Ethiopia, who spoke very little compared to most of the other children, drew me into a dialogical experience with him and some available objects. He invited me into a game of hairdressing by playing with a pair of scissors (the tiny blunt nosed scissors common in preschool classrooms), using body language and very purposeful eye contact. Together in this improvised intra-action we created a story about hairdressing and power relations effectively disrupting the child adult binary. I happened to be seated on a small chair which placed my head at ideal height. Hamid made snipping movements around my head with the scissors, much to the surprise and consternation of a passing parent – causing hilarity among the present company of children. Subsequently, it was enough for him to catch my eye and make snipping movements with his fingers to re-establish that mutually shared narrative and connection and re-activate my laughter.

The continually evolving project of early childhood education carried out by the municipality of Reggio Emilia has well established practices that are designed to support the emergent, negotiated curriculum with all its unpredictability, wonder and perplexity. The affordances of found and natural materials, recyclable waste materials as well as more traditional art materials are highly valued. *Atelieristas* bring embodied knowledges of materials, processes and tools into the preschool space and enliven these materials with the forces of the world, for example, wind, light, water, time and digital technology. They also bring cultural and historical knowledge of these materials and practices often taking cues from contemporary artists to provoke new ways of working and thinking. The demonstration *ateliers* offered to visitors and local community members and parents at the Loris Malaguzzi International Centre model this materialdiscursive awareness and related practices and the kinds of learning environments created in their schools.

In Reggio environments transdisciplinary explorations are taken up responsively from serendipitous events and 'happy accidents' through the rigorous and sensitive documenting of daily occurrences. The rigour and sensitivity required for the generative creation of pedagogical documentations is important to note. Rinaldi stresses that these are not for display purposes or for merely recording (Rinaldi, 2006, p.77). The documentations need to have resonance with the processes in which the children are immersed so that they can be used in the recursive revisiting and worrying of the perplexities and provocations emerging from them (Rinaldi, 2006, p.78). Listening, noticing, and dwelling in and with the questions, proposals, explorations of thoughts and ideas of children is a pedagogical commonality between Reggio and P4C and requires an openness to events and encounters, and an ability to plan in a way that opens up multiple paths of enquiry for participants. Ironically, the difficulty with not planning end results and the urge to pre-empt and control the

pedagogical process may be some of the consequences of formal scholarship and outcome-oriented learning practices associated with the modernist educational paradigm. Vecchi notes that for her, the process of learning as an *atelierista*, was one of learning to “undo learning” (Vecchi, 2010, p. 108). This is not to suggest that less learning is favourable to more, but rather that a different kind of learning is required and that the criteria for selection of candidates for this kind of education would be more related to the capacity to “affect and be affected” and an openness to change and uncertainty, than more formal academic knowledge and skills usually assessed by the academy.

The kinds of curricula offered to early years and Foundation Phase educators is a relevant issue here. Hands-on, experiential and enquiry-based learning needs to be at the core of teacher education offerings if the strangle hold of product-oriented, instructional modes of teaching are to be broken. The recent commitment on the part of the provincial Gauteng premier to adopt a Reggio-inspired approach in the preschools of his province (Molefe, 2017), has the potential to improve awareness and a more in-depth knowledge among policy developers of the approach and the value and importance of the role of the *atelierista* in working alongside educators to develop a project-based curriculum and a relational inquiry-led pedagogy. Vecchi describes how in the 1970's, Malaguzzi worked hard to make this role “*precious and necessary*” (Vecchi, p. 109) to counter cost-cutting moves by administrators.

Dahlberg and Moss (in Rinaldi, 2006), discuss the global nature of the Reggio project. What is unequivocally an endogenous and locally responsive endeavour, with a deep connection to specific political, historical and geographical realities has captured the imagination of the international early childhood community. The urge to “grasp” what is Reggio and duplicate it elsewhere is understandable but impossible and even undesirable (Dahlberg & Moss in Rinaldi, 2006, p. 16). Resisting commercial franchise pressures, the

organisation of Reggio Children shares their learning through international workshops, networks and publications, in the hope that rather than generating Reggio clones, other communities will “embark on local cultural projects of childhood” (Dahlberg & Moss in Rinaldi, 2006) towards the creation of better and more democratic societies. My research site was a community-based not-for-profit preschool in an inner-city area. It does not claim to be “Reggio-inspired” but being a centre serving a community of diverse, working-class urban children who depend on local government services it was a good place to explore ways of working that are cognisant of the entanglements and diffractive waves and patterns of difference in a particular space and time but that would be likely to have resonance with and relevance to situations in multiple sites in the country. The school makes use of provincial government and municipal services including a nutrition scheme, a public park and a library among other things. The idea of the commons is an important one in the discourse around children’s access and rights to the city as a space for learning. This issue is dealt with in more detail in chapter nine where I consider the affordances offered by the park specifically.

In the early part of the research period, some of the children made spontaneous contributions to my field note sketch book. Thulani made a drawing of a mermaid (Fig 8.1).



Figure 8.1: A mermaid drawing made with fluency and ease fills the page of my note book. I had made a photograph of this before I lost the notebook, as described in chapter six.

This repertoire (Kindler, 1999)⁶² I later found out, functions as a connector in his friendship with Mbali. They both often draw mermaids and their drawings share a number of features. Interestingly the mermaid is a mythological creature that has strong presence in African mythology as well as European. I have not been able to trace the source of this fascination for Thulani and Mbali, but it goes along with other mythical creatures like fairies and princesses that are common currency among the children in the preschool and are strongly present and reinforced in Disney films, cartoons and story books that include traditional European fairy tales. When the class

⁶² Kindler (1999, 2004), has offered a range of alternatives to the Piagetian stage theories of Lowenfeld, Kellogg and others, linking art pedagogies with contemporary art practices. Her notion of repertoires is a multi-modal approach to art practice going beyond the visual but remaining in an anthropocentric ontology.

was creating things with the winged seeds and other found materials, Thulani constructed a mermaid out of a bottlebrush flower, stalk and leaves (Figure 8.2).



Figure 8.2: A mermaid constructed from bottle brush flower, leaves and a spherical seed.

Thulani and Mbali play on the large tractor tyres in the outdoor play area. The tyres become their horses. They mount and dismount like professionals (Figure 8.3).



Figure 8.3: Mbali and Thulani mount their horses.

They are Elsa and her sister, Anna, from the Disney movie, *Frozen*. Thulani hasn't seen the film yet, but he is fully engaged, having been well inducted into the material-discursive realities of the sub-culture existing around the film. His hoodie (zip up hooded jacket) is his long hair that he can flick back with his hand. He wants the blue 'horse' to match his hair and calls me to intervene in an impasse, as Mbali also wants to ride the blue tyre-horse. I suggest that two people can ride one horse. Thulani likes the idea and they leap on together and supposedly ride off into the distance, each with their riding crops in hand.

Creating provocations, inviting perplexity

P4C and Reggio place importance on wonder and perplexity in learning (*'The wonder of learning'* is the title of the current international exhibition of Reggio Children). Malaguzzi differentiates between marvelling and wonder (Cagliari, Castagnetti, Guidici, Rinaldi, Vecchi & Moss, 2016, p. 338).

Marvelling is the day-to-day amazement at things that may or may not turn

out to be worthy of deeper engagement. Wonder has a connection to *eros*, which can be interpreted as an equivalent of “life energy” (Cagliari et al, 2016 p. 359).

In Italian, the word for wonder is “stupore”, whose Latin root give us the English words, stupefy, and stupid. Tavin (cited in Hellman & Lind, 2017, p. 211) proposes that stupidity has the potential to disrupt predictable ways of working in the arts. Care and precision in observation have been the lifeblood of the European visual arts tradition for centuries. *Not looking* where *looking* has been reified into a sacred unquestionable truth can disrupt conventional assumptions about knowing and reveal the sedimented assumptions that operate. Wonder is most often experienced outside of the predictable, the expected and the programmed. Wonder may be occasioned more by ‘stupid’ children and ‘incompetent’ teachers than by dutiful learners, expert and effective teaching, instructing, facilitating. In a similar vein, Haynes and Kohan (in press) offer the word “difficultating” in the place of facilitating.

Thinking moves occasioned by encountering a provocation start from a surprise. Malaguzzi (2016) proposes that it is the form of reasoning Peirce called “abduction” that comes into play. Abduction “contains no certainty but pursues the probable” and “is part of children from the start” (Malaguzzi, cited in Cagliari et al, 2016, p. 334). Abduction is listed along with a range of thinking moves by Peirce as part of the sometimes chaotic process of the community of philosophical enquiry (Kennedy, 1999, p. 347). Linked directly to perception, abduction is “the only logical operation that introduces any new idea” (Peirce, cited in Hoffmann, 1999, p. 275). It is the generation of hypotheses in response to an unexpected or surprising event or fact, as opposed to the testing, or elaborating of already existing ones. The title of Hoffmann’s article is “Problems with Peirce’s concept of abduction” and it seems the problem for science scholars is whether or not abduction is a logical process. Peirce makes a “clear distinction between the logical or

inferential *form* of abductive reasoning and – as a *precondition* of this reasoning – the genuine *creative act* of ‘perceiving’ possible explanatory hypotheses” (Hoffmann, 1999, p. 278). Linking creativity, perception and logic, the middle space between percept and concept is filled just as Semetsky (2009) describes (as discussed in chapter 4). The shared monism (Spinozist) of Peirce and Deleuze is clear in this ‘image of thought’.

The philosophy for children movement has faced on-going critique from different quarters citing a number of “overlapping and conflicting” reasons (Gregory, Haynes & Murriss, 2017, p. xxvii). Some of these critics, coming mainly from a psychological stand point, question the capacities of young children to philosophise, think, and enquire (Kennedy, 1999; Murriss, 2000; Haynes & Murriss, 2009). Rather than leaving the argument at the point of proving children ‘capable’ of philosophizing, Kennedy (1999) radically critiques the particular construction of human reasoning that underlies much of the discourse around children’s capabilities. In modernist, rationalist forms of European philosophy (based on Platonic-Aristotelian traditions) and what Kennedy terms “the politics of rationality”, children fall outside of the realm of the rational (along with women and the enslaved). This singular rationality has been challenged since the exoticisms of the Romantics, and later, psychoanalysis, surrealism and outsider art at the turn of the last century, offered “multiple images of reason” (Kennedy, 1999, p. 353). Kennedy’s thesis, drawing from feminist stand point epistemology, is that children, in their position as the ‘outsiders’ to the dominant epistemology actually have the potential to re-connect our thinking with more holistic thinking paradigms that do not separate subject from object, as in “mainstream Western epistemology” (Kennedy, 1999, p. 354)⁶³ and that also incorporate the irrational, and the imaginary (not relegating them to the

⁶³ Children are often seen as having less knowledge due to their comparatively short life-experience, but the other side of this fact is that they are less likely to have been inculcated into the Cartesian dualisms and “sedimented knowledges” (Kennedy, 1999, p. 354) that we as adults have taken on.

shadows of the unconscious). In this way, they have the capacity to offer something to the “reconstruction of philosophy” (p. 338) and can be valued as thinkers. An undoing of this narrow conception of reason has been part of the project of postmodernism, a project that Kennedy describes as an effort to find the “between” of inside and outside, subject and object. Guattari’s work (referred to in chapter four) on the concept of desiring can be seen to extend this project and to offer a way to consider the materialdiscursive energies of thought and affect working in, among and between bodies.

In more recent work, Kennedy (2013) has drawn on Deleuze and Guattari’s concept of becoming-child, which works as a “process of desire” (Deleuze & Guattari, 1987, p. 272). This notion of child is the molecular or minoritarian child, not fixed and identifiable, but decoding and recoding itself, “fluid, ambivalent or polyvalent, open to change, continually being made, unmade and remade” (Kennedy, 2013, p. 5) always resisting “the molar system based on majoritarian (white, male, middle class) dualisms, hierarchy, psychological splittings and exclusions” (p.7). The becoming-child inhabits the intensity of *aion*, or *aeon*, an in-between space of intensity and eternity with no chronology or chronometry (Deleuze & Guattari, 1987, p. 263). This is the time of a “child playing draughts” (Heraclitus, cited in Kennedy 2013, p. 3). It is the non-Newtonian timespace that Barad refers to in which past and future are not fixed in the present, nor are phenomena “located in space and time” as in containers, but rather, “phenomena are material entanglements enfolded and threaded through the spacetime mattering of the universe” (Barad, 2014, p. 82). Kohan, whom Kennedy draws on in this work and often writes and teaches with, suggests that childhood may be seen “not only as a period of life, but as a specific strength, force or intensity that inhabits a qualitative life at any given chronologic time” (Kohan, 2012, 172).

So, unlike the “pervasive rationalization and normalization of stage theory, (which) in its relentless chronologism – sees childhood as over before it begins” (Kennedy, 2013, p. 2), the becoming-child is a virtual future and the

potential of newness. The becoming-child is a becoming that is part of the wider becomings of the world and part of the worlding in which we are all implicated.

A provocation is offered as an open-ended starting point that may or may not be taken up (Vecchi, 2010, p. 40). Philosophy with Children and the pedagogy of the Community of Philosophical Enquiry depend on puzzlement or disequilibrium (Murriss, 2008) provoked by some kind of text, object, question, event. This provocation or starting point starts the process of questioning that leads to the collaborative and creative philosophical work. The broadened notion of reason and inquiry proposed above asks for the processes of science and the arts to be combined. The *atelier* and the laboratory are two intersecting strategies in Malaguzzi's writings and carry with them possibilities for exploring the rational and irrational; reality and fantasy; connecting thoughts and bodies in relational journeys of discovery and learning.

During my time as a visiting researcher in the preschool, I became a folder of paper aeroplanes. I had shown some children a way to make them and they soon became the favorite tea time and after school pass time. As long as there was paper, the folding would continue, and the throwing games would take on new forms and patterns. Time took on that unmeasured quality associated with *aion*. Fortunately, some children managed to master the folding technique so the pressure on me lessened. I remembered something else I could do with folded paper: folding and cutting friends holding hands. I made one and it caught on (Figure 8.4). Vibrant paper, enlivened by scissors, connected with desiring movements and energetic flows.



Figure 8.4: Friends holding hands.

I had also brought along an overhead projector from the university where this technology was slowly becoming obsolete. The paper cut-outs and their possibility for creating shadows, and the projector with its light source and glass surface were an obvious connection. The transformation of the cut-out paper shapes into shadows on the ceiling created an enthusiastic response and simple abstract shapes gained significance once projected. “Diamonds!”, “Traffic signs”, “a crocodile”. Some shapes were the discarded negative shapes from someone else’s cutting (Figures 8.5 and 8.6): a possibility created by the close entanglements of bodies and paper and the accumulation of rejected, unused superfluous pieces. A process of composting that is not possible in a tidied-up space where individuals work in isolation on their own identical products. Composting, re-use and re-purposing throws up new thoughts. The tidying-up impulse needs to be contained. Remaining with our desiring, “always in the middle” (Deleuze and Guattari, 1987, p. 293), and the “muddle” (Haraway, 2016, p. 31) of the process is part of artmaking processes that keep us among “the forces and actions that are actively becoming” (Jackson & Mazzei, 2012, p. 87) can be generative of creative thought.



Figure 8.5: A muddle of bodies, paper, light, a floor and a ceiling.

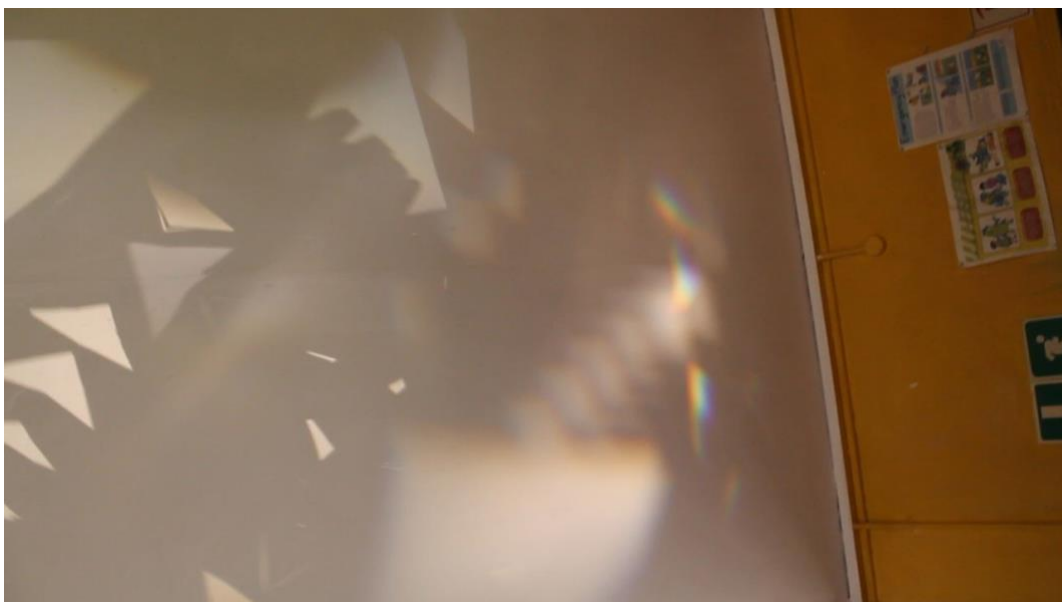


Figure 8.6: Shadows, refractions and rainbows.

“There’s a rainbow!”: Someone noticed the diffracted light from the edge of the mirror in the projector that made a thin rainbow on the ceiling. I remembered being shown how to make a rainbow with a mirror in water, so I set this up outside when the children went out to continue their play.



Figure 8.7: The work with shadows and light continues through 'playtime'.

The sunlight reflected from the mirror and refracted through the water created light patterns and rainbow colours on the outside wall of the preschool. There was an almost hysterical outburst when the flickering shape took on the form of a caterpillar, which looked just like the silkworms we had been keeping in a shoebox and feeding everyday with mulberry leaves (Figure 7.5). The intra-active narrative of children, water, sunlight, wall, and caterpillar cut across the binaries of rational/irrational and reality/fantasy. The idea and memory of caterpillar materialised in the timespacematter of the entanglement. The way the light formed a shape and moved on the wall was a performance of becoming caterpillar. A body without organs, like an egg: full of potential but with no differentiated cells or solid parts (Deleuze & Guattari, 1987). A language of crawling, caterpillar locomotion was recognised and the materialdiscursive literacy was distributed among and between the human and more-than-human assemblage.



Figure 8.8: A caterpillar with rainbow edges appears on the wall.



Figure 8.9: The emojis on the wall express a heightened level of affect.

A frequently practiced artform during outdoor play was the making of chalk drawings on the paved area on the western side of the preschool building. Today the sun was bright and the shadows of bodies invited the tracing of outlines. Noticing the caterpillar-like shapes on the wall, Marla approached teacher Alina with a question: “Are the shadows we made on the ceiling the same as the patterns on the wall from the water?”. In other words: What is the difference between a shadow and a reflection? This philosophical and

scientific questioning was made possible by the materials in intra-action with the conversations and games we created together as friends and co-researchers. The 'muddle' allowed what Peirce called abduction.

Connections were being made in all directions and the rhizome-like nature of knowledge and thinking was strongly present. The on-going and open invitation to ask this kind of question is what the "establishment of a community of enquiry" generates.

The day we played with cut out shapes on the overhead projector had an impact in different ways on different children (and adults). Thulani created a fairy with wings that formed a convincing shadow (Figure 8. 10 and 8.11). The shadow of a real three-dimensional fairy would have been very similar. I realised why shadow puppetry is so compelling. The philosophical exploration of 'real' versus 'representation' was enacted among and between child, paper, drawing, scissors and shadow.



Figure 8.10: A drawing leaves its page.



Figure 8.11: Shadow fairy story.

Mbali and Thulani sadly went on to different primary schools after their Grade R year and their opportunities for playing together were less frequent. My relationship with Mbali's family meant that I saw her often so I arranged some play dates with Thulani's grandmother with whom he lived. When I went to pick him up on one occasion (about six months after the cut outs session), I found him playing on the floor with a collection of paper dolls he had made. They were carefully drawn, coloured in and cut out shapes of fairies, mermaids, and other visibly female characters. Thulani told me they were "people" and some were "fairy teachers" (Figures 8.12 & 8.13).



Figure 8.12: Thulani's population of mermaids, fairies and fairy teachers.

Thulani's population of paper people is a powerful example of learning as desiring. A well established and deeply felt affinity for fantasy creatures like mermaids and fairies (evidenced by the drawing in my field notes, the leaf construction and the cut out) gave Thulani the impetus to create a collection of uniformly sized but individually designed units that had the advantage over regular drawings in that they could be arranged and grouped and moved as individual items in space. The power of a cut line to create a separate shape that performs like an individual entity (has a shadow, has variable positions and relationships) was something that seems to have made itself felt on the day he made his first cut out fairy. I can't presume to know the extent of the meaning of this process for Thulani and efforts to discuss them have been largely unsuccessful. What is remarkable is the power of a materialdiscursive practice like this paperpeople artform to take hold, gain purchase, and invite the engagement of Thulani's narrative, mathematical, aesthetic and imaginative capabilities in a durational enquiry.

Semetky's interpretation of Deleuze's triad of affective knowledge is discussed in chapter five and picked up earlier in this chapter. In this image of thought, affect is the connector between percept and concept and it clearly applies to these vignettes of learning as desiring. Abductive reasoning emerges from surprises, chaos and perplexity that produces intensities of affect. Thought moves on to logical engagements with cause and effect, problem-solving and purposeful creative production with, over and through time.

Thulani frequently resisted the criticism he encountered in relation to his choice of female images. He claimed a right to like women's fashion but rejected a pair of black ballet pumps offered to him by his teacher as being "for girls". Blaise and Taylor (2012) make important distinctions between the performativity of gender as opposed to the fixing of sexuality. Thulani 'does' gender in a way that "complexifies" his maleness and defies easy understanding (Pacini-Ketchabow, Nxumalo, Kocher & Sanchez, 2015). He

expresses his creative sensitivity to style and whimsy through his manipulation of materials. The materials provide a surface on which he writes his unique story. In one of my data video clips he can be seen placing a rag on his head to create a wig and on another occasion, he lifted his heels onto the backs of his shoes to create high heels. He does this with a sense of enjoyment and display. Through a process of learning about himself and his preferences, Thulani plays with embodiment and representation in ways that extend his story-making and agency in his fantastical explorations. Sometime later, when he had moved into the next grade I saw Thulani again and enquired as to whether he was still making his people. He said he was and added, as if coming upon this idea just then, "I can make a boy!".

Intersectionality theory current in feminist thought (Hill Collins, 2016) connect with this expression of a flow of entangled and contingent subjectivities. This unfinished story continues beyond the pages of this thesis as do the lives of all the research participants who continue their journeys of loving, learning and becoming.

A commitment on the part of adults working with young children, to pay attention to the notion of learning as desiring has the potential to change our job descriptions. The value of mediated, teacher-guided processes is primarily as a welcoming invitation, a springboard, an opening up for difference. Importantly, learning as desiring connects the material, embodied, affective and aesthetic aspects of encounters in and with the world as well as the rational and irrational, real and fantastical life- and thought-worlds. It calls on us as educators to slow down, stay, dwell in the threshold space where each child's emergent languages of expression can steep and stew. This is the space of "collective assemblages and experimentation" (Manning, 2007, cited in Irwin, 2013, p. 202) where teaching is becoming-intensity. My role as researcher (knowing) and my practice of making photographs and video recordings (making) allowed me to slow down, re-turn, re-visit and re-consider (doing). Sharing my research-

in-progress with a community of co-researchers through presentations and a webinar gave me a collaborative space in which to re-turn (to) the pedagogical events and with which to diffract further over and through time, space and difference. The practice of documentation and sensory ethnography offer compelling pedagogical and research tools that can become a way of being in the world in which diffraction is not a metaphor but a methodology.

Methodologists-in-the-classroom might consider:

1. Finding ways of making that allow them to dwell in the moments of intensity that emerge in the everyday learning environment.
2. Following concepts that emerge from the collaborative assemblages that classrooms are. The concepts of composting; the middle and the muddle; intensity; and abduction were put to work in the chapter to analyse or further complexify the data/creata.
3. Creating collaborative thinking communities with whom to rake over the rich data/creata that an intra-active teaching and learning practice produces. These may include children, parents, co-teachers, and co-researchers.
4. Continually re-turning to theory and re-turning to practice until the space between becomes the place of pedagogical thought and a diffracting of the one through the other. Theory might include texts about approaches to teaching and learning or even policy documents.

9. Park-ing: public places as intra-active learning spaces

One ventures out on the thread of a tune (Deleuze & Guattari, 1987, p.311)

Memory – the pattern of sedimented enfoldings of iterative intra-activity – is written into the fabric of the world. (Barad, 2011, p. 146.)

In an aeroplane on my way to Lubumbashi the inflight magazine features an article about local photographer George Senga. His photograph becomes the provocation for an enquiry.



Figure 9.1: *Footprint*, by Georges Senga, 2013. Courtesy of the artist. Focus of an enquiry with activists from non-government organisations in Lubumbashi in 2013.

The surface of the earth presented like this, flattened against the picture plane makes the invisible underneath more obviously absent. And absences speak louder than presences sometimes: Wouldn't Derrida say something

like this? Barad is interested in hauntology too. Is the park haunted and by what?

Both the Philosophy with Children and the Reggio Emilia theorypractice of early childhood education value the lived experience of participants and the learning offered by it far above any selected body of pre-existing knowledge available for transmitting from teachers to learners. As such they challenge many of the established forms of knowledge and accepted practices usually identified with their fields, namely philosophy and education, and specifically early childhood education. Academic philosophy and developmental psychology are troubled by the practices that these two 'nomadic' or 'rhizomatic' pedagogies enact (Murriss, 2017; Kuby, 2016). In these practices, a direct connection is made between being and knowing (Barad, 2007; Lenz Taguchi, 2010; Olsson, 2009; St. Pierre, 2013; Kuby, 2016) and knowledge comes with an ethical responsibility (Barad, 2007, pp. 391-396). What this means is that the contexts and lifeworlds of learning and learners are given prominence as are the circles of community and belonging shared by participants. This has resulted in a range of interpretations of practice of P4C in different parts of the world (Gregory, Haynes & Murriss, 2017, pp. xxv-xxvii), and in different kinds of learning communities and in the insistence by Reggio protagonists that their system cannot be 'cloned' elsewhere (Dahlberg, Moss & Pence, 2007; Dahlberg & Moss, 2005; Rinaldi, 2006).

The history of the municipal system of early childhood education in the city of Reggio Emilia is inextricably bound to the political and social history of the people of the area and to the virtuality of their unfolding futures that connect directly to the kinds of choices they are making as a community (Rinaldi, 2006; Dahlberg & Moss, 2005). In this chapter I explore the implications of a situated and intra-active approach by considering the entangled context of the preschool that performs (with me) as my site of enquiry in this research project and unfolding account, and connecting it to

the histories and political realities of its timespacemattering. Diffracting the events I witnessed in the preschool through the entangled phenomena of the suburb and city offered possibilities for making visible potential lines of flight and to respond to the call from Dahlberg and Moss (2005) for the recognition of early childhood institutions as “sites for ethical and political practice” (Blaise, Hamm, & Lorio, 2017, p. 2).

Movements, traces and sedimentations

My documentations about this phenomenon of children in the preschool and park are entangled with the complexities and challenges relating to equitable early childhood education provision in South Africa. The links may not be immediately obvious, but I trust these connections will emerge through the telling of some intra-connected stories (a series of events that occur on two different days in September 2015.) I pay attention to this one particular inner-city ward in Johannesburg and the implications of the histories and politics of the area on the preschool site. It is in the small local area of a ward, that one can see the intersecting and interdisciplinary issues playing out. I return to the concepts of “minor” or “minority” politics, proposed by Deleuze and Guattari and drawn on by Dahlberg and Moss, (2005, pp. 121-154) to consider the alternatives to a universalist ethics and a deliberative democracy which is dependent on rational consensus. They propose instead a pluralism in which decisions, consensus, alliances and choices are always temporary, and open to re-negotiation and possibly conflict in small “cramped” local areas, “little territories of the everyday” (Rose cited in Dahlberg and Moss (2005, p. 155). Rose’s work draws on Foucault, Lefebvre and Deleuze to explore the terrain of freedom and governmentality. In these “cramped” spaces, where change seems impossible, issues considered only marginally important by powerful hierarchies like national authorities and established political formations have the potential to create new connections and link up “with a whole series of other circuits” (Rose, 1999, p. 280). As in a Deleuzian ‘minor politics’, according to Rose, these local, contingent

connections can create new “mobile lines of force” (Rose, 1999, p. 279) with sufficient momentum to redirect and reconstitute relations and patterns of engagement. In these small spaces we are more likely to confront the parallel threads of ethics and politics and forge new ways of living together.

Taking a cue from Nxumalo (2016a), I position myself as “*mutated* modest witness” (Haraway, 1997). I diffract with intersecting and co-constructed narratives of imagined/entangled histories of the park with a “storying” of “everyday pedagogical encounters” (Nxumalo, 2016a, p.1). Rather than claiming the objective view of an independent, autonomous knower, claiming a “culture of no culture” (Haraway, 1997, p. 32), I have attempted to situate myself in a specific location, time, culture, and purpose and have followed the rhizomatic concepts (Deleuze & Guattari, 1987, p. 11; Lenz Taguchi, 2016, p. 216) and the “marks on bodies” (Barad, 2007, p. 394), as well as the omissions and exclusions where possible, to produce a new and pragmatic truth. The histories of this particular place tell stories of movement and change. “Time leaves traces in a multitude of layers and scales in the realm of life. Everything is time. Stone, tree, mountain, ocean; thoughts, doubts, clouds – we are time” (Trinh, cited in Barad, 2014, p. 184). The challenge offered by post-and de-colonial scholars and in particular by Barad’s feminist physics/philosophy is to find ways to be “responsible/response-able – to the thick tangles of spacetime matters that are threaded through us” (Barad, 2014, p. 184).

Migration seems to be the most common story and one that continues today. Migration is always already the story of the suburb. Huffman (2010) tells how agropastoralists – the first settled inhabitants of the place- arrived in the greater Johannesburg area in the late stoneage (around 1300CE). Hunter gatherer communities (the ‘San’), who were the earliest inhabitants, and present when nomadic herders (known as Khoi) and later, pastoralists came, have left signs of their extended and varied presences, mainly in the form of stone tools. The history of these three groupings is inter-connected and

complex. Some hunter-gatherers were displaced by herding and farming practices and in order to continue their way of life moved into more inaccessible mountainous areas. Others adapted to new practices. Colonizing European farmers and *trekboers* moved into Koi and San territory and the engagement was one of confrontation, conflict and competition (Yates, Parkington, & Manhire, 1990).

The agropastoralists who were present from around 1300CE moved out of the area between 1670CE and 1780 when the climate became cooler and drier. There were few trees growing on the Highveld so these farmers built boundary walls of stone. Their pottery styles are what identify their various cultures and languages; BaFokeng, BaKwena and BaRolong for example. Mzilikazi dispersed the population before the Voortrekkers arrived in the early 1800s. By 1838 the BaRolong and the Voortrekkers had formed an alliance and chased Mzilikazi northwards. This alliance did not prevail, and the Republic formed by the *boers* did not honour any such relationships. Brodie (2008) and Smithers (2013) have traced the patterns of migrations, some of which have formed, and others that continue to affect and change, the inner city of Johannesburg.

The global migrations prompted by the gold rush affected this area in the 1900s and laid the foundation of the city as we know it. Gold seekers arrived in the area from all over the world, and local Black people from across the country and further afield came to work on the mines (A poll tax imposed by the white government forced many Black people into formal employment). Jewish people escaping persecution in Europe also joined this emerging settlement. Colonial British and Afrikaner governments created racial boundaries that served their political and economic agendas and persist today in many parts of the city even though the laws enforcing them no longer exist. White immigration was encouraged by the Apartheid state and Johannesburg became home to people of a wide range of selected nationalities. When Mozambique and Angola became independent,

politically conservative white Mozambiquans (mostly of Portuguese heritage) created another wave of migration. A similar thing happened when Zimbabwe achieved independence in 1980. South Africa became a democratic republic in 1994 and white migration into the country decreased (there was emigration of whites in large numbers to Australia and other places, but that is not really relevant here). Current migration patterns are due to disruptions of various kinds on the continent and elsewhere. Amongst those arriving in the country are people from the Democratic Republic of Congo, Zimbabwe and Somalia, all of which have witnessed decades of war and/or economic crisis. The inner city of Johannesburg is a gathering place for African migrants and refugees from more than twenty different countries many of whom have harrowing tales of hazardous journeys and divided families.

For the first time in the history of the planet, more than half of the world's population now live in cities. In this city of migrants, both from other parts of South Africa and from further afield, we are experiencing this statistic. Of the twenty-seven children registered in the Grade R year, twelve have surnames and languages that connect them to countries other than South Africa. Increasing levels of inequality on a global and local scale are also a factor in this area – the levels of unemployment in inner city Johannesburg are way above the national average which is pegged around thirty percent. With an increased urban population come a population of urban children. How is the current provision of early childhood care and education responding to the realities and desires of this growing constituency and giving them the tools with which to forge their lives together and create the cities of the future?

Strategies for living together

The responsibility for Early Childhood Education in South Africa is currently shared by the Departments of Social Development, Health and Education.

One of the most important national policies affecting early childhood education is the newly adopted curriculum for children from birth to four. The existence of this curriculum signals a welcome move from the perception, reflected in the Johannesburg Growth and Development strategy, that provision for the birth to four cohort should comprise only 'care' and actually serves mainly as a business opportunity for women (City of Joburg Growth and Development Strategy)⁶⁴. However, although the curriculum acknowledges that children's learning is important, it offers minimal content and methodology aimed at ethical, social or environmental values formation. The educational outcomes are individual and humanist and have not moved beyond the dominant developmentalist and 'child-centred' paradigm. Pragmatic decisions guiding the adoption of the National Integrated Early Childhood Development Policy (Republic of South Africa, 2015) and the earlier National Integrated Plan for Early Childhood Development Strategy (UNICEF & Department of Social Development, 2005) suggest a more adventurous and experimental approach to providing opportunities for play and specifically outdoor play for children not attending centre-based programmes (Atmore, van Niekerk, & Ashley-Cooper, 2012). The policy acknowledges the need for commitment from city planning bodies in this regard (Republic of South Africa, 2015, p. 27). It will be important for inclusive strategies to recognize that centre-based programmes and children, particularly in the inner city, could be valuable (expert) collaborators in these planning interventions.

The histories of the inner-city spaces mentioned above focus on human histories. What of the geological realities beneath the surface of the ground visibly invisible in Senga's photograph? How are they entangled with the surface and the humans? Johannesburg sits on a ridge formed by the impact of a meteorite that hit the earth over 2 000 million years ago. This collision

⁶⁴ https://www.joburg.org.za/about/_Documents/joburg2040.pdf

liquidized the rock and earth at the centre of the impact, broke up the earth's crust and tipped the Witwatersrand basin, which had held an inland sea and considerably rich ore-containing conglomerates. The circular ridge that formed around the point of impact folded the gold-bearing conglomerates deep into the earth's surface – in some places kilometres deep. Brodie (2008) says that this actually protected the gold from being washed away by erosion. The discovery and exploitation of this immense volume of gold followed the already established patterns of inequality and extractive accumulation operating in the worlds claimed by colonial empires. The carving up and sharing out of Africa by the European powers at the Berlin Treaty was part of this system. Questions about access to land and resources remain unanswered in South Africa today even though our constitution upholds the right of every citizen to socio-economic provision. To look at children and their relation to a public park without paying attention to the wider entanglements that create this reality plays into dominant paradigms that leave these questions unasked. Dahlberg and Moss (2005) question the compensatory nature of many high level early childhood interventions that seek to solve problems largely caused by poverty and inequality by leaving existing economic systems in tact but investing carefully directed funds into the first years of schooling to mitigate “social ills” (Dahlberg & Moss, 2005, p. 41-42). If open public spaces are valuable learning spaces for children, as my research claims, children's productive access to these spaces is an important political issue.

Spaces for learning

A primary function of municipal planners is to implement policies relating to zoning and early childhood centres may apply for and be granted approval to operate on residential, business, church or government-owned land. Apart from monitoring land use, these officials also direct the applicants to relevant departments that manage roads, water, electricity, building plans and environmental health. Turning my attention to the issue of the park as a

learning space and as a place that children have a claim to as 'users', it is the department of city parks and zoo within the municipal government that are the formal institution with direct responsibility for managing this space. Land designated as public open space is managed by a park manager. Park managers are given the task of overseeing the care of between 20 and 120 different urban spaces which may be a mix of "developed parks, undeveloped parks, conservancies and nature reserves" (Benit-Gbaffou, forthcoming, p. 11). They manage a team of between 15 and 30 horticulture workers who move from site to site cleaning, mowing and maintaining the spaces.

The essentially 'gate-keeping' functions carried out by city planners ensure that the required standards are met, and relevant rates and taxes are paid. The more visionary and transformative aspects of city planning are most often the result of provincial and national policies and plans motivated by socio-political imperatives which are then operationalized through local government programs. These run the risk of being somewhat out of touch with the actual local (minor) conditions. Benit-Gbaffou's ongoing research relates to the reconfiguration of city management relationships to improve the possibilities for effective "co-production" of public spaces through meaningful partnerships between local government and community groupings (Benit-Gbaffou, forthcoming).

Management of Early childhood development

As Harrison (2102) notes, the responsibility of early Childhood Development "is thinly spread across three (national) government departments (DSD, DBE, DHE)⁶⁵, and delegated to relatively junior officials in most provinces" (p.3). With regard to funding, the provincial government controls the budgets allocated by national government for social development, health

⁶⁵ He refers to the National Departments of Social Development, Basic Education and Health.

and education and works with local government to deliver services on the ground. Local government budgets are only partially from the national coffers, the bulk of their money coming from the collection of rates and taxes and the provision of services. While cities do have some scope for designing appropriate local solutions to urban challenges, they often struggle with limited funds and capacity.

Global initiatives

International, non-governmental networks of cities across the world encourage partnerships and learning at local government level. “The Nature of Cities” is an online network of environmental activists and Derr, Chwala and van Vliet, (2017) who draw on the writings of Dewey and the theorypractice of Reggio Emilia participate in this network together with similar projects in Mexico and Canada that all focus on environmental education and creating outdoor learning spaces for children. Since the inclusion of participation as a key element in the conception of children’s rights, marked by the 1989 United Nations Convention on the Rights of the Child, some urban planning practitioners and researchers from a range of disciplines and from diverse regions of the world have contributed to the growing movement in global development supporting the rights of children to impact on the design of the spaces they live in (Bishop & Corkery, 2017; Mintzer & Flanders Cushing, 2017; Million, 2017; Robbé, 2017). Much of the research focuses on issues relating to the “Child-Friendly Cities Initiative” CFCI (Malone, 2015; 2017) a UNICEF project and annual European conference running since 2002. A number of cities in developing countries in Asia and South America participate in the program, but in South Africa, the experience has been problematic. Durban signed up to be part of the project but has not scored the required ranking on the accreditation index. The City of Johannesburg embarked on a project within the broader CFCI project to incorporate children’s ideas into their planning. Children in five different areas participated in activities that generated a number of recommendations,

mainly about the management of public spaces. Three years later, an evaluation was commissioned by the funders and it was reported that none of the recommendations from the children were carried through, and the participants had not received any feedback or replies to communications they had made to the mayor's office (Clements, 2000). Reasons given by officials included: change in leadership, lack of capacity, and confusion of roles. Clements notes that a number of valuable recommendations came from one of the original researchers who has become wary of funder-generated projects due to these kinds of outcomes. One of her recommendations is the inclusion of more community members and the incorporation of formal feedback to participants in the initial research design. The author proposes that funders need to factor in feedback and "follow-through" as well as support and education for municipal officials as "an ethical step forward" (Clements, 2000, p.115). Current practices undermine any original intentions relating to 'empowerment' or inclusion.

One of the key indicators for the achievement of the status of 'Child-Friendly City' is the increased participation of children in decision-making that affects their lives. The UN moved to centralize the accreditation process for granting 'Child-friendly' status once they realized that claims were being made with regard to some of the indicators that were not justifiable (Malone, 2017). Mayall (2000) and Mannion (2007) point to potential ambiguities and distortions relating to the idea of representing children and note that the UN convention on children's rights has been criticized for imposing Western cultures onto children from other parts of the world. Mannion (2007) suggests that intergenerational solutions need to be considered where the collaborative relationships between children and adults need to be the focus. This critique contributes to the re-examination of the notion of 'child-centredness' and recognizes the importance of relationality. The Mosaic Approach (Dahlberg & Moss, 2005; Clark, 2010) is an example of a localized, democratic, intergenerational project based in the United Kingdom. Its

protagonist, Alison Clark, draws from her experience as an artist, her knowledge of social development-based participatory practices as well as the work of the Municipality of Reggio Emilia to enact a respectful, responsive, locally appropriate way of working in which the contributions (lived experiences, ideas, proposals) of children are taken seriously. This included their being involved in the architectural planning and designing of a new building (Clark, 2010).

The call for more intergenerational human relationality does ‘humanise’ child. But such a ‘universalist’, anthropocentric social justice framework leaves in place prevailing patterns of environmental exploitation and fails to consider wider circles of entanglement. Malone (2018) has turned her attention to the era of the Anthropocene⁶⁶ to complexify the challenges facing children in cities today. The inclusion and respectful engagement with and between human and nonhuman participants and “non-natal kin” (Haraway, 2016, p. 130) is productive of transformational ethical encounters. There may be benefits for a city to strive to obtain the international accreditation offered by the United Nations (as Child-friendly City), but it seems that more local, “minor” initiatives that focus on building human and more-than-human relationships and creating locally appropriate sustainable systems may have a deeper impact on changing patterns of inequality and exclusion.

My contribution to the growing conversation about children in cities is to offer some stories that have the concept ‘learning’ as a central thread in the relational assemblage of child and city and so can potentially strengthen the claims for why children’s access to space should be on the agenda of those claiming to have their interests at heart. Patterns of city planning, management of public spaces, and community involvement in decision-

⁶⁶ The Anthropocene is a term used by geologists to mark the first era in which human habitation of the earth has made permanent changes to the earth’s crust.
<https://qz.com/771439/scientists-have-finally-decided-we-are-in-the-age-of-humans/>

making have an important role to play in creating opportunities for learning for our youngest citizens but government-led, top-down designs based on universalist ethics may fail to respond adequately to the specific conditions and unexpected situations that emerge in small local places. However, ignoring the power balances and working only outside and in-between official channels is also a naïve approach that could see local initiatives sidelined and or undermined by officials

Local possibilities

Can children have some say in what happens in the places that they play? Is the park partly 'their' park? What do children actually own for themselves? Lipman (in the 1990 documentary "the Transformers") proposes that they own very little besides their own thoughts and this may be true if one takes a modernist, individualist position on the concept of ownership. The question about whether children can be considered part-owners of the park seems relevant here as we consider children as being fully recognized citizens able to impact on decisions that affect them rather than being 'possessions' themselves. Rollo's (2016) discussion about the relation between notions of the 'human' in western democracies and their connection to certain levels of personal material wealth raise some interesting questions about what form a challenge to inequality and dispossession might take. Owning land was used as a qualifying factor in class-based franchise systems and was effectively used as an exclusionary tool. The notion of 'the Commons' has parallels in many pre-industrial cultures and is an important one for opponents of global forms of capital. Cavanagh and Mander (2004, p. 107) note that "(a)s recently as two decades ago, large parts of the world were not part of economic globalization. The majority of people in the world still lived off the land with little dependence on outside markets". Changes to global business practices instituted under the leadership of Ronald Reagan and Margaret Thatcher are having extensive and irreversible impacts on communities and the environments. Historically commonly owned resources such as water are

becoming increasingly commodified and increasingly inaccessible to the poor (p. 109-113). On the other side of the political spectrum, environmentalists are fighting for the resources themselves to be recognized as legal entities. A river in New Zealand, the Whanganui, won the case against the Crown and now has legal rights and interests, and two legal human guardians (Roy, 2017). Roelvink & Gibson-Graham (2009) call us to re-think the notion of the commons to incorporate nonhuman members of this community. 'Human', but not quite (according to dominant Aristotelian notions of the human), children have a lot to gain from a re-framing of ownership. How could children, as a fluid and fluctuating constituency, be given a more equitable common ownership of public spaces? To conceive of this kind of ownership there needs to be an exploration of different kinds of ownership that does not reside in an individual adult human. One could say that public parks are a surviving relic of a social system that valued the notion of 'the commons': property held in communal ownership and responsibility. In Reggio Emilia, well established feminist and communist networks underpin their notion of 'the commons' and the 'commune'. In our context, public parks are valuable resources particularly for poorer communities who do not have access to private outdoor spaces, and who cannot afford holidays and trips to recreation sites elsewhere in and outside the city. Bénit-Gbaffou (forthcoming) considers the complexities and constraints involved in co-managing public space in Johannesburg and her unpublished paper provides insights for potential engagements by early childhood activists with city structures on the issue of access and for children and preschools to common space in the city and more radically, the "co-production" of these spaces.

Ownership or access

Misopeddy (Rollo, 2016, p.2) frames child as bestial and pre-rational and justifies adult control and decision-making over issues relating to children and their needs. Not only are they a possession over which adults have

control, their needs are predominantly physical or 'natural', as they are inherently 'of nature'. This approach to the management of the affairs of child was used to justify the treatment of colonial subjects by categorizing them as child-like as early as ancient Greece and as recently as early twentieth century legislative systems like Apartheid. Interestingly, Rollo points out that the rationality attributed to the western adult male, "the standard of civilizational maturity", had a lot to do with the acceptance of commodification and private ownership of property (Rollo, 2016. p. 15). Ontologies that place 'inanimate' objects, including places, animals, trees, spirits of the dead, in relation to the human, rather than as property or 'resources' for exploitation are considered primitive and undeveloped. These counter narratives to possession and individual entitlement include those of 'ownership in common' and custodianship, and have been present in both pre- and postcolonial land management practices but are being increasingly eroded by powerful multinational corporations who are given more and more space to commodify resources (Cavanagh & Mander, 2004). The troubling of our conceptions of 'human' and 'child' is vital to the forging of new relationships and flattened ontologies of human and more-than-human relationality. Both the challenge to colonial practices of dispossession and land appropriation but also to the destruction of ecologies largely by corporate exploitation have implications for legal concepts such as ownership, inheritance and private wealth.

Habermas's concept of the public sphere is of an abstract normative space of public engagement (Mitchell, 1995). The Greek Agora or market place worked for the ancient Greeks and their form of democracy, and in a posthumanist sense, can be seen to have co-constituted the Greek citizen. In addition to the streets and public spaces of protest, our print and digital (television) media and increasingly digital social media are for us today some of the most powerful spaces and forces for public engagement and the co-production of a connected global citizenry. It is in the materialdiscursive

spaces of common space that the 'public' and the excluded and 'othered' groups, like the homeless and I would propose children – can make themselves seen, heard and noticed as part of the public, or *become* a public (Mitchell, 1995; Ophir, cited in Gillespie, 2015). For children to come out into the open as visible and legitimate co-habitants⁶⁷ of the city, they need allies who will not use them and their words for ulterior political motives. The City of Reggio Emilia and the organization of Reggio Children have the visibility of children in the city as a central focus for their work in early childhood education. Their permanent exhibition: '*One city many children*' tells the story of their many projects over the years. Their rigorous and versatile practice of documentation has an advocacy role (as well as a role in on-going reflection and planning) in that preschools are considered public spaces (and part of the commons) where the parents, families and the broader community of the city can get to appreciate the culture of the children through exhibitions and events.



Figure 9.2: Documentations in the street after the research period. Photo by Maurice Smithers.

⁶⁷ If, as Bennet states, all matter is vibrant, my notion of a co-habitant should be able to incorporate the non-human as well as the non-living.

A selection of images generated through my intra-active a/r/tography practice became part of an exterior wall of the local primary school. It was an attempt at making the children's thinking visible and effecting a 'becoming public' of the children of this neighbourhood. I invited a small group of Grade 5 children into an encounter with the images and this diffraction brought about new ideas about streets and classrooms. The images-with-school wall make up chapter nine and a half and perform as a line of flight beyond the work of this thesis.

The lives of children have historically been closely connected with the lives of their mothers and the domestic or inside space. Increasingly and largely due to developments in women's rights and the growth of formal childcare and education spaces, children are becoming recognized as having lives independent of their mothers and even their families and are considered as an independent social group (Dahlberg, Moss & Pence, 2013). Deleuze and Guattari's lyrical chapter entitled *1837: Of the refrain* creates the image of a child venturing out from home into a strange world as if at the beginning of time. I see these children entering the park a little like this: "One ventures from home on the thread of a tune" (Deleuze & Guattari, 1987, p. 311). In their relatively brief life experience, children are likely to experience these adventures as important and memorable. The place of the park, with all its layers of history and prehistory is ancient and has stories that tell themselves in different ways. The past is here in the present. Perhaps we can read the stories in the age of the trees, the lines of the buildings around the park? The trees mark a time of planting (the establishment of the city of Johannesburg) and a taking of ownership. The trees are exotic species marking the space as a colonized urban space. Cane (2016), as part of his doctoral thesis entitled: "Civilising grass: the art of the lawn on the South African Highveld" makes a study of Joubert park and its role in the creation of the colonial City of Johannesburg in 1887. Some of the seeds and seedlings were donated by Kew Royal Botanic Gardens (Cane, 2016, p. 151). This park is a similar

marking of civilized, ordered recreational space established a short while later. As Huffman (2010) notes, this plane had few trees in the pre-colonial period, necessitating the building of stone enclosures rather than wooden ones. The grassland is invisible beneath the 'urban forest' of exotic jacarandas that line the city streets. Lefebvre (1991) notes that modernism has removed the visible traces of time from our environment. Now time is only visible on clocks where it can be regularized, made strictly chronological and also can be bought. Barad (2014) wants us to recognize time as "phenomenal" just as space is. The past is not gone and irretrievable and fixed but present and implicated in the present and future and produced differently and intra-actively "in the making of phenomena" (Barad, 2014, p. 181). In venturing outside one leaves the order of the home space which was created to provide stillness and safety. While this order always has the potential for disorder and change, the striations of the school and its systems are powerful materialdiscursive controls. To some extent, in the park, one contends more often with the disorder of chaos, the world worlding: one part of the world making itself known to another part (Barad, 2007, p. 379). It is important not to see the attention to the park space as a move into a dualism of inside and outside - both are mutually constituted and are always folding into one another. Thresholds are important middle spaces made possible by the movement from one to the other and the intra-action of the shades or variations of inside-ness and outside-ness, further complicated by the outside of the inside and the inside of the outside. Movement and energies in all of these kinds of spaces are constantly decoding and recoding - ordering (into striations) and going off on lines of flight (smoothing out). Quantum physics undoes the notion of inside/outside, as it shows the tiniest part of the universe, "a force extending a mere millionth of a billionth of a meter in length" (Barad, 2017, p. 63) reaching "global proportions" and destroying entire cities. Energy and time are forces that can disrupt all our comfortable Newtonian explanations about place and time and the sequential processes of cause of effect.

I offer some accounts of learning experiences that take place in and with the public park close to the preschool by way of an assemblage of image and text. I diffract with the notion of 'naturecultures' (discussed in detail in chapter one) to explore the affordance of a park as a place of potential, change, chaos and virtuality. Parks and gardens have featured strongly in the early childhood discourse either as Fröbelian representations of 'nature', innocence, purity and growth (Taylor, 2011) or as a source of curative physical activity and controlled secure surveillance (Knight, 2016). What becomes visible through this diffractive account is an intra-active curriculum: a thinking-with-the-park where desire leads and connects human and nonhuman in a mutually affecting and constantly emergent worlding.

Dancing with letters

One morning in September, I accompany the class and their teacher on a visit to the park. The class come here often as it is actually their 'back yard', only a fence and a gate separate their centre from this public space. All of the children start to run immediately we are in the space. Some do cartwheels and forward rolls. There is a slope on one side of the park and this means that one can lie down and roll down the slope. This brings delight and shrieks. An aeroplane flies overhead. The noise of the aeroplane combined with the thrill of rolling down the grassy slope creates what Dewey would call "an experience" and for Barad - this is one part of the world making itself known to another, a monist intra-activity of affect. The world worlding. The teacher notices how the children are taken by this moment and she remarks: "Wow, that was exciting!".



Figure 9.3: Handstand with froggy shadow.



Figure 9.4: Blurry leg.



Figure 9.5: Hoodie cartwheel.



Figure 9.6: Rolling down/with a grassy slope.

My camera is turned on but I am not only being photographer, making photographs. As I engage with questions and conversations, losing my focus on filming or photographing, the camera continues to record visuals and sound, just as my lungs continue to breathe. After a day in the 'field', I download all the photos and video clips. My computer saves them in numbered sequence. Over time I view and review the clips and still photographs and select the pictures that I think are worth saving. Two

pictures caught my eye: One is of three children drawing together in the sand. Some of the marks made in the sand are recognizable as letters of the alphabet, others look abstract. The other picture that stood out was the picture of the grey cement table with the thin spidery lines making up an A and an M. This image is much more compelling than the real object was, flattened as it is against the picture plane or paper surface. It has the allure of ancient Roman graffiti or Northern Cape rock engravings. There is something ancient and precious about these children's marks: ancient in that the signs have come down the ages although now they are being repeated as fresh, new and exciting discoveries. The texture and colour of the weathered cement table has a surprising beauty and subtleness.

I consider which clips I think I should transcribe. I create stills from some of the video clips to help me to identify narrative sequences. Sometimes I give the clips descriptive titles so that they are easier to locate. Re-turning (to) some of the video footage, I hear voices that come from outside of the camera's view that I had previously not noticed. I am used to favouring the visual aspect of video and now am forced to listen more carefully, replay the footage and decipher the audio content, much of which has been incorporated without my knowledge or choosing. The apparatus offers me new views of a past that is not fixed but returning in new ways. The video footage gives me access to events that at the time were peripheral to my view and consciousness. As I re-turn to the series of short clips I made over that one day, I re-discover the connections between them and the chronology rewinds. A story begins to emerge from the digital material. The 'voices off' in the earliest piece of video mark the beginning of Stella's enquiry into the mysteries of writing, "I found a pen!". In another section of video I hear her voice again: "Do you know how to do an 'A'?" The vignette that initially drew my attention was the scene with the three girls drawing in the sand and then dancing together before leaving the park to return to the Centre. I had this one piece transcribed. Gradually the connections appear like

invisible writing revealed by a flame. The drawing on the table preceded the drawing in the sand. The discovery of the pen and the paper started the whole story off. It began with one child and drew in her friends. It held her attention throughout the cartwheels and bolamakisi and even through the game of duck, duck, goose.

Encounter between Marla and paper, the MarlaPaper assemblage

“I found a pen!”, Marla says, excitedly, showing me her treasure. ‘Should I hold it for you? Oh, its broken,’, I say. Ballpoint pens are usually not made available for children to write with in the Grade R year. Their writing is limited to writing their name on their artwork and usually with pencil. Marla is not giving up on this pen that has arrived unsolicited into her hands, even if it is oozing ink. Marla notices a piece of white paper floating past. It calls to her in its whiteness, its flatness, its rightness for her literacy desiring pen. This is its “thing-power” (Bennett, 2010); its capacity to affect. In Baradian terms, Marla and pen become a phenomenon of intra-acting agency. She responds, catches it, and tries to write.



Figure 9. 7: Chasing paper.



Figure 9.8: Writing playground.



Figure 9.9: Paper pen friends.

Friends and paper and pen. Marla's connection with the pen draws in her friend who becomes part of the assemblage for a while. At what point does she ask me if I know how to do an 'A'? Who else did she ask? Can I write on a leaf?



Figure 9.10: writing on a leaf.

She finds another piece of paper – a label or package of some kind. The flotsam of consumerist urban living is rich treasure for a wording worlding humanpen assemblage.



Figure 9.11: Packaging as writing surface.

The children are all called together to play a game of 'duck duck goose'. Stella and the pen are still intensely connected and cannot be disengaged.

Unlike the intense speeding up of the discovery of the pen, this is a slower consolidating time. Marla sits still, her whole body focused on her important new tool, now a part of her cyborg becoming-writer. Her hour in the park has been taken over by this pen. The disturbance of her state is not due the pen, but rather to the in-between of Marla and the pen. The affect causes disturbance, things are not the same. The smooth and the striated spaces of curriculum are not discrete and separate, but flow and change one into the other. The game of duck duck goose coordinates the movements of all the children and precedes their return to the more formal space of the preschool building. It draws on the schooling they have received with regard to responding to instructions, making a circle, controlling their individual impulses. These are the striations of a structured pedagogy.



Figure 9.12: Duck duck goose matters less.

The park table: a flat, textured surface invites Marla to try out her letters. She defends her hold on the pen from one of the boys who tries to snatch it away: “It’s mine!” she claims. Not so much possession or ownership as a cyborg becoming. She and her friend, Mbali, make letters on the table. Marla has painfully short, bitten nails and her fingers on her right hand are now stained with the marks of a writer. My impulse is to psychologise and

pathologise and to assign a cause for this effect (nailbiting caused by stress and always definable in terms other than normal, healthy and complete). This urge is disrupted by my own sense of the complex materialdiscursive phenomenon that is nailbiting, as nailbiter myself. I consider the complex intra-action of inside and outside that produce the conditions that result in nailbiting. They are intense affects that produce material results. I choose instead to acknowledge and appreciate Marla's capacity for intensity. Her urgent and intense relation with the pen today is another expression of her "capacity to affect and be affected" by what she encounters. "Spinoza asks: What can a body do? We call the *latitude* of a body the affects of which it is capable at a given degree of power, or rather within the limits of that degree. *Latitude is made up of intensive parts falling under a capacity, and longitude of extensive parts falling under a relation.*" (Deleuze & Guattari, 1987, pp. 256-257; emphasis in the original). So, both her capacity for action and her connection with the things around her make her who she is in this event. The concept of molecular becoming that Deleuze and Guattari (2004) explore at length in their chapter entitled "1730: Becoming intense, becoming animal, becoming-imperceptible" (pp. 232-309) uses a non-Cartesian, Spinozist ontology in which qualities of bodies and objects can only be expressed in relation to what they do: "A race-horse is more different from a workhorse than a workhorse is from an ox" (Deleuze & Guattari, 1987, p. 257). The longitude of the body is the name given to "the particle aggregates belonging to that body in a given relation; these aggregates are part of each other depending on the composition of the relation that defines the individuated assemblage of the body" (Deleuze & Guattari, 1987, p. 256). An individuated assemblage coheres with Barad's intra-actions that "cut together-apart (in one movement)" (Barad, 2011, p. 125). The entangled phenomenon is an assemblage of elements that produce one another through the relation, none of them pre-existing the event. The impulse to interpret the event in the park as expressions of individual identities, abilities, personalities, or interests and intentions of particular children misses the flow of immanence that

continually creates the world in its infinite and endless possible actualisations.

The child and the writer are in relation. Writer becomes child and child becomes writer -in parts. The pen-holding fingers and the hand-eye of the writer take away molecules from the dancing child. In an intra-active assemblage of Barad, Bennet and Deleuze and Guattari, the thing-power of the pen and the molecular becoming-writer interferes with the child dancing.



Figure 9.13: Park table holding hands.

Fingers can be bitten and fingers can hold pens, and become blue with ink. Fingers can also do friendship. Marla and Mbali hold each other's fingers in a tentative sign of closeness in a beginning friendship emerging in their shared thinking with the park. The imposition of a system of verbal, written culture onto the hundred languages of orality, movement and dance, drawing, and friend-making seems like a kind of violence. Many early years teachers claim that parents put pressure on them to get their children writing long before their Grade R year. Student teachers return from their teaching experience placements with reports of three-year-olds sitting at tables for most of the school day. While corporal punishment is illegal, punitive practices are rife (Murriss, 2013). The normalization of sitting at tables for

extended periods may seem to an adult like a mild form of discomfort but is a harsh form of restraint and a gross violation of the purpose of education. The materialdiscursive power of the school readiness agenda is a diffraction of future time in the present. The downward force of literacy is a force from future time that intensifies Marla's capacity to enact her literacy moves for better or for worse. The discourse of preparation and 'readiness' materially affects Marla and her intra-active becomings with the children, park, the pen, the table, the sand.



Figure 9.14: Table as writing surface.

The three girls move to the sandy patch near the table. Human and nonhuman intra-actions speed up and slow down the intensities of engagement. Speeded up moments of thrilling new discovery are interspersed with slower less intense gatherings of thought, re-doing and doing differently again.



Figure 9.15: Writing in the sand.

Marks in the sand. Sticks work well as writing tools and there are more of them to go round. All three girls now draw together. What comes first? The letters or the images? First letters then images. The letter is abandoned. Mbali draws a girl with long hair. K says she is drawing a king. We are now in the world of princesses, princes and kings.



Figure 9.16: Drawing a girl.

How does a princess dance? You need a prince. Who will be the prince? Oracy returns to the intra-action. I am struck by the ease at which the girls move from their stick drawing to their storying, to their dancing. The elegant expressiveness of Stella's movements in her solo dance contrast so strongly with the more constrained and contained movements I see in the tight spaces indoors and in her intense, perhaps anxious "literacy desiring" limiting her movements to eye and hand.



Figure 9.17: Dancing with the park 1.



Figure 9.18: Dancing with the park 2.

The girls end their park-ing with this dance and we go back inside. In this thinking-with; writing-with; drawing-with the park, the lightness of this teacher's hold on the curriculum makes this encounter possible. She has left spaces or cracks for the incidental and the unexpected to enter. She is assisted by this space just next door. It is always there but always different, in ways that are beyond her control or choosing. The arrival of a pen on this occasion set off a string of events for Marla and her friends. Their assemblage of desire propelled them into the flow of intensity that waxed and waned and moved location around the park. For others there were parallel events going on unnoticed by me and my camera. The becoming-dancer and becoming-prince enter in a defiant nonsense-making (Wohlwend, Peppler, Keune, & Thompson, 2017) that reasserts the power of a hundred languages and storyworlds.

The park is not a defineable feature in a city with predetermined qualities like 'nature', 'play space', 'fresh air'. The park and everything in it, plants, creatures, equipment, people make it into an infinite number of intra-active phenomena with fluid and changing characteristics and the capacity to make 'child' intelligent⁶⁸. If we can make a cut to see the disturbance patterns that are created when parts come together and make themselves known to one another, and specifically these children, their teacher and this park space, we can appreciate the complex workings of a park-preschool assemblage as a material-discursive assemblage of learning.

Learning with trees

The children point out things, ask questions, and become much more physically animated while they are in the open space of the park: running,

⁶⁸ Malaguzzi is credited with saying: "all children are intelligent" (Moss, 2016, p. 14), and according to the Rancière's "ignorant school master" (Rancière, 1991), this is the assumption that should underlie any educational endeavor. However, in an agential realist ontology, it is the intra-activity of worlding that includes child, that will render child 'intelligent'. We cannot define or describe a 'free-standing' independent, autonomous 'child', fixed in a state of intelligence or any other state.

rolling, cart-wheeling. There is a mature tree in the park which has areas of its trunk exposed where bark has been removed. The children's imaginations construct these as a "door" where the shape is an arch shape and "bums" where the exposed area is at five-year-old bottom height. I asked a number of the children about what the space in the bark looked like and they agreed it was "bums". This was obviously a part of their shared discourse. One particularly empathetic response: "Because it's lost its covering". The bark covering the tree is a protective layer and if the entire circle of bark had been removed, the tree would have died. The removal of this layer allows us to see into the inside of the tree, its intimate self. This conversation works in interdisciplinary ways and diffracts natural science concepts (skin, phloem, protective layer) through the anthropocentrically focused socio-cultural or child-rights notions of exposure, shame, exploitation. This account is increasingly about my own learning about the pedagogies of worlding. The negotiation of shifting boundaries (private and public, inside and outside, human and tree) enters as a new thought about this tree and these marks of violence and humiliation. The children drew me in to their thinking *with* their surroundings. The connections made between the children and the park make their shared culture and discourse materially present.

"Concept as method" (Lenz Taguchi, 2016; Colebrook, cited in Lenz Taguchi, 2016, p. 214) invites me to slow down, reorient. The concepts of 'bum' and 'covering' allow me to resist a humanist and child-centred impulse to find a 'teachable moment' and deliver instruction about the structure and function of phloem and xylum in plants in a natural science disciplinary mode and to moralize about modesty and probe a possible pathology of anal obsession, elicit silent voices, past transgressions, rules and codes for behavior. Following the ideas, thoughts and concepts that emerge, rather than following the individualized and age-defined child, is the "concept as method" that Lenz Taguchi (2016) invokes. My 'concept as pedagogy' is the uneasy and unknown territory that can be navigated with Philosophy with

Children and the community of enquiry and the practice of the *atelierista* that keeps things open and unsettled.



Figure 9.19: Tree with bum.



Figure 9.20: Tree and person, bum to bum.

Foucault's genealogy of schooling connects it with the performance of surveillance (Dixon, 2011) that originated in the 18th century prison. A stark and shocking recognition of such intrusive practices are made in my body's

intra-action this tree's nakedness. The haunting presence of the Tausa dance⁶⁹ (Figure 9.12) performed by black prisoners in the Number four prison is now present for me in the tree's trouserless-ness. Black prisoners and preschool children share a positionality of otherness in relation to entrenched practices of rational colonial mastery and undergo similar treatments of surveillance, coercion, and humiliation via the institutional practices that manage every aspect of their lives: in the preschool this means eating, sleeping, toileting, speaking, not speaking, sitting, not sitting, moving, keeping still. The tree's and my knowledge of intrusion and invasion of boundaries of 'self', privacy and dignity heighten my sense of the performative and productive brutalities of schooling.

In the 1950s the Number four prison was a prison filled on any given day with pass law offenders. Would-be citizens were made into criminals by (the lack of) a rubber stamp. This park would have been 'out of bounds' for black people, particularly adults. They required official permission to be working in this area. The 'approved' black users of this park would have been predominantly the 'nannies' of the white children of the suburb. These white children, now adults roughly my age, and their own children, are visibly absent.

The photograph by Bob Gosani is held in the Bailey's African History archives and I was granted permission to use the image in this thesis. The decision to include the image matters. Tuck and Yang teach a "pedagogy of refusal" (Tuck & Yang, 2014, pp 811-818) in which the academy is denied access to the painful pasts of the subaltern for the purposes of creating settler colonial academic knowledge. Although this image (*Tausa*) is already in the

⁶⁹ Bob Gosani's photograph shows the courtyard of the Number four prison which is part of the old fort complex in Braamfontein. Initially a Boer fort, it became a British and then an Apartheid prison. The photo was taken in 1954 during a Drum magazine photo shoot on the roof of an adjacent building. The shoot was set up ostensibly to photograph the Johannesburg skyline, but actually for the purpose of gaining access to a view prison yard. The Drum team's cunning ruse involved a white secretary posing as photographer and distracting the building's caretaker while Gosani did his work (Sampson, cited in Gillespie, 2015).

public domain, its repetition can be seen to be a gratuitous re-enacting of an intrusive and denigrating act. Tuck and Yang discuss the work of Ken Gonzales-Day, who works with images of lynchings from the American South (Tuck & Yang, 2014, p. 814). He erases the main foreground image of the lynched person, drawing attention to the other parts of the image, the things usually not given importance in the viewing. In making a drawing from the photograph, I stay with the image in an attentive way. I am surprised as I notice how closely together most of the people are sitting, almost 'packed' together, legs enfolding other bodies. I think of the preschool at sleep time. Laid out on the floor are mattresses on which children sleep top to tail like sardines, performing the spatial efficiencies of control. In the Tausa photo I see casual poses and smiles that are out of place. The violence and invasive practice of inspection is 'normalised'.



Figure 9.21: Researcher's drawing from the photograph, *Tausa*, by Bob Gosani, 1954. Held in Bailey's African History Archives.

The photographic two-dimensional image of the tree in the park (Figure 9.19) juxtaposes tree surface with ground surface, both flattened against the

page. The intrusive 'tausa' makes a connection with the intrusions of mining that burrow into and underneath the skin of the earth.

The (violent) histories of extraction and intrusion are there and not there at the same time, troubling a metaphysics as presence (through a different optics). Barad invites us to consider that "(e)vents and things do not occupy particular positions in space and time; rather, space, time, and matter are iteratively produced and performed" (Barad, 2007, p. 393). The future already threaded through the now: parks are planned with a conception of citizen. The future of this park will be affected by all the possible presents and the possibilities for what will come to matter.

Travel-hopping/ Queering time and space

What does the non-clock time of this encounter bring into being? What do I write as a "travel-hopping scribe" (Barad, 2017, p. 81)? The travel-hopper must risk her sense of self. Travel-hopping, says Barad, as she diffracts a novel written by a survivor of Hiroshima through her account of quantum field theory, means "tracing the material entanglements: a risky journey of placing one's body in touch with the matter/materiality of specific colonialist histories" (Barad, 2017, p. 81). For Malaguzzi, inside and outside should be one unified space (Cagliari et al., 2016, p. 229). In dualisms there is always a dominant side (Lenz Taguchi, 2010, p.23). The assumption governing current school architecture is that inside is dominant as legitimate learning space. The forest school swings the opposite way making the outdoors the ideal. If the schoolroom is a colonial construct, how does it work? Like so many representations in educational discourses (Christmas in winter, daffodils in the wild) a northern climate seems to be assumed. The regimentation and control offered by school buildings with ease of separating age-groups, abilities, subjects also works as a powerful representation. Indigenous forms of architecture are conceptualized as both inside/outside: the courtyard and enclosure an important feature. The stone

walling of the early iron-age settlements in this area and all over Southern Africa linked the mud walled buildings of internal domestic space, creating in-between spaces of inside/outside. A temporal diffraction of patterns of architecture help to disrupt accepted notions of inside/outside, of now and then, of tomorrow, next year and the next generation.

From the entanglements of pastoral life the 19th century saw men swallowed into the subterranean incarceration of the mine. For women, there was either the single-handed raising of children and grand-children, or the servicing of white families (often caring for children while having to leave one's own children in the care of another). Miners extracted a high value commodity which remained unobtainable to them but which offered a way to survive. They became wage-slaves, without political rights: having no say in the decisions that affected their lives. Apartheid effected a complete undoing of families. Disenfranchised and disinherited, black people were landless, and had no vote. As if forgetting this troubled history, our constitution offers a supposedly new zero, a beginning and a chance to start on a better footing. While enshrining the right of all citizens to "housing, health, food, water and social security", by simultaneously "protecting property rights, the constitution ratifies the outcome of over three centuries of colonial and apartheid violence- conquest, dispossession, and the Land Acts of 1913 and 1936, as well as the successive labour regimes of slavery, forced labour, migrant labour and cheap rightless labour on the basis of which capital accumulation took place" (von Holdt, 2013, p. 593).

My own place here now can be traced back to the extraction of gold and the exploitation of people made into migrant labourers. My maternal grandfather left his wine growing family in Croatia at the time of the *phylloxera* (a widespread disease affecting grape vines that threatened the wine making industry in many areas of Europe at the turn of the century) and mined gold in Zimbabwe (then Southern Rhodesia), employing migrant labourers from Malawi. My paternal grandfather was recruited by the British

government to build the railways used for, among other empire-related purposes, to move extracted wealth to sea ports. I am part of the swarm of the gold rush and colonial expansion. My university began its life as a mining college.

My body holds memories of both powerless child and authoritative pedagogue. I am a vulnerable woman in a violent society with one of the highest rape statistics in the world, as well as privileged employer of adult black workers (I employ two people who work part-time to maintain my house and garden).

Everything bears the traces of an extractive history. Barad argues that “Memory – the pattern of sedimented enfoldings of iterative intra-activity – is written into the fabric of the world”. (Barad, 2011, p. 146.) When Bokamuso recognized me as the owner of a car, and a camera, he placed me in a particular position in an entanglement of becoming. He reminded me of my privileged position always and already implicated in the perpetuating inequalities of past and current relationalities. Staying with the trouble requires turning the compost of histories, stories, and encounters, seeing what is just beneath the surface or right here in the middle. This is not a romanticisation of the past or a return to pre-industrial technologies. Disruptions of the present and waves of temporal diffraction, render me capable of seeing differently and invite me to remain open to all my possible ways of ‘being with’ and risking myself /selves. Practicing a living a/r/tographical enquiry I re-turn (to) Gosani’s image tree and tausa dancer diffracting with the public park space, body, tree, pass laws, and photography. To diffract the *Tausa* and the tree, I use my own (white) body to disrupt the colonial pattern of using Blackness to represent ‘race’, knowing, however, that the reverberations of Colonial and Apartheid legislation and practices continue to mark and divide, to abuse and privilege human and non-human bodies differently.



Figure 9.22: Thinking with park, body, tree, pass laws and photography: Tausa tree diffraction. Photo collaboration with Maurice Smithers and Mitra Maki.

‘There are four seasons in the year’

On the visit made to the park to find the new spring leaves, the Grade R group discovered a small tree sapling growing at the base of a large plane tree. The trope of babies and small creatures is strong for the children who immediately identified this tree as small like them and deserving of love and attention. “We love it!” they said. They wanted their picture taken with it and posed alongside it. The small tree appeared in a number of children’s drawings (for example Figures 8.4 and 8.7). On a subsequent visit, we discovered that the small tree had been cut; mown down in the routine grass-cutting done by the parks management. There was disappointment and sadness. I see this a clear expression of a naturecultures reality in which this park, while offering experiences of the organic and ecological (including creatures such as bees, ants, caterpillars and rats, see below), are managed and controlled as part of a system of city parks with particular notions of order, control, beauty and functionality, foregrounding certain stories and erasing others. The insistent colonial presence of the lawn has a long and

vibrant history on the highveld (Cane, 2016). This space is not a food garden, nor is it a *muti*⁷⁰ garden; it is a recreational facility where the gymnastic equipment and running, rolling, somersault-inviting smoothness of an alien lawn variety co-constitute modern urban children-in-parks. Indigenous forms of clover creep in unannounced and unwelcome. Ants are too small to fence out and can go too deep to poison completely. The perfection of the colonial park is constantly, consistently, always, already un-made.



Figure 9.23: Grass, clover and ants.

⁷⁰ A 'muti' garden provides indigenous healing herbs for the use of African traditional healers.

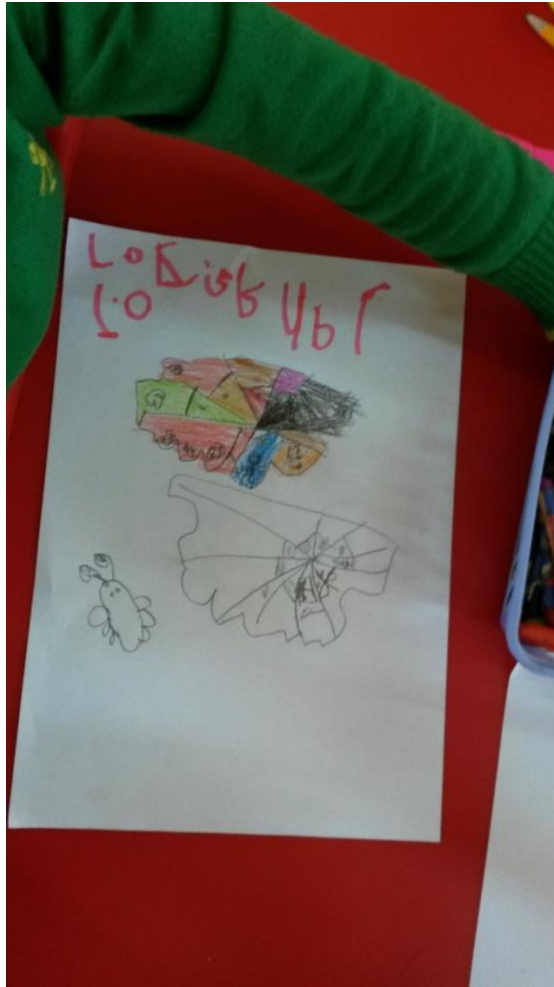


Figure 9.24: Leaf drawing



Figure 9.25: Branching systems



Figure 9.26: Park with tree, small tree and bee.



Figure 9.27: Clay bee.



Figure 9.28: The small tree that we love.



Figure 9.29: Large and small tree, bee and man who sweeps the park.



Figure 9.30: Small tree cut down.

The children posed for pictures with the truncated sapling as well. They expressed disappointment and perhaps some (already) resignation.

A close connection is visible between the children and the park although they have no part to play in the day-to-day up keep or care of the space. It was only when the image of the small tree appeared repeatedly in the images generated by the children that I began to see how much it mattered and how devastating its removal must have been. The removal of the small tree was one visible and painful effect of the exclusion of the children from

the right to care for and make choices about their learning space. In figure 9.8 the artist has included an image of the person who sweeps the park. 'People who help us' is a theme covered in the Lifeskills curriculum for Grade R, and here, the custodians of the park have been found wanting. The people who help us seem not to know us and what this 'help' might mean. The segregation of the classroom and the park excludes children from the life of the city. The park constructs them in particular ways. They are the child-playing or the childswing assemblage. They are part of the city and the community, but not fully citizens. They are kept in the confines of schooling so that their presence in the materiality of the world is minimal. Following the concepts of 'care' and 'custodianship' led me to rhizomatic sproutings that led to new ways of considering 'pedagogy'. Pedagogy and the school separates children from their worlds and their relationships (something that Malaguzzi's notion of 'the hundred languages' works to undermine). The work of the Reggio Emilia municipal system is part of a long established and ongoing political project in which issues of equality and direct democracy are at the centre of their conception of what education for their youngest citizens means. Their commitments to decentralisation and flexibility are not the privileged products of a financially stable local government but rather hard won and fiercely defended strategic, ethical and political choices about knowledge, and the cultural, social and political status of 'child', (Dahlberg & Moss, 2005, p. 137).

Blind spots and invisible scars

Playing into a long established and unexamined set of assumptions and organizational arrangements, my research focused intently on the pedagogical performances of children and their spaces. The less visible entanglements of relationship and response-ability, although central to the workings of the centre, were less visible, not 'centre-stage'. I was performing my artist/researcher/teacher role. Where was citizen/activist? Toward the end of my research journey, I recognised the connection between two

seemingly unrelated narratives. The continuing crises in management and the multiple financial irregularities that plagued the centre and mentioned in chapter one, were part of the same entangled colonial construction of disinheritance, inequality and exclusion as the assigning to children only passive and receptive roles. The double twist of misogyny and misopedy creates the conditions for a dysfunctional early childhood sector. Children and black working-class adults, and especially women can, due to the diffractions of history, colonial and apartheid notions of difference, and patterns of wealth distribution, be accorded outsider status. In the milieu of the daycare centre, I was witnessing the alienation of people from the decisions that affect their lives both with the teachers and with the children so early on in their life as citizens. Women who work in early childhood settings experience financial, social and political realities that exclude them from decision-making and undermine and distort their efforts to 'take care' of themselves, their children and their environments. These unquestioned historical distortions isolate them from creative, and generative intra-actions with their more than human, living and non-living kin. My initial judgements about corruption and misuse of public resources were misplaced. I see the intra-active phenomena that co-constitute lack and entitlement. Early childhood practitioners, particularly in informal contexts work long hours in a profession that demands high levels of patience, discernment and accountability. Daycare workers are some of the worst paid workers in the country but also put in the longest hours. A daycare worker earns an average of around R3000 per month⁷¹. A Grade R teacher in the informal sector earns around R5000 per month. People earning this amount would be depending on child grants (currently R380.00 per month per child under eighteen) and would still find it impossible to make ends meet without complex and creative solutions to accommodation, food and transport requirements. In a context of a conservative estimate of 30%

⁷¹ www.payscale.com Accessed 28 March 2018

unemployment, most wages support more than the earner. When notions of individual morality are challenged by a critical posthuman ethics of relation and response-ability, new claims of accountability can surface. Government subsidies and schemes barely cover necessities. In areas where parents and carers are unemployed, incoming fees are kept low and barely cover costs. The cost that is most flexible is the cost of the labour of the (mostly) women in these positions. Inadequate funding for this sector will always leave the situation unchanged and women will continue to agree to being paid less than enough. These “power asymmetries” (Barad, 2007, p. 219) perpetuate colonial patterns of misogyny and racialised economies.

Crèche fees must fall

All the arguments made about the rights of the black child in the ‘fees must fall’ narrative are even more compelling when one considers the birth to five age group. Currently, the students who complete their final year of high school and are admitted into universities in South Africa are a scant fourteen percent of the childhood population who entered school in Grade one⁷². A materialdiscursive framing of early childhood is an agential cut that shows a disjointed, unequal and unethical set of relationships and systems - and this is the reality in a suburb of Johannesburg: the most well-resourced city in the wealthiest province of the country. Children-learning-with-environments (an intra-active phenomenon) are intelligent and hopeful, but rather like a stillbirth, this hope is short lived. Learning-with-the-park has produced knowledge about the inseparability of systems, management and finances from issues of pedagogy, curriculum and daily programmes of teaching and learning. Political and ethical choices need to be made and central to these are the images we hold of ‘child’ and of ‘teacher’.

⁷² <https://www.enca.com/south-africa/high-dropout-rate-sas-school-system>
Accessed 30 March, 2018.

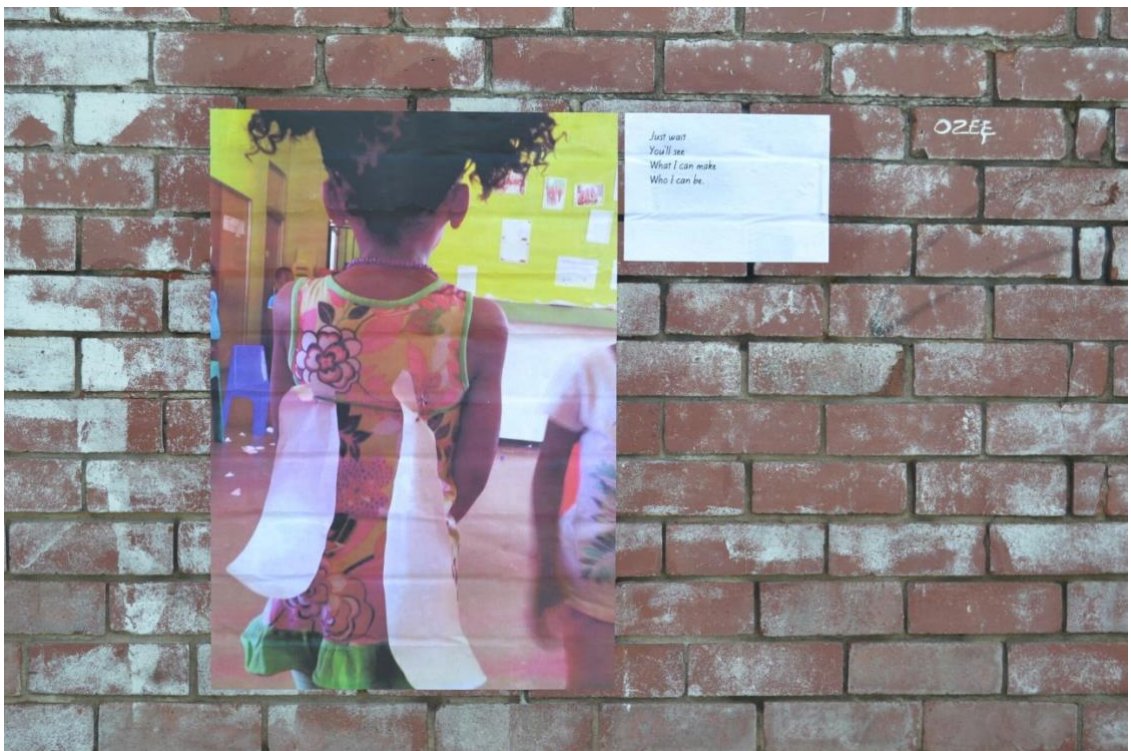
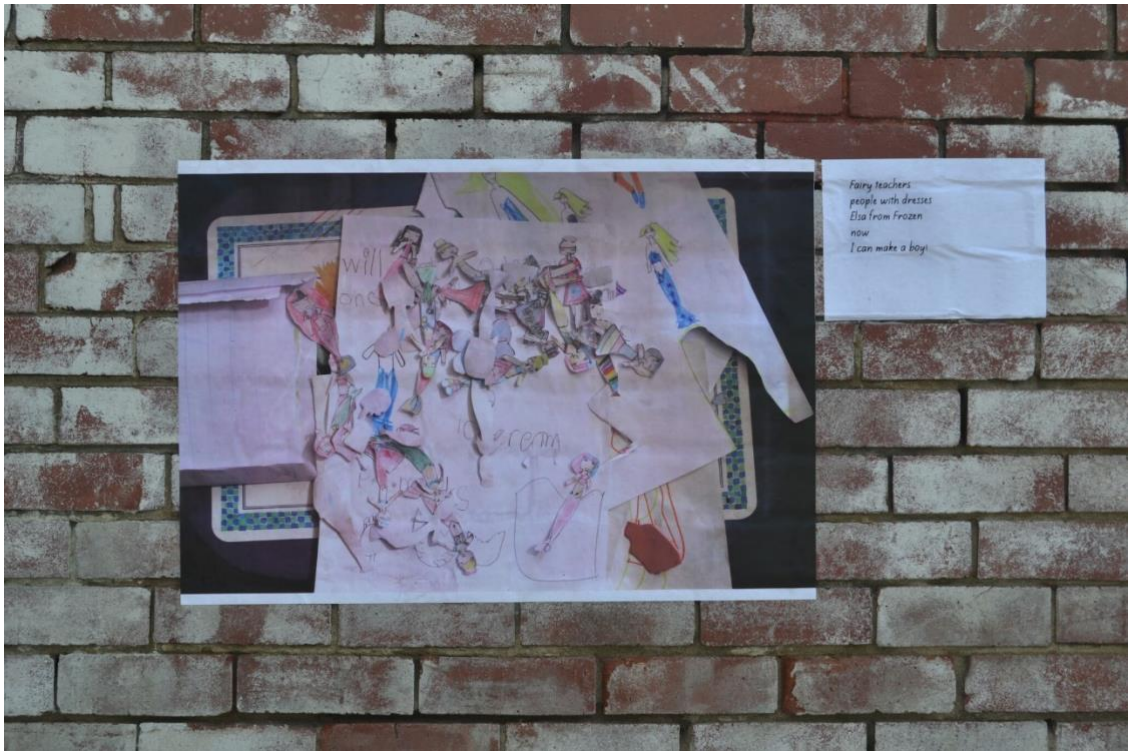
9 1/2. Wall becoming pages

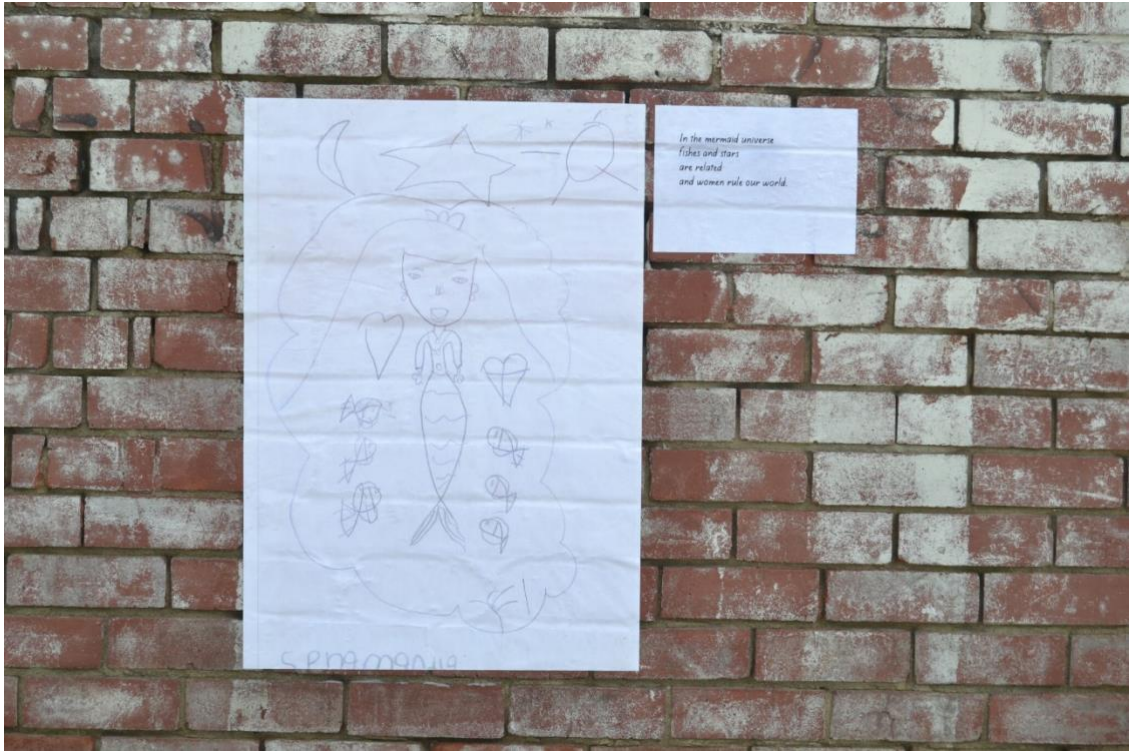












10. Re-verberations, un-finishings and lines of flight

The acknowledgement of 'nonhuman agency' does not lessen human accountability; on the contrary, it means that accountability requires that much more attentiveness to existing power asymmetries. (Karen Barad, 2007, p. 218-291)

Awaking on Friday morning, June 20, 1913, the South African native found himself, not actually a slave, but a pariah in the land of his birth. (Sol Plaatjie, 1920, p. 1)

..the place feels as if it stood open before me
because the string has broken for me
therefore
the place feels strange to me
on account of it

Diä!kwain (poetry selected and adapted by Antjie Krog, 2004)

Current models of early childhood education are inadequate, uneven and seem to be undermining the intelligence of our youngest citizens even though they actively co-produce their spaces, cities and worlds. Their active and intra-active engagement with the world needs to be honoured in their educational programmes in preschool as well as in the Foundation Phase. My argument has taken some long but important diversions into posthumanist philosophical theory and stories of other times and other places before returning to/simultaneously remaining with the site of my study: an inner-city preschool and its neighbouring park.

The becoming-teacher of everything

Protagonists of the Reggio Emilia municipal early childhood system consider the environment a “third teacher” (Gandini, 2012) alongside the two collaborating teachers assigned to each group of children. A reciprocal relationship between children and their spaces of learning is recognized : “All the things that surround and are used by the people in the school - the objects, the materials, and the structures - are seen not as passive elements but, on the contrary, as elements that condition and are conditioned by the actions of children and adults who are active in it” (Gandini, 2012, p. 339). To what extent can the assigning of anthropomorphic qualities to the physical world, like calling the environment a teacher, begin to undermine the anthropocentric basis of a socio-constructivist orientation to being and knowing?

The notion of ‘environment as third teacher’ is a generative concept that has been put to work in early years education for at least half a century in different ways in different parts of the world as well as in the Italian town of its origin (New, 2007; Strong-Wilson & Ellis, 2007; Schroeder-Yu, 2008; Danko-McGhee & Slutsky, 2009), profoundly affecting the design, aesthetics and management of learning spaces for young children. The use of documentation (recorded, diffracted and displayed accounts of learning events) as a way to ‘make learning visible’ for children, teachers and families and as a way to build on and deepen particular avenues of interest and discovery does justice to the intelligence and collaborative capacity of young children to actively produce knowledge in a multitude of modes and media. The quotation that opens this chapter, however, calls for a different and deeper questioning of what happens in learning. It suggests that there is an ethical imperative to acknowledging the agency of the other than human and that it (learning) has everything to do with the exclusions and injustices that lie at the centre of our most basic assumptions about knowledge, subjectivity and truth. Lenz Taguchi’s exploration of the “third pedagogue” (Lenz

Taguchi, 2010, p. 10-11) takes the notion into a new materialist/posthumanist pedagogical experiment.

Micro/ macro worlds

To some extent, the take-up of the Reggio Emilia approach in the global north and the well-resourced pockets of the south has been on issues of pedagogy rather than on models of government or systemic provision. The segmentations and divisions that operate in our late capitalist worlds, mean that for many teachers working in early childhood education, their sphere of influence is strictly limited to delivery of prescribed curricula within tightly restricted hierarchies, or market-led, competitive offerings to high-end consumers.

There are some exceptions. Sweden and some of the historically left-wing progressive cities of northern Italy share a similarly decentralized system of early childhood management, as well as some core values and traditions (Dahlberg & Moss, 2010, p. xiii) that position the preschool as a 'public good'. The Swedish early childhood education guideline curriculum document of sixteen pages leaves space for innovation and local variation in curriculum and pedagogy and offers a Reggio Emilia model of *pedagogista*. South Africa is in the first stage of building a functional local government structure from the ground up – a considerable feat considering the legacy of apartheid (Department of Monitoring and Evaluation in the Presidency, 2014)⁷³. As such things are fluid and changing and offer opportunities and hope for different kinds of relationships and co-production.

Efforts to participate in the international project on Child-Friendly Cities coordinated by UNICEF have not had success mainly due to the 'top-down' operations that it sets up (Clements, 2005).

⁷³ 20 year review of Local Government Background paper:
www.dpme.gov.za/publications/20%20Years%20Review/Pages/default.aspx
Accessed 2 April, 2018

Research swarms

Ongoing work on pedagogical documentation, has led a new generation of researchers and pedagogues (like Lenz Taguchi, 2010; Olsson, 2009; Rautio, 2013; Kind, 2013; Nxumalo, 2016a; 2016b; 2016c) to pay closer attention to the workings of the 'material' alongside the 'linguistic'. They draw on the philosophical work of among others, feminist physicist, Karen Barad, and French philosophers, Deleuze and Guattari and political theorist, Jane Bennett (2010), to offer ways of opening up possibilities for the co-production of new knowledges with and among the entangled and emergent realities of the preschool.

There is an equally radical movement of thought among philosophers of education, educational theorists, and educational research methodologists. Posthumanisms in all their various forms: philosophical, ecological, feminist, technological and critically political offer new ways of working with knowledge (Taylor and Hughes, 2016). Methodologists experiment by thinking with and without method (Lather, 2016, St. Pierre, 2014; Jackson and Mazzei, 2012); thinking with the human, non-human, living and non-living emergent world(s). Education and social science research more broadly has a growing research praxis in non-representational and post-qualitative strategies (Vannini, 2015). My research community of Foundation Phase education scholars and I have put (and continue to put) some of these notions and practices to work and my project forms part of this swarming effort. Taking inspiration from Karin Barad's diffractive methodology with which she threads insights from quantum physics through queer politics and issues of justice, I attempt to diffract concerns about care and belonging and the everyday use of spaces and things through aesthetics and the connections created by the affective vibrations of the material world. This is a following of concepts or a concept as pedagogy (inspired by the theorypractice of Philosophy with Children) in which ideas move across disciplines, spaces, times and material formations to create new knowledges

and ways of being and living together. Like all research reports and dissertations, it is an end and a beginning. I leave threads and lines for myself and others to pick up and follow further.

The text so far

An inner-city preschool, the nearby park and their human and nonhuman constituents, including myself, as researcher, all feature in my story that ultimately takes note of some hopeful possibilities and freedoms in what may seem like a place of limited alternatives. The context of my research is introduced in Chapter one of the account. I acknowledge the interconnectedness and mutually dependent relationality that constitutes our complex and ever-changing worlds and which plays out in pedagogical and political events. Relationships tie us into responsibility with and for one another and bring into focus the on-going and always already implicated roles we perform. The ethical implications of existence become clearer through a levelling out of the ontological playing field to give credit to things, places and material and non-material forces in the living and learning we share with and among these collaborative partnerships.

The pedagogies offered by the municipality of Reggio Emilia's early childhood education system draw attention to the environment as third teacher. This heuristic motivated my research and has been explored throughout the chapters of this thesis. I diffract the schema of 'environment' with a posthumanist framework to trouble the notion of what 'environment' can mean (and desire) when put to work in a preschool pedagogy. The environment, in a humanist framework is positioned as an enabling setting in which learning happens. The environment and in particular, the 'outside', is often a synonym for 'nature'. The normalized dualism of nature/culture is undone in chapter two through a genealogical account of the entangled natureculture realities that do justice to both the material and the discursive constituencies of the on-going becoming of the world. The implications of a

monist ontology and a post-developmental or 'post-age' and post-colonial epistemology are considered.

Chapter three lays out the main elements of the conceptual framework I use to explore and experiment with the notion of the environment-children-pedagogues assemblage or 'park becoming teacher/learner'. These are philosophical concepts mainly from the writings of Barad, and Deleuze and Guattari and require some unpacking and re-turning. They are employed in a rhizomatic and intra-connected way to make (non)sense of the received, accepted and assumed practices of teaching, learning, understanding and knowing. Some well-established notions that are re-turned and diffracted include metacognition, the zone of proximal development, and the learning paradox.

For art educators like myself, the notion of environment in a learning context includes the material world and its objects. This notion would include the *atelier* and other learning spaces in which collections and selections of materials are available for hands-on exploration, manipulation and transformation. The materials of artmaking, while acknowledged for their agential power and "affordances" (Kress, 2010) in multimodal teaching and learning, in a posthuman reworking, emerge as part of a complex assemblage or apparatus, emerging through relationship and becoming different in each different event or "agential cut" (Barad, 2007; Kuby & Rucker, 2016). "Thing-power" is a seductive concept offered by vital materialist writer, Jane Bennett (2010) who acknowledges the liveliness of matter and the affective connections between the human and non-human. These ideas intra-sect with Malaguzzi's "aesthetic vibration" (Vecchi, 2010, p. 6) and Irwin's "waves of intensities" (Irwin, 2013, p. 199) The chapter (chapter four) on the City of Reggio Emilia and its entanglements with Johannesburg introduces these (non)art concepts which are taken up later in the data chapters (seven, eight and nine), but also considers the intra-connected micro and macro worlds of the preschool sector. These include the

internal organizational systems and local government structures of which it is a part but also the histories of colonialism and extraction that have created the existing conditions of provision.

Chapter five presents the second pedagogical 'character' (The City of Reggio Emilia is the first) in my research narrative: *Philosophy with Children*.

Giving credit for its role in my project and a condensed history of its origins and workings in the world, my main focus is on the centrality of concepts in my emerging methodology and praxis.

Chapter six was a difficult task of "wrangling words down onto the page" (Gershon, 2016, p. 76) to account for the 'how' of the research activities and events that emerged and continue to emerge as a result of the entanglements of the research endeavour that produces my subjectivity as artist/researcher/teacher. Experimenting with post-qualitative and non-representational strategies I make use of photographic and video technologies in diffractive and recursive ways. As intentional human-centred practices, research and academic writing give partial and situated views that attempt to impose closure onto an extended and continuous spacetime-mattering. I claim that my descriptions in these pages are single agential cuts that account as carefully as possible for the particular intra-actions and phenomena witnessed. It is an attempt to de-centre my human agency and recognize the entangled working of human, non-human, living and non-living, solid and energetic, temporal and spatial.

Chapter seven explores the vibrancy of pedagogical products and names as things that work with children in what becomes literacy learning. In chapter eight, lines, outlines, cut lines, and edges assert their power, even in the discarded 'negative shapes' that exceed our intentions. These line/edges invite thoughts and create new connections with imagination, story-making and gendered becomings in crocodiles, crowns, fairies and hand-holding friends.

In chapter nine a public park is explored as an unpredictable and entangled phenomenon welcoming human and more-than-human intra-actions cutting together the spacetimes present in the material reality and congregating in a pedagogy of worlding. The park becomes citizen. Considering this space, not a Newtonian spatial container but as a member of a congregational phenomenon together with time, matter, forces and change. The pasts and futures working in the present in a composting and sedimentation of timespacematterings. Questions of ownership and histories of theft, appropriation and exclusion assert themselves forcefully in a narrative of contestation in a climate of poverty, inequality, lavish consumerism and wastefulness.

Implications and response-abilities

What a posthumanist reading of 'environment as third teacher' offers is the always, already entangled relationality of environment with human and more-than-human, living and non-living intra-activity. The environment cannot be separated from the human relationships and histories that are part of its production. Researcher, teacher and children are in relationship already with the environment and attention needs to be paid to the connections and middles and in-betweens of these relationships in order to find ethical ways to respond within these relationships and encounters. To summarise, the environment works as "third teacher" only in entangled relation with time, space and matter and in on-going re-negotiation with human and non-human others. The "third pedagogue" can perform as a body without organs: a becoming-teacher. This thought image refers not to the identity of a teacher, or what it is to 'be' a teacher. This is the 'capacity to affect and be affected' of the relationship that teaches. Learning-as-desiring in affective intra-actions with the world renders the humans, young and old, 'intelligent' and capable.



Figure 10.1: Installing images in the street with creche family members.



Figure 10.2: Environment/street becoming teacher.

Decolonising moves are attempted through doing justice to the entanglements of past present future and marks-on-bodies. This is a re-

turning and rehearsing of Barad's ethico-onto-epistemology and temporal diffraction. Staying with the trouble and being a modest witness (with Haraway) to the on-going struggles of the women working in the field of early childhood education and care alongside children where they are receiving so little themselves (in remuneration, education and care). Mostly with less than the minimum educational requirements for carrying out the job and receiving little more than a minimum wage they are undervalued and under paid. It may be tempting to cast some of these women in a villain role, and as individuals they may seem amoral, joining the swarm of corruption and self-enrichment evident in South African society in a post post-Apartheid society. Modernist ethics judges the individual - moral or immoral, innocent or guilty? A postmodern ethics looks for the ethical relationships, the connections of response-ability that produce the ethical subject in particular timespacematterings. Salary levels, access to education and the status of early childhood educators are all important elements in the assessment of the (dis)empowering economies operating currently in early childhood development environments.

Powerful possibilities

Efforts to shift power to local community-based structures and to cooperatively govern the social goods of education have precedents as discussed by Dahlberg & Moss (2005, p. 134-137) and include the municipalites of Reggio Emilia, Pistoia, Stockholm and others (Moss, 2014). An awareness of the significance of public parks for education is growing internationally and is on the agenda of a range of organisations for different reasons, from sports promoters to environmentalists. The UNESCO learning cities initiative (which forms part of the Institute for lifelong learning UIL) includes parks as learning spaces in its guiding document (p. 7) and in its measurement tool (point 2.2.1).

There is space in current legislation for civil society to impact on urban planning although in reality, processes tend to be top-down, and where community representation is recommended, this is limited to party-political appointments (Eglin & Ngamlana, 2015). The potential diversity and 'agonistic' potential of ward committees are currently compromised due to this pattern of patronage. The Integrated Development Plan (IDP) process depends for its effectiveness on the ward committees and sector forums. Sector forums are ideally made up of civil society organizations and community-based organisations. The early childhood development forums that are in existence currently spend all their time and energy on the crucial task of meeting requirements for the registration of sites (Bridge, 2017). Hopeful lines of flight are emerging in current early childhood discourses (Atmore, van Niekerk & Ashley-Cooper, 2012) with the consideration of public spaces and peripatetic play fieldworkers. How do we as adults who work and live with children, work alongside them as partners, not making assumptions about their needs but taking them seriously as fellow citizens with insights and ways of being in the world that offer the "becoming-young of every age" (Deleuze & Guattari, 1987, p. 277). How can we work with children in ways in which we are directly response-able to and with them rather than acting on their behalf and without their consent or knowledge? More importantly, how do we practice an intersectional ethics that does not compartmentalize children into a dislocated category of (sub)human, to the exclusion of their carers and families who are an equally important intra-active constituent of the phenomenon of early childhood education? This may be seen as a reversion to old patterns of conflating the issues of women and children and assigning them to the 'domestic', and the 'natural'. In fact, this move is an effort to shift these issues to the front of the political agenda. This work will have to fall to other/future research.

The 'world' of early childhood education is not a separate isolated self-perpetuating system. This world is plugged into numerous other worlds.

Similarly, the 'one world' view of how it should work can be disrupted by multiple intersecting worlds. Not only one world, but many worlds, a multi/pluri/omni/universe, constantly re- and un-made.

More than participation

Mannion (2007) makes a strong point that efforts at including "children's participation" in decision-making has been problematic and open to distortion and it is rather in the quality of the relations between adults and children that changes for the better can be made. To move beyond an anthropocentric social justice agenda, we need to pay attention to these relationships but also to recognize the entanglements of inherited assumptions and destructive practices in which we are already implicated. Attention to the more-than-social aspects of our worlds reveal existing inequalities and imbalances. For example, in a water scarce continent, safe and accessible toilet facilities are a complex political and ecological challenge and point to the importance of considering the more-than-human and both living and non-living co-producers of our worlds. We are going to be depending increasingly on the critical capacities of civil society to forge strategic alliances for the planet and its "earth dwellers" (Murriss, 2016, p. 61). Civil society - potentially "a second superpower" (NY Times cited in Cavanagh & Mander, 2004) creates local initiatives to bring children and their partisan adults into the open and make them visible as equal members of society even if they express their opinions and desires in ways that are less compatible with dominant systems of decision-making. Children have more to lose in the long run - as they are the inheritors of the planet in crisis. Our national constitution actually does have a clause that protects the environment, but it is in conflict with clauses protecting property rights that come with no clear responsibilities toward caring for property in the interests of the broader population, animals, plants and future generations of all of these. A wider and more inclusive conception of rights should include the more-than-human.

Intelligent worlds

My study asserts the visceral sense as the key to learning through experience (insideoutside). Learning is currently too closely equated with a narrow, technicist approach to reading and writing and number sense (which favour auditory and visual senses) rather than sensorial experience and knowing as being. Science and art have the capacity to perform as the ways in to learning as desiring and as worlding because they invite direct encounters between inside and outside: thinking, feeling, experiencing, testing, tasting, experimenting, connecting each different body in a flexible relationality of learning (Ceder, 2015). Lifeskills is a core subject in the Foundation Phase and even in the Birth to four curriculum. The potential of this subject for interdisciplinary, sensorial exploration is obvious, but not the “sensori-motor” systems of Piaget (1970) that leave out the concept of intelligence. All children, according to Malaguzzi are intelligent – but not a child as an independent unit but the ‘child worlding’ is intelligent.

Teacher education

Why do the arts have such unsuccessful unimpressive uptake in early years education and teacher education? Art is often relegated to the last session on a Friday, and interchangeable with “baking” (as recommended in the CAPS documents). The ‘arts in education’ offerings at universities are often not connected with the ‘real’ arts learning offered in other parts of the same universities. The efforts of artist educators like Solomon (2012), in collaboration with Schaer and the Curriculum Development Project, aimed at giving early childhood educators intensive experience of their own creativity so that they might be capable of recognising and supporting this for and with children. A small number of non-governmental organisations are currently doing similar work⁷⁴. An a/r/tography- inspired approach

⁷⁴ As funding remains a challenge for most non-governmental organisations, teacher training interventions are most often short workshops and form part of bigger programmes that can show wider reach and direct learner impact.

offers teacher education an interdisciplinary praxis and engagement with nonrepresentational forms linking science and contemporary art processes with the environmental and spatial. This could take attention away from literacy and numeracy as core subjects for teachers and foreground experimental, exploratory strategies of the arts and sciences⁷⁵. Art is more generative when seen as a process and way of thinking (and a part of worlding) rather than connected to particular art materials, art spaces and products.

Early childhood education and care in South Africa is a complex area of intersectoral service provision that has enjoyed increased funding and policy development in recent years due its anticipated impact on a range of social outcomes. Education, social development and health departments impact on the sector in different ways. This study enters the arena from the field of education and with a specific focus on the agency of materials and art practices in the learning process. A posthumanist framework drawing on feminist new materialism places the study in a growing community of researchers exploring the spaces of teaching and learning as materialdiscursive assemblages. Children, adults, spaces, things, ideas and practices in the research site affected one another powerfully in generative and productive ways. The posthumanist notion of 'learning as worlding' is at the centre of the thesis and children's access to this world is an issue of epistemic access. The materialities and practices of a particular approaches to art-making and their capacity for inviting or stimulating thought and the creation of concepts are recognized through the research process as re-enactments of worlding intra-actions.

The methodologies employed in the study include visual and material processes using digital media. These media and technologies offer ways of recording and re-turning moments of intensity and sensorial connection with

⁷⁵ I have seen baking being done in such an transdisciplinary enquiry-based way.

and among the human and non-human co-participants in the research. This instantiates the practice of 'researching as worlding' in a significant parallel with the childhood learning that reconnects learning with direct sensorial experience, but not as an individual with definable characteristics and behaviours, as in the structuralism of Piaget, but as flexible assemblages of intra-action between bodies of equal importance and agential power. Images from the intra-active thinking work in the research period were installed in public spaces in the residential suburb in which the research took place and presented here as chapter nine and half. These are offered to the broader community as initial suggestions about the need to increase engagement by and with children about their place in the city. Hauntings of children's ideas and productions from an always young and always already growing up.

In considering ways to support and enhance this kind of emergent and transformative experience of learning I suggest that the highly valuable and potentially available learning resource that outdoor spaces constitute is being undervalued and often ignored in the efforts to improve access to early learning opportunities for urban children. By venturing into the area of urban planning I find a way to respond to the emergent questions and provocations offered by the children's provocations. Resisting dualistic claims framing 'children as nature', I make a claim for the agency of outdoor spaces in terms of their generative connection with forces of perplexity, chaos and chance (such as those set up in provocative arts and science programmes).

Diminishing access to free spaces of play and engagement with the unpredictable, surprising and unexpected aspects of what the world has to offer shuts down the opportunities for thinking for most of the world's children who are increasingly located in city spaces. Engagement with a revitalised conception of 'Lifeskills' can re-turn us to the wonder and surprise of new encounters and the vibrating connectivity made possible through aesthetic intra-activities with the unexpected.

Co-production

City planning processes, although providing for 'community participation', in reality do not succeed in this endeavor. Civil society, as a potential 'superpower' will have to work with and for children and their adults in a claim on the right to urban outdoor learning thinking playing space for all city children and the right to care for them. This demand has to be seen in the broader context of citizen involvement and co-production which has by no means been achieved with adults. Municipalities in South Africa constitute a layer of government that is currently plagued by disorganization, lack of capacity and accountability (although Johannesburg, as one of the most well-resourced municipalities in the country has a slightly better record). This is a crucial sphere of government, closest to the ground, and potentially able to listen to and include citizens in the co-management of their cities as envisaged in the constitution.

Lines of flight

De-territorialising language and literacy

Language and literacy work in our lives in verbal, visual, melodic and geometric ways, not to mention the descriptive, meaningful, symbolic, representative, emotive and empathic ways. The evocative symbolic languages of art-making, play and imagination are the thresholds that welcome humans into these complex, diverse and generative coding and meaning-making systems. The Grade R group in my study dwelt in this welcoming and comfortable threshold where I shared their wonder and surprise of daily discovery. Recognising the sounds related to the shapes of letters. Singing our names. Repeating the litany of our friends' names. The deep consolidation of the layers of meaning in the practice of literacy. The meaningful and playful use of names, letters and sounds before meeting up with a categorized, ordered and sequential list of letters. A similar invitation

comes from an acquaintance with quantities, sizes and numbers of things: the sorting, grouping and counting, the removal and adding of things.

An example of the 'language' of shadows, outlines and cut-outs has its own rich vocabulary, syntax and grammar, the possibilities of paper, crayons, scissors and the spaces between them. Stories and characters: silk worms, moths and butterflies. Wings, winged seeds, fairies and mermaids invite a thinking-with and in-between the real and the imaginary.

The teacher/ learner binary needs to be disrupted as suggested in chapter seven: through shared initiating of enquiries, the handling of pedagogical products, displaying, sorting, filing, re-viewing, and then re-working and thinking with these products as further, extended pedagogical encounters. The fertile ground of the muddle and the refusal to tidy up offer generative surprises and disruptions to ordered thought, as discussed in chapter eight. New ideas emerge from the chaos of this middling muddle. Collaborative strategies need to be put in place in order to harvest these emergent concepts.

Re-territorialising space

Talking about the 'commons' and 'public space' in a Johannesburg suburb brings one up close to questions about access, inequality, poor or limited infrastructure. Suburbs with wealthier residents enter productive collaborative partnerships with local government for the upkeep and enhancement of their common spaces (Benit-Gbaffou, forthcoming). Poorer suburbs and townships feature fewer such collaborations, and city budgets are stretched to cover basic services like cleaning and grass-cutting.

Postmodernist researchers writing from the established liberal democracies of the north, tend to avoid questions about who has access, and who looks after it, who pays? These are, after all, modernist concerns about planning, and constructing the equitable modern democratic state (Watson, 2014) which are already always predetermining our futures. Knight (2016)

explores contemporary parks and playgrounds as sites for radical posthuman pedagogical encounter, convincingly framing the “diverse aspects of playgrounds as assemblage series, comprising matter, air pressures, atmospheres, and bodies collide and force indentations and impressions that force counteractions and diversions into new collisions” (Knight, 2016, p. 25). The teaching and learning going on here is unpredictable and difficult to articulate. It exceeds normative curricular goals, pathologising discourses and the intentions of the designers (Knight, 2016, p. 26).

The documentations I made with the children witness these collisions and diversions in our engagement with the park and each other. The unexpected direction that the chaotic and emergent encounters of learning-with-the-park took was to the notion of ‘care’.

In my work with the children of Siyakhula daycare centre, their impulse to take care of the park emerged from their direct and visceral intra-actions with the park assemblage. The park assemblage, working as a “radical” learning site of pedagogical choreography, encounter, and “collisions” as so evocatively suggested by Knight (2016, p. 25), took the learning in this unanticipated direction. To be allowed to take care of something implies relationship: a kinship, most often associated with an intimate relationality or a home. Tronto’s feminist critique of modern Western democracies produces the notion of a “caring democracy” (Tronto, 2013). Simply put, her proposal is for the mutual co-construction of state and household (domestic) concerns. Lefebvre’s notion of “oeuvre” (1996, p. 179) is employed by Schmelzkopf (2002) in her discussion of a New York park removed in favour of a housing development in a neo-liberal development project in that city. *Oeuvre* is about the right of citizens “to urban life, to renewed centrality, to places of encounter and exchange, to life rhythms and time uses, to enabling the full and complete *usage* of these moments and places” (Lefebvre, 1996, p. 179). This concept suggests a deep and affective connection with and among

people, other creatures, plants, things, spaces and environments. There is a reciprocal and co-productive inter/intra-change of care that is possible among human and non-human in-(co-)habitants of the city.

The tree, the soccer field and the sandpit

The “biological/material/sensationa(al) happenings” (Knight, 2016, p. 26) between and among the human and non-human assemblage or ‘park-ing’, performed as an aesthetics of care. The inside-outside of the materialdiscursive engagement of sensory experience made a close connection between us and re-made us as park custodians: an agential cut in which we were re-configured in an inseparable new becoming-with-the-park.

Sedimentations of abuse and care

For years there has been an out-of-commission sand pit in the space between the community centre and the preschool building. The roof has fallen down and was long removed as scrap. The sand level is low and although children still play in it when adults are not around, it is not kept covered and accumulates waste and dirt (see figure 8.3).

When Thuli and I approached the community centre manager about the possibility of taking over the sand pit for the preschool, he declined our request insisting that the sand pit was there for the whole community. He repeated his frustrated mantra about the lack of support he got from his superiors in the council and the lack of budget for the maintenance of the centre. The sand pit remains an empty promise to the children of the immediate area who would make excellent use of the resource, were it paid some careful attention. Questions about who it belongs to, who should look after it, who can use it and who cares remain frozen.

In the same inner-city suburb, there is an example of a locally forged solution to a similar resource management problem that offers some inspiration. An alternative to ongoing critiques of lack of effective local governance, lack of

representations of ordinary citizens in decision-making and other quite legitimate gripes emerged through on-the-ground encounters between citizens and officials of government institutions. The soccer field at the centre of this story had orphan status rather like the sand pit. Partly registered with public works and partly with the Gauteng provincial government, the field had been part of the grounds of the government school, let's call it School A, that was situated across the road from the field on the western side. The school, initially established in 1907, has generous grounds and had stopped using the field years previously leaving it untended and overgrown. The fence fell down at some point and homeless people made use of the space for sleeping and ablutions. Litter and dumped waste added to the deteriorating condition of the field.

To the north of the field is another school. This school, School B, had been a private church school, but after 1994, had been donated to government and newly constituted as a low fee-paying government primary school, providing education to children from grade R to Grade seven. It had no sports grounds. The principal of School B, with the help of a local political activist working on local development issues, approached the principal of School A, to make use of the field. Round about the same time, local soccer teams had expressed an interest in using the field as well. This information reached the activist through a network of foreign nationals that was part of a community development consortium established in the area. A local supermarket was approached for financial assistance with fixing the fence. A field management committee was established to see to on-going maintenance and management. They take small fees for use of the field from teams and community groups. Access to the park is managed by a shoemaker who works across the road from the park. He keeps the key and administers the fees collection. He is in touch by cellphone to the members of the field management committee. A good example of the minor politics of the everyday, this model of a local system of care and collaboration has side-

lined local government structures. What can happen at any time, however, is that a government official can make a unilateral decision and over-ride this delicate structure. A section of the field has already been sold off to a state-owned entity/utility company for the housing of a sub-station. The users of this park were not consulted (a similar scenario to the one Schmelzkopf (2002) describes in New York).

Benit-Gbaffou (forthcoming) notes the severe limitations imposed on parks managers by their current job description. Assigned to oversee the management of anything between 20 and 120 different large and small public spaces, each manager coordinates small cleaning and grass-cutting teams, ensuring a daily choreography of movement and timing to ensure that all areas are covered. These creative and highly skilled professionals are no doubt frustrated and under-utilised, but also, as Benit-Gbaffou notes, so many possible opportunities for productive partnerships are ignored. A reconceptualization of the park manager role, proposed by Benit-Gbaffou, would prioritise the forging of collaborative relationships with community-based groupings. I see an opportunity for preschools to form user-groups and become more visible as citizen groupings in the ward.

Currently, a small group of residents who live around a small, newly refurbished park in the same suburb, are attempting to form a committee to jointly care for their park. The local councilor is reluctant to open the park to the public as he also sees a need for some form of local custodianship. Budgets in the city prohibit the employment of park 'attendants'. This may be an opportunity for the adjacent preschools to claim a right to care for this learning space. With local government sanction, children can claim access to publicly owned land for their very important purpose: meeting the chaos and playfulness of unplanned learning spaces.

Children and their partisan adults rather precariously experience their status as citizens with access to space and the commons of publicly owned and

managed land (park as citizen). In these spaces, children are citizens alongside adults. They are free to encounter the world in its familiarity and its affordances for change and strangeness and can become increasingly visible in the relationship of ethical response-ability with this common good. In a posthuman conception of citizenship, we are rendered capable of mutually co-productive relationships of care with and among our living and learning spaces of the city. Patterns of inequality and violence require us to stay with the trouble, acknowledge our precarious status on unpredictable and shifting political, economic and ecological ground. In these times it is increasingly important to forge relationships with human and non-human others to “make kin” and take response-ability for and with each other. Being response-able for and with our worlds means paying attention to the whole intra-connected kinship of children, adults and environment, and, and, and... One set of rights or one injustice cannot be seen in isolation. The “ethic of care” proposed by Tronto (1987; 1993; 2013) needs to be extended into an ethics of posthuman intra-sectionality and an aesthetic of care.

Appendix I

Ethics Forms and Information Sheets

Letter to the management committee chair

Information sheet teachers

Consent form teachers

Information sheet parents/guardians

Consent form parents (own participation)

Consent form parents (child's participation)

Children/learner consent form

LETTER TO THE MANAGEMENT COMMITTEE CHAIR

May 2015

Dear

My name is Theresa Giorza and I am a PhD student in the School of Education at the University of Cape Town and the University of the Witwatersrand.

I am doing research for my PhD on how materials, objects and spaces work together and help our children to learn. The title is '**Investigating material as a third teacher in an inner-city Johannesburg pre-school**'.

My research involves finding out how children are learning in the pre-school and how the materials and the spaces they work in and play with help them to learn. To do this I would like to work with the teachers to plan and organise activities with the children and engage in enquiry sessions to reflect on the project as it develops. I will observe and record what happens (through making notes, photographs, audiotaping and videotaping) over the next six to eight months. Artworks and constructions made by the children will be documented but the original artefacts will remain in the preschool.

The reason why I would like to work with (name of school) is because I already know the teachers and some of the children and have worked with them. The the teachers have asked me to assist them with art activities in the pre-school and the assistance they wanted fits in with my research goals. If you would allow me to work with the teachers and the children on the research project I would also like to invite parents to participate in some discussions about the project and about the children's experience of it. If there are issues that emerge from these sessions that require clarification, I may need to interview some parents. The enquiry sessions and interviews will be documented (through video, audio and/or photography).

The research participants will not be advantaged or disadvantaged in any way. They will be reassured that they can withdraw their permission at any time during this project without any penalty. There are no foreseeable risks in participating in this study. The participants will not be paid for this study. The names of the research participants and identity of the school will be kept confidential at all times and in all academic writing about the study. Your individual privacy will be maintained in all published and written data resulting from the study.

All research data will be kept safely stored and password protected and once the project has been completed, all data that has not been processed and incorporated into the research products, will be destroyed so that they cannot be used for other purposes or without permission.

Please let me know if you require any further information.
I look forward to your response as soon as is convenient.

Yours sincerely,
SIGNATURE

Theresa Giorza
93 Regent Street
Bellevue
theresa.giorza@wits.ac.za
0833057904

INFORMATION SHEET TEACHERS

May 2015

Dear

My name is Theresa Giorza and I am a PhD student in the School of Education at the University of Cape Town and the University of the Witwatersrand.

I am doing research on how materials, objects and spaces work together and help our children to learn. The title is '**Investigating material as a third teacher in an inner-city Johannesburg pre-school**'.

My research involves finding out how children are learning in the pre-school and how the materials and the spaces they work and play with and in help them to learn. To do this I will work with the teachers to plan and organise activities with the children. I will observe and record what happens (through making notes, photographs, audiotaping and videotaping) over the next six to eight months. Artworks and constructions made by the children will be documented but the original artefacts will remain in the preschool.

The reason why I have chosen to work with (name of school) is because I already know the teachers and some of the children and, as you know, the teachers have asked me to assist them with art activities in the pre-school. I was wondering whether you would agree to participate in the research project with me and allow me to co-teach with you in some of your art sessions. I would also value your participation in regular enquiry sessions with the children and similar meetings with the parents and the other teachers to discuss what is happening in the project.

Your name and identity will be kept confidential at all times and in all academic writing about the study. Your individual privacy will be maintained in all published and written data resulting from the study.

All research data will be kept safely stored and password protected. On completion of the project, data in the form of writing, photos and video footage that has not been used in the final report and presentations, will be destroyed so they cannot be used subsequently for other purposes or without permission.

You will not be advantaged or disadvantaged in any way. Your participation is voluntary, so you can withdraw your permission at any time during this project without any penalty. There are no foreseeable risks in participating and you will not be paid for this study.

Please let me know if you require any further information.

Thank you very much for your help.

Yours sincerely,

SIGNATURE

A handwritten signature in black ink that reads "Theresa Giorza". The signature is written in a cursive style with a small horizontal line above the 'i' in "Giorza".

Theresa Giorza
93 Regent Street
Bellevue
theresa.giorza@wits.ac.za
0833057904

CONSENT FORM TEACHERS

Please fill and return the reply slip below and indicate your willingness to be part of my voluntary research project

Investigating material as a third teacher in an inner-city Johannesburg pre-school.

I, (My name) _____

Agreement to be part of group discussions/enquiries,

Agree/Do not agree* to be part of group discussions/enquiries

I know that I don't have to attend all the enquiry sessions and that I may withdraw from the study at any time and that I will not be advantaged or disadvantaged in any way.

I am aware that the researcher will keep all information confidential in all academic writing.

I am aware that the records of the enquiries will be kept safely and password protected

Agreement to keep a journal and make this available as data for the project

I know that I can decide to keep certain journal entries private

I know that my journal entries will be copied or scanned but the original document remains my own

I know that the researcher will keep all information confidential in all academic writing

I know that the journal content will be kept safely and password protected

Permission to be audiotaped

I give/do not give (please delete as appropriate) my consent to have the activities and interviews recorded.

I know that I can stop the audiotaping of the activities and interviews at any time without repercussions.

I know that the tapes will be kept safely and password protected.

Permission to be interviewed

Give/do not give* my consent to be interviewed.

I know that I don't have to answer all the questions and that I may withdraw from the study at any time and that I will not be advantaged or disadvantaged in any way.

I am aware that the researcher will keep all information confidential in all academic writing.

I am aware that my interview will be kept safely and password protected.

Permission to be observed

Give/do not give* my consent to be observed in class for this project.

I know that I may withdraw from the study at any time and that I will not be advantaged or disadvantaged in any way.

I am aware that the researcher will keep all information confidential in all academic writing.

I know that the observations will only be used for this project.

Permission for the use of still photographs

Give/do not give* my consent for still photographs of my teaching to be used for this study.

I know that the photos and digital data will be used for this study only.

I know that the photos and digital data will be kept safely and password protected.

Permission to be videotaped

give/do not give* my consent to be videotaped for this project.

I know that the videotapes will be used for this study only.

I know that the tapes will be kept safely and password protected.

Permission for the researcher to make field notes of events and conversations

give/do not give* my consent to researcher to make field notes of events and conversations.

I know that the researcher will keep all information confidential within all academic writing.

I know that these notes will be securely kept and password protected.

Option to withdraw

I know that I may withdraw from the study at any time and will not be advantaged or disadvantaged in any way.

Permission for use of images and video footage once they have been made

I know that although I have given consent for video recording and photography to be used in the research, I can deny permission for the use of any particular image or piece of video footage of me once I have seen them.

All data to be destroyed on completion of project if it has not been processed and used in the final report

I know that all data, in written form, images or video, that has not been used in the final report and presentations will be destroyed and therefore not be used for any other purpose or without permission.

Teacher Signature: _____ Date: _____

Contact person:

NAME

ADDRESS

TEL NUMBER

*Please delete as appropriate

INFORMATION SHEET PARENTS/GUARDIANS

May 2015

Dear Parent or Guardian

My name is Theresa Giorza and I am a PhD student in the School of Education at the University of Cape Town and the University of the Witwatersrand.

I am doing research on how materials, objects and spaces work together and help our children to learn. The title is **'Investigating material as a third teacher in an inner-city Johannesburg pre-school'**.

My research involves finding out how children are learning in the pre-school and how the materials and the spaces they work and play with and in help them to learn. To do this I will work with the teachers to plan and organise activities with the children. I will observe and record what happens (through making notes, photographs, audiotaping and videotaping) over the next six to eight months. I will also facilitate discussions/enquiry sessions with children and teachers about what has happened in the activity time and what we are learning. These sessions will also be documented.

The reason why I have chosen to work with (name of school) is because I already know the teachers and some of the children and the teachers have asked me to assist them with art activities in the pre-school. I was wondering whether you would give your consent for your child to be involved in my research project and agree to participate in some discussions with other parents about the learning happening in the school. The discussion sessions about the project and your children's learning will be documented through photographs and audio or video-recording and then transcribed. If issues emerge from our conversations that require clarification, then I may need to interview you.

Your child will not be advantaged or disadvantaged in any way. S/he will be reassured that s/he can withdraw her/his permission at any time during this project without any penalty. There are no foreseeable risks in participating and your child will not be paid for this study. This study is not about testing your child or reporting on his or her performance.

Your child's name and identity will be kept confidential at all times and in all academic writing about the study. His/her individual privacy will be maintained in all published and written data resulting from the study.

All research data will be kept safely stored and password protected. On completion of the project, data in the form of writing, photos and video footage that has not been used in the final report and presentations, will be

destroyed so they cannot be used subsequently for other purposes or without permission.

Please let me know if you require any further information.

Thank you very much for your help.

Yours sincerely,

SIGNATURE

A handwritten signature in cursive script, appearing to read 'Theresa Giorza'.

Theresa Giorza
93 Regent Street
Bellevue

theresa.giorza@wits.ac.za

0833057904

011-6485974 (home)

CONSENT FORM PARENTS (OWN PARTICIPATION)

Please fill in and return the reply slips below indicating your willingness to be part of my voluntary research project called

Investigating material as a third teacher in an inner-city Johannesburg pre-school.

I, _____ the parent of _____

Agreement to be part of group discussions/enquiries,

Agree/Do not agree* to be part of group discussions/enquiries

I know that I don't have to attend all the enquiry sessions and that I may withdraw from the study at any time and that I will not be advantaged or disadvantaged in any way.

I am aware that the researcher will keep all information confidential in all academic writing.

I am aware that the records of the enquiries will be kept safely and password protected

Permission to be interviewed

Agree /do not agree* to be interviewed.

I am aware that the researcher will keep all information confidential in all academic writing.

I am aware that my interview kept safely and password protected.

Permission for the use of still photographs

Give/do not give* my consent for still photographs of me to be used for this study.

I know that the photos and digital data will be used for this study only.

I know that the photos and digital data will be destroyed between 3-5 years after completion of this project.

Permission to be videotaped

give/do not give* my consent to be videotaped for this project.

I know that the videotapes will be used for this study only.

I know that the tapes will be destroyed between 3-5 years after completion of this project.

Option to withdraw

I know that I may withdraw from the study at any time and that I will not be advantaged or disadvantaged in any way.

Permission for use of images and video footage once they have been made

I know that although I have given consent for video recording and photography to be used in the research, I can deny permission for the use of any particular image or piece of video footage of me once I have seen them.

All data to be destroyed on completion of project if it has not been processed and used in the final report

I know that all data, in written form, images or video, that has not been used in the final report and presentations will be destroyed and therefore not be used for any other purpose or without permission.

Parent Signature: _____ Date: _____

Contact person:

NAME

ADDRESS

TEL NUMBER

*please delete as appropriate

CONSENT FORM PARENTS (CHILD'S PARTICIPATION)

Please fill and return the reply slip below and indicate your willingness to have your child's activities included in my voluntary research project called **Investigating material as a third teacher in an inner-city**

Johannesburg pre-school.

Permission to have my child's activities audiotaped

I, _____ the parent of _____
give/do not give* my consent to have the activities recorded.

I know that the tapes will be kept safely and password protected.

Permission for the use of school work including artwork and constructions

I, _____ the parent of _____

Give/do not give* my consent for the use of the following documents:

School work including artwork and constructions

I know that my child's artworks and constructions will be used for this study only.

I know that photographs and scans of artworks and constructions will be kept safely and password protected.

I know that art work and constructions will not be removed from the preschool site.

Permission for researcher to make field notes of conversations and enquiry sessions

I, _____ the parent of _____

Give/do not give* my consent for my child's conversations to be written down.

I know that the researcher will keep all information confidential in all academic writing.

I know that the field notes will be kept safely and password protected.

Permission to be observed

I, _____ the parent of _____

Give/do not give* my consent for my child to be observed for this project.

I know that the researcher will keep all information confidential in all academic writing.

I know that the observation notes will be kept safely and password protected.

Permission for the use of still photographs

I, _____ the parent of _____

Give/do not give* my consent for still photographs of my child in class to be used for this study.

I know that the photos and digital data will be used for this study only.

I know that the photos and digital data will be kept safely and password protected.

Permission to be videotaped

I, _____ the parent of _____

give/do not give* my consent to let my child be video recorded in class.

I know that the videotapes will be used for this study only.

I know that the tapes will be kept safely and password protected.

Option to withdraw

I know that I and/or my child may withdraw from the study at any time and that neither I nor my child will be advantaged or disadvantaged in any way.

Permission for use of images and video footage once they have been made

I know that although I have given consent for video recording and photography to be used in the research, I can deny permission for the use of any particular image or piece of video footage of my child once I have seen them.

All data to be destroyed on completion of project if it has not been processed and used in the final report

[] I know that all data, in written form, images or video, that has not been used in the final report and presentations will be destroyed and therefore not be used for any other purpose or without permission.

Parent Signature: _____ Date: _____

Contact person:
NAME
ADDRESS
TEL NUMBER

* please delete as appropriate

CHILDREN/LEARNER CONSENT FORM

Explanation to read to the children:

My name is Theresa Giorza and although I am a grown up I am still at school learning things. My school is called a university. I want to learn about how children like you learn with things in the preschool – things like toys and paints and drawing and climbing on the frames outside. There might be games you play using these things that also help you learn – like games about being mummies and daddies or being superman or superwoman, or fairies and mermaids and astronauts. You might talk to each other about what you are finding out when you explore things inside and outside the classroom. I want to work in the preschool with you and your teachers to see how you use the things in the preschool to learn. I might bring some new things for you to play with and make art with. We will meet together with your teachers to talk about what we are learning. I will also ask your parents to help me to understand which things you like to learn with. When I have taken lots of pictures and made notes about your games and your conversations and our discussions, then I will write a story about it.

Children/learner consent form



Explanation about the smiley face and the frown images to be used as indication of consent or withholding of consent:

Can you give a tick at the smile if you want to be part of the story or a tick at the frown if you don't want to be part of the story? If you do not want to be part of the story then that is your choice and I won't be sad or upset with you. Everyone is allowed to make their own choices in school as long as our choices don't harm us or our friends. If you don't want to be in my story then that is your choice. We will still be friends and work together in class.

If you agree to be part of the story I will use photographs and videos of you doing your work to tell my story. I will write down what we talk about and things you say. I will also write stories about what happens when we work

together. If you don't want me to use the photographs or videos you can tell me. I will show you all the photographs and videos I want to use and you can decide before I use them if you are happy for me to use them. This is also your choice and I want you to choose whether or not I can use these photos and videos.

Children's consent form

Name	
	

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