Encounters With Materials in Early Childhood Education

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ENCOUNTERS WITH MATERIALS IN EARLY CHILDHOOD EDUCATION

Encounters With Materials in Early Childhood Education rearticulates understandings of materials—blocks of clay, sheets of paper, brushes, and paints—to formulate what happens when we think with materials and apply them to early childhood development and classrooms. The book develops ways of thinking about materials that are more sustainable and insightful than what most children in the Western world experience today through capitalist narratives.

Through a series of ethnographic events and engagement with existing ideas of relationality in the visual arts, feminist ethics, science studies, philosophy, and anthropology, *Encounters With Materials in Early Childhood Education* highlights how materials can be conceptualized as active participants in early childhood education and as generators of human insight. A variety of examples show how educators, young children, and researchers have engaged in thinking with materials in early years classrooms and explore what materials are capable of in their encounters with other materials and with children.

Please visit the companion website at www.encounterswithmaterials.com for additional features, including interviews with the authors and the teachers featured in the book, videos and photographs of the classroom narratives described in these pages, and an ongoing blog of the authors' ethnographic notes.

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This book is dedicated to the children and educators who have been our inspiration and our companions in the process of experimenting with materials.

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1

THINKING WITH MATERIALS

In the early childhood classroom, educators and children gather around materials to investigate, negotiate, converse, and share. A block of clay, a brush, pots of paint, a brilliant sheet of paper, a heavy rectangular wooden block, a thin piece of willow charcoal—materials beckon and pull us in. They live, speak, gesture, and call to us. Materials can evoke memories, narrate stories, invite actions, and communicate ideas.

This book sets out to experiment with pedagogies of relationality that emerge when we encounter materials as active participants in early childhood education. Nothing in its pages acts as an appropriate model of practice. There is nothing to rehearse, nothing to appropriate. The book is about *encounters*. Encounters that are not necessarily good or bad. These are risky, worldly encounters that affect us, provoke us to think and feel, attach us to the world and detach us from it, force us into action, demand from us, prompt us to care, concern us, bring us into question.

Experimenting with these encounters entails nudging ourselves to experience them differently. We do not find, nor are we looking for, the meaning of these encounters. We are not concerned with their facts. We engage with each encounter as an event that demands its own questions, its own concerns, its own ethos. We inhabit each encounter. We are situated in each encounter's situatedness.

Eventful Material Relations

Encounters With Materials in Early Childhood Education aims to tell stories of what happens when we think *with* materials, when we choose to see materials as movements, as encounters, as assemblages, as ecologies, as time. Materials live in

the world in multiple ways (Bennett, 2004). In the chapters that follow, we think with five materials that are often found in early childhood spaces: paper, charcoal, paint, clay, and blocks. We treat these materials as active and participatory. They set things in motion, incite questions, produce ideas. In other words, they become productive moments.

Throughout the book, materials generate insights by provoking human and nonhuman others. We pay attention to a wide spectrum of forces and movements: how materials move through time and space; how materials move us, physically and emotionally; how time moves; how air moves; how bodies move; and more.

Thinking *with* materials transforms early childhood education, provoking educators to notice how materials and young children live entangled lives in classrooms, how they change each other through their mutual encounters. We are curious about the ways such a shift in perspective might change our interactions with materials, children, other educators—and perhaps even change the nature of our engagement with society and the world.

The greater goal of this book is to reassemble early childhood spaces as vibrant social-ecological-material-affective-discursive ecologies in which humans and nonhumans are always in relation. Relationality, therefore, is central to *Encounters With Materials*.

In this chapter, we tell stories of how materials are conceptualized in early childhood education and how we think of materials throughout this book. We outline the project this book is based on: what we did, the questions we asked, how we integrated materials through the arts, how we used video and photography. In other words, this chapter is where our theoretical and methodological frameworks are set into motion. Yet, this introduction is not written to support the book's structure. Like the book itself, it is written through diffractive movements to produce new possibilities.

Materials in Early Childhood

Engagements with materials are certainly not new in the early childhood literature. Since the 19th century, early childhood scholars have emphasized materials' importance for the development and education of young children. Frederick Froebel's gifts, the first educational toys developed in the 1800s, have marked materials' central role in early education (Prochner, 2011), but John Dewey (1897) reminded us more than a century ago that "the child's own instincts and powers furnish the material and give the starting point for all education" (art. 1, para. 3).

Today, scholars continue to highlight the importance of materials in young children's learning. Processes such as painting with a brush and working with clay are seen as activities that contribute to children's social, physical, emotional, and creative development (Golomb, 1992; Lowenfeld & Brittain, 1987; Matthews,

2003). The majority of texts available emphasize what to do with materials, yet say little about how one might think *with* them.

While movements have been made toward thinking of children's artistic explorations of materials as languages (Pelo, 2007), even early childhood centers that integrate the arts in their practices typically use developmental understandings of materials and artistic processes. There may be an interest and desire to engage with the arts as a visual language, yet without a depth of conceptual understanding, too often children's art is viewed as literal representations of self, experience, or knowledge. Materials are described as "bones" of curriculum (Carter & Curtis, 2007) in a developmental progression from exploration to representation. Often, instructions on how to organize and arrange materials are first provided so that children will learn the materials' properties and functions. Then, as they become more familiar with the materials, children are encouraged to use them to represent ideas and objects.

Pedagogues in the Reggio Emilia infant and preschool programs in northern Italy have paid close attention to materials, and philosophically complex ideas have been generated from their investigations of materiality (Ceppi & Zini, 2008; Friends of Reggio, 2004; Vecchi, 2010; Vecchi & Giudici, 2004). We see today a myriad of early childhood classrooms inspired by the practices in Reggio Emilia around materials (Callaghan, 2002; Fraser, 2006; Gerst, 1998, 2002, 2003; Kocher, 1999, 2004, 2009, 2010; MacDonald-Carlson, 1997, 2003; Rosen, 2009; Tarr, 2005; Tarr, Bjartveit, Kostiuk, & McCowan, 2009; Wien, 2008; Wong, 2006; Young, 2001).

We, too, have been greatly inspired by the Reggio Emilia pedagogical work. Despite the work's significance for our field's development, though, little of the Reggio-inspired early childhood literature focuses on how materials can take part in shaping ideas. This is the focus of our book.

The connections that *Encounters With Materials in Early Childhood Education* creates might surprise some readers. Instead of suggesting that carefully selected, beautifully organized materials be offered to children to experiment with and to represent their ideas and theories, this book thinks *with* materials—alongside them, listening to and caring for them, being with and being for things, exploring an ecology and ethics of things (Benso, 2000). We engage in thinking beyond instrumentalism, which reduces things to surface qualities and functions and treats materials as merely what mediates learning and developmental processes (e.g., Rule & Stewart, 2002; Trimis & Savva, 2009).

We investigate how materials "speak back" to children in agentic ways, extending and broadening the important body of knowledge on Reggio Emilia–inspired practices. Simultaneously, we generate original research to inform what Hillevi Lenz Taguchi (2010) refers to as an *intra-active pedagogy* that shifts attention from intra- and interpersonal relationships toward a material–discursive relationship among all living organisms and the material environment, such as objects and artifacts, spaces and places.

Encounters With Materials in Early Childhood Education challenges understandings of materials that define them from a scientific, rational, or functional viewpoint and through predictable properties of color, shape, density, mass, friction, and gravity. We contest deeply rooted cultural dichotomies—animate versus inanimate, active versus passive, and self versus other, to name a few (Bennett, 2010)—that lead us, often unconsciously, to think of ourselves as animate agents who act on passive, inanimate materials. We ask: What if humans' role in shaping materials is not as central as we believe? What if materials shape us as much as we shape them? What if we pay attention to the effects of things and to how things move together, not asking what an object or a thing or a material *is,* but what does a material *do*?

In this book, materials themselves propose particular possibilities. Materials do not just feel or act differently from each other, or have different properties, or produce different forms and images. They also provoke different ways of thinking as a child engages and works with them.

A block, for instance, is not just a tool for building. A block evokes particular ways of thinking, processing ideas, and making meaning that are profoundly different from the ways one works with paint, charcoal, paper, or clay, for example. In drawing a human figure or in using a camera to create a particular image of a person, the subject may be the same, yet engaging with different media and processes results in different perceptions and ways of thinking through the subject.

This means that how we think about materials shapes what is possible to do with them. For example, if we think of clay as a sculptural material used for making objects, that thought suggests certain engagements. We may set out individual slabs or balls of clay on a table and give directions or support in how to create particular objects. We may talk about form, texture, structure, and balance. We may subtly or directly encourage individual sculptural objects.

What we think clay is for shapes our experience with it, and the language we use to talk about the experience constructs particular meanings. If, on the other hand, we think about movement, place, impermanence, and relationality, then we may consider the possibility of moving toward and away from the clay, attending to the relationship of clay to its surroundings, and inviting interaction with others.

These concepts give structure to and shape the investigations with the material. And so we may set the clay out in other ways, for instance, as a big block in the center of a large mat on the floor, as several blocks stacked so they echo a child's height, in a space with several overhead projectors to facilitate a complex play of shadow, bodies, and movement. These various ways of setting out the clay do not just invite different interactions. They also shape what and how we see and the meanings we construct of the experience.

The "Material Encounters in Early Childhood Education" Project

This book works with pedagogical events collected through the "Material Encounters in Early Childhood Education" project, a visual ethnographic study conducted in two early childhood centers in Canada and supported by the Social Sciences and Humanities Research Council. The project's main goal has been to engage in an art-based collaborative inquiry to experiment with the complexities and possibilities of engaging with materials' relationality in early childhood spaces.

Inquiring Into Materiality

Over a period of three years, children, educators, and researchers became interested in what might happen to pedagogies when their focus is not solely on how children think about materials, or how materials should be presented to children, or what children's or educators' intentions are in relation to materials. Our focus became paying careful attention to materials in interaction. Through that process, we discovered that materials have a life of their own in classrooms and that these lives matter immensely for how we think and act in classrooms. We took materials seriously, not to romanticize them or to think of them as humans, but to attend to what they do when they participate in classrooms. We encountered each material as already filled with histories and stories, and also as an event that would allow us to ask questions and provoke inquiries.

In our weekly inquiries with children and educators, we asked: What does it mean to think *with* things? How does each material evoke particular invitations and provocations? How does each material live differently among/with/between other things and among/with/between young children? How are materials implicated in a classroom's movements? These questions framed our collaborations.

Experimentation

Materials, objects, places, and environments are inextricably bound to experimentation; thus, experimentation was key to our inquiries. The work of philosophers Gilles Deleuze and Félix Guattari (1987) helped us to conceptualize our experimentations with materials. Experimentation is a complex social-affective-political phenomenon that actively extends experience (Guattari, 1995). It opens up worlds and creates new venues for thinking and doing (Stengers, 2005). It reveals what human and nonhuman bodies can do and produce when they encounter each other. We embraced experimentation in our collaboration to transform life in the early childhood centers.

We committed ourselves to see encounters among materials, objects, places, and humans as part of the flow of experience. We created pedagogies that assume that we are never separate from the world, that we are made up of relations. Following Deleuze and Guattari, we conceptualized thought as experimentation: Thought creates itself through encounters. We experimented with the ideas that stories are told, forces are harnessed, and roles are performed through thought.

Through experimentation we discovered how something works by relations among the parts of assemblages, structures, flows, and connections. In this way we assumed teaching and learning as processes of creating what Deleuze and Guattari (1987) called lines of flight. By testing new and unpredictable mixes of bodies, forces, and things, we invented. Our process of inquiry into the unknown became embedded in the experimentation of experience, with all its unpredictable connections. Our experiments were not without risk, of course. Outcomes could never be predicted or known in advance. There was always the danger of reproducing the same, of decomposing one or more elements of an assemblage too quickly. Certainly, our project has been imperfect. It has been marked by struggle and, at times, resistance. The work has been slow, often challenging and unsettling. Yet, we committed to staying with the trouble, as Haraway (2008) suggests, that our experimentations brought to us.

Experimentation brought life to our sedimented early childhood discourses, increased our capacity to act in the world, and produced new forms of living (see O'Sullivan, 2006). It allowed us to open up perceptions and understandings of what is possible in the classroom. We engaged with children, materials, narratives, and each other as if they act on us and we act on them, entering into complex, entangled networks and assemblages—or, to use Lenz Taguchi's (2010) term, into intra-activity. We got to know the power, vibrancy, timeliness, possibilities, and consequences of a material.

This did not mean that we ignored children in our inquiries. We were interested in what children select, what they choose as desirable, and what they bring into their play. But we were also aware that experimentation does not only involve children's creative inventions. We worked within the tensions and ethics of listening to children's own concerns as we took seriously the materials and discourses children play with. We began from this question: How do children take the substance of their lives—the circulating images, narratives, and ideas—and make something of them, inventing, reproducing, transforming?

In the chapters that follow, we hope it becomes clearer how experimentation was encouraged in the early childhood centers, how the educators looked for ways to provoke and facilitate experimentation, how "problems" were worked with and not "managed," how most of the work that took place in the classrooms was collective and not "owned" by particular children. Through pedagogical experimentation, we aimed to create a collective context so that it was never about what individual children did, rather how we could invent together.

The Arts as Mode of Inquiry

Our collective experimentations with materials emerged through our interest in the arts. In the "Material Encounters in Early Childhood Education" project, the arts were not superfluous additions, teacher-directed activities, or even idealized examples of children's inner worlds or creativity. Instead, they were seen as integral aspects of children's daily inquiries, explorations, and learning. Art was a puzzle, a question, an encounter. As Claire Colebrook (2002) reminds us, like inquiry and research,

> art is not about knowledge, conveying "meanings" or providing information. Art is not just an ornament or style used to make data more palatable or consumable. Art may well have meanings or messages, but what makes it art is not its content but its *affect*, the sensible force or style through which it produces content.
>
> *(pp. 24–25, emphasis in original)*

Part of what art does is ask us to attend to things. It draws our attention, often to new things, or to older things said or presented in new ways. Basically, art asks us to make sense of things, or to figure them out.

As we mentioned earlier, integrating the arts into our project was not always easy. It is a commonly held misconception that art should be easy—that an artwork emerges effortlessly in a singular moment of inspiration, or that an artist knows the work in advance and an idea comes into his or her mind fully formed. There is often a large difference between an artist's idea and the realization of that idea in paint, charcoal, or clay. The process of working through an idea is not straightforward, as if the materials merely illustrate a mental image; rather, there is a dynamic interaction of thought and image, and both are shaped in the process of creating. Shaun McNiff (2008), for example, writes:

> Artistic inquiry, whether it is within the context of research or an individual person's creative expression, typically starts with the realization that you cannot define the final outcome when you are planning to do the work. . . . In the creative process, the most meaningful insights often come by surprise, unexpectedly, and even against the will of the creator.
>
> *(p. 40)*

Art also relies on failures, mistakes, and disjunctures (Kind, 2007). As Alain Toumayayan (2004) describes, artistic inspiration is a "consequence of failure . . . an accomplishment which exceeds one's powers of conception, planning and execution" (p. 93). Thus, to create is to step into the unknown with improvisation at the heart of the endeavor. Failure, struggle, uncertainty, and not knowing the outcomes in advance were at times difficult concepts for educators to embrace, yet these are essential elements of artistic practice.

Drawing on the work of Guattari (1995) and Bennett (2010), Springgay and Rotas (2014) write about classroom art as more than giving children an opportunity to explore or to have a sensory experience:

> In thinking a classroom as art, Guattari (1995) is not referring to institutionalized art but to the ethico-aesthetic paradigm, where mutant compositions will "not simply attempt to preserve the endangered species of cultural life but equally to engender conditions for the creation and development of unprecedented formations of subjectivity that have never been seen and never felt" (p. 91). Disrupting reductive practices that enforce specific ways of doing curriculum (i.e., laws and codes), the classroom as art, as an ecology—an ethico-political enunciation—"is an activity of unframing" (p. 131); a way of living differently both in schools/life, but also differently living research, vital research "which refuses to dissolve completely into the milieu of human knowledge" (Bennett, 2010, p. 3).
>
> *(Springgay & Rotas, 2014, p. 563)*

When art is understood materially, as an affective event, it becomes irreducible to function, form, and technique. In our project, it became a force of relations that made learning felt and inarticulable—in excess of language. As Springgay and Rotas put it, art became a social practice. Children were creating and were invited into thought.

The Studio

The art studio was an important element in our experimentations. The studio itself emerged and shifted through and with the project. It took many different forms and was created differently in each early childhood center at different times. In one center, we claimed a small area of a resource room that was connected to the early childhood education students' classroom, and it became a dedicated studio space. In another center, we transformed the atrium into a studio. The forest became an art studio, as did a river. Yet, we never fully defined what the studio was supposed to be. We stayed close to the idea of "not yet." We wanted to follow the rhythms and movements of the studio and wonder, What is the studio? rather than know in advance what it was or should be. Each studio evolved slowly.

In the studio, we questioned rather than accepted what things were. We asked, "What is (a) painting?" rather than trying to facilitate or plan painting projects. We held back for a while on an emphasis on what the marks and imagery represented, and attended instead to how our understanding and perception of the processes could be enlarged and altered. We wondered: When does a painting begin? When does it end? What are the rituals, rhythms, and tempo of painting?

And we experimented, sometimes rather wildly, with materials. We spent months in intense experimentation with charcoal, encounters that connected

References

Ainsworth, M. D. (1969). Object relations, dependency and attachment: A theoretical review of the infant-mother relationship. Child Development, 40, 967–1025.

Anderson, B. , Kearnes, M. , McFarlane, C. , & Swanton, D. (2012). On assemblages and geography. Dialogues in Human Geography, 2 (2), 171–189. doi: 10.1177/2043820612449261

Atkinson, D. (2011). Art, equality, and learning: Pedagogies against the state. Rotterdam, The Netherlands: Sense.

Barad, K. (2007). Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning. Durham, NC: Duke University Press.

Barad, K. (2011). Posthumanist performativity: Toward an understanding of how matter comes to matter. Signs, 28 (3), 801–831. Retrieved from: http://www.jstor.org/stable/10.1086/345321

Bennett, J. (2004). The force of things: Steps toward an ecology of matter. Political Theory, 32 (3), 347–372. Retrieved from: http://www.jstor.org/stable/4148158

Bennett, J. (2010). Vibrant matter: A political ecology of things. Durham, NC: Duke University Press.

Benso, S. (2000). The face of things: A different side of ethics. Albany, NY: SUNY Press.

Bergson, H. (1991). Creative evolution. Mineola, NY: Dover.

Boorstin, D. J. (1983). The discoverers. New York, NY: Random House.

Bowlby, J. (1969). Attachment and loss. Vol. 1. Attachment. New York, NY: Basic Books.

Bowlby, J. (1973). Attachment and loss. Vol. 2. Separation. New York, NY: Basic Books.

Bowlby, J. (1980). Attachment and loss. Vol. 3. Loss. New York, NY: Basic Books.

Bronfenbrenner, U. (1979). The ecology of human development. Cambridge, MA: Harvard University Press.

Callaghan, K. (2002). Nurturing the enthusiasm and ideals of new teachers through reflective practice. Canadian Children, 27 (1), 38–41.

Canatella, H. (2006). Is beauty an archaic spirit in education? Journal of Aesthetic Education, 40 (1), 94–103.

Carey, J. (1989). Communication as culture: Essays on media and society. New York, NY: Unwin Hyman.

Carter, M. , & Curtis, D. (2007). Learning together with young children: A curriculum framework for reflective teachers. St. Paul, MN: Redleaf.

Casarino, C. (2003). Time matters: Marx, Negri, Agamben and the corporeal. Strategies, 16 (2), 185–206.

Ceppi, G. , & Zini, M. (Eds.). (2008). Children, space, relations: Metaproject for an environment for young children. Reggio Emilia, Italy: Reggio Children and Domus Academy.

Clark, A. (2005). Ways of seeing: Using the Mosaic approach to listen to young children's perspectives. In A. Clark , A. Trine Kjorhot , & P. Moss (Eds.), Beyond listening: Children's perspectives on early childhood services (pp. 29–49). Bristol, England: The Policy Press.

Close, H. (2007). The use of photography as a qualitative research tool. Nurse Researcher, 15 (1), 27–36.

Colebrook, C. (2002). Gilles Deleuze. London, England: Routledge.

Coleman, R. (2008). Things that stay: Feminist theory, duration and the future. Time & Society, 17 (1), 85–102.

Coleman, R. (2009). The becoming of bodies: Girls, images, experience. Manchester, England: Manchester University Press.

Csikszentmihalyi, M. (1990). Flow: The psychology of optimal experience. New York, NY: Harper & Row.

Dahlberg, G. , & Moss, P. (2005). Ethics and politics in early childhood education. London, England: RoutledgeFalmer.

Dahlberg, G. , & Moss, P. (2009). Foreword. In L. Olssen (Ed.), Movement and experimentation in young children's learning: Deleuze and Guattari in early childhood education (pp. xiii–xxviii). New York, NY: Routledge.

Davies, B. (2014). Listening to children: Being and becoming. New York, NY: Routledge.
Deleuze, G. (1997). Desire and pleasure (Trans. M. McMahon). Retrieved from: http://www.artdes.monash.edu.au/globe/delfou.html
Deleuze, G. (2006). Bergsonism (6th ed.). New York, NY: Zone Books.
Deleuze, G. , & Guattari, F. (1987). A thousand plateaus: Capitalism and schizophrenia. Minneapolis, MN: University of Minnesota Press.
Dewey, J. (1897, January). My pedagogic creed. School Journal, 54, 77–80. Retrieved from: http://dewey.pragmatism.org/creed.htm
Dewey, J. (1916). Democracy and education. New York, NY: Free Press.
Dittmer, J. (2013/2014). Geopolitical assemblages and complexity. Progress in Human Geography, 38 (3), 385–401. Retrieved from: http://phg.sagepub.com/content/38/3/385.full
Foucault, M. (1977). Discipline and punish: The birth of the prison. New York, NY: Vintage.
Fraser, S. (2006). Authentic childhood: Experiencing Reggio Emilia in the classroom. Toronto, ON: Nelson.
Friends of Reggio . (2004). Remida day. Reggio Emilia, Italy: Reggio Children s.r.l.
Gerst, B. (1998). Further reflections on the application of the Reggio view in a kindergarten classroom. Canadian Children, 23 (2), 43–48.
Gerst, B. (2002). Making kindergarten meaningful: The bird study. Canadian Children, 27 (2), 12–16.
Gerst, B. (2003). Exploring an essential question: How can bears and humans share our earth peacefully? Canadian Children, 28 (2), 36–43.
Gilbert, J. (2004). Becoming-music: The rhizomatic moment of improvisation. In I. Buchanan & M. Swiboda (Eds.), Deleuze and music (pp. 118–139). Edinburgh, Scotland: University of Edinburgh Press.
Goldsworthy, A. (n.d.). In his own words. Retrieved from: http://www.morning-earth.org/ARTISTNATURALISTS/AN_Goldsworthy.html
Golomb, C. (1992). The child's creation of a pictorial world. Berkeley, CA: University of California Press.
Greene, M. (1984). The art of being present: Educating for aesthetic encounters. Journal of Education, 166 (2), 123–135.
Grosz, E. (1999a). Becoming: An introduction. In E. Grosz (Ed.), Becomings: Explorations in time, memory, and futures (pp. 1–12). New York, NY: Cornell University Press.
Grosz, E. (1999b). Thinking the new: Of futures yet unthought. In E. Grosz (Ed.), Becomings: Explorations in time, memory, and futures (pp. 15–28). New York, NY: Cornell University Press.
Grosz, E. (2005a). Time travels: Feminism, nature, power. Durham, NC: Duke University Press.
Grosz, E. (2005b). The nick of time: Politics, evolution and the untimely. Durham, NC: Duke University Press.
Guattari, F. (1995). Chaosmosis: An ethico-aesthetic paradigm. Bloomington, IN: Indiana University Press.
Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. Feminist Studies, 14 (3), 575–599.
Haraway, D. (2008). When species meet. Minneapolis, MN: University of Minnesota Press.
Haraway, D. (2015, June 30). Anthropocene, Capitalocene, Chthulucene: Staying with the trouble. Anthropocene: Arts of living on a damaged planet. Open Transcripts. Retrieved from: http://opentranscripts.org/transcript/anthropocene-capitalocene-chthulucene/
Hodgins, D. (2014). (Re)Storying dolls and cars: Gender and care with young children. Master's thesis, University of Victoria, British Columbia, Canada. Retrieved from: https://dspace.library.uvic.ca/handle/1828/5740
Honegger, D. S. (n.d.). Journey into early childhood: Construction/block play. Retrieved from: http://journeyintoearlychildhood.weebly.com/the-importance-of-block-play.html
Ingold, T. (2011). Being alive: Essays on movement, knowledge, and description. New York, NY: Routledge.
Ingold, T. (2013). Making: Anthropology, archeology, art, and architecture (Kindle version). New York, NY: Routledge.

Kimmerer, R. W. (2003). Gathering moss: A natural and cultural history of mosses. Corvallis, OR: OSU Press.
Kind, S. (2007). In open spaces. In L. F. Darling , A. Clarke , & G. Erickson (Eds.), Collective improvisation in a teacher education community (pp. 67–74). Dordrecht, The Netherlands: Springer.
Kind, S. , & Pacini-Ketchabaw, V. (2016). Charcoal intensities and risky experimentations. In H. Skott-Myhre , V. Pacini-Ketchabaw , & K. Skott-Myhre (Eds.), Youth work, early education, and psychology: Liminal encounters (pp. 93–111). Critical Cultural Studies of Early Childhood series. New York, NY: Springer.
Kocher, L. (1999). The rabbit habitat: Documenting a kindergarten project. Canadian Children, 24(2), 15–22.
Kocher, L. (2004). The disposition to document: Portraits of practice. Canadian Children, 29 (1), 23–31.
Kocher, L. (2009). Setting our little sails: Pedagogical documentation as a phenomenological act. In L. Iannicci & P. Whitty (Eds.), Early childhood curricula: Reconceptualist perspectives (pp. 121–140). Calgary, AB: Destelig.
Kocher, L. (2010). Families and pedagogical narration: Disrupting traditional understandings of family involvement. In V. Pacini-Ketchabaw (Ed.), Flows, rhythms, and intensities of early childhood education (pp. 177–201). New York, NY: Peter Lang.
Koepke, M. (2015). Towards a pedagogy of moments: Radical pedagogies. Inflexions, 8. Retrieved from: http://www.inflexions.org/radicalpedagogy/main.html#Koepke
Kummen, K. (2010). Is it time to put ‘tidy up time’ away? Contesting routines and transitions in early childhood spaces. In V. Pacini-Ketchabaw (Ed.), Flows, rhythms, and intensities of early childhood education curriculum (pp. 97–112). New York, NY: Peter Lang.
Latour, B. (2005a). Reassembling the social: An introduction to actor-network theory. Oxford, England: Oxford University Press.
Latour, B. (2005b). What is given in experience? A review of Isabelle Stengers ‘Pensée avec Whitehead’. Boundary 2, 32 (1), 222–237. Retrieved from: http://www.bruno-latour.fr/sites/default/files/93-STENGERS-GB.pdf
Law, J. (2004). After method: Mess in social science research. New York, NY: Routledge.
Lehrer, J. (2012). Imagine: How creativity works. Toronto, ON: Penguin.
Lenz Taguchi, H. (2010). Going beyond the theory/practice divide in early childhood education: Introducing an intra-active pedagogy. New York, NY: Routledge.
Levine, R. (1998). A geography of time: The temporal misadventures of a social psychologist, or how every culture keeps time just a little bit differently. New York, NY: Basic Books.
Lowenfeld, V. , & Brittain, W. L. (1987). Creative and mental growth (8th ed.). New York, NY: Macmillan.
MacDonald-Carlson, H. (1997). The story of the room. Canadian Children, 22 (1), 34–37.
MacDonald-Carlson, H. (2003). Developing a sense of place: Exploring ideas of home and community. Canadian Children, 28 (2), 10–16.
Manning, E. (2007). Politics of touch: Sense, movement, sovereignty. Minneapolis, MN: University of Minnesota Press.
Manning, E. (2009). Taking the next step: Touch as technique. Senses and Society, 4 (2), 211–226.
Manning, E. (2010). Always more than one: The collectivity of a life. Body & Society, 16 (1), 117–127. doi: 10.1177/1357034X09354128
Manning, E. , & Massumi, B. (2014). Thought in the act: Passages in the ecology of experience. Minneapolis, MN: University of Minnesota Press.
Massumi, B. (1987). Introduction. In G. Deleuze & F. Guattari (Eds.), A thousand plateaus: Capitalism and schizophrenia (pp. ix–xv). Minneapolis, MN: University of Minnesota Press.
Massumi, B. (2002). Parables for the virtual: Movement, affect, sensation. Durham, NC: Duke University Press.
Matthews, J. (2003). Drawing and painting: Children and visual representation (2nd ed.). Thousand Oaks, CA: SAGE.
McNiff, S. (2008). Art-based research. In J. G. Knowles & A. L. Cole (Eds.), Handbook of the arts in qualitative research (pp. 29–40). Thousand Oaks, CA: SAGE.

Navab, A. (2001). Re-picturing photography: A language in the making. Journal of Aesthetic Education, 35 (1), 69–84.
Oates, L. (n.d.). Artist's statement. Retrieved from: http://leahoates.com/
O'Donoghue, D. (2015). The turn to experience in contemporary art: A potentiality for thinking art education differently. Studies in Art Education, 56 (2), 103–113.
Olssen, L. (2009). Movement and experimentation in young children's learning: Deleuze and Guattari in early childhood education. New York, NY: Routledge.
O'Sullivan, S. (2006). Art encounters Deleuze and Guattari: Thought beyond representation. London, England: Palgrave Macmillan.
Pacini-Ketchabaw, V. (Ed.). (2010). Flows, rhythms, and intensities of early childhood education. New York, NY: Peter Lang.
Pacini-Ketchabaw, V. (2012). Acting with the clock: Clocking practices in early childhood. Contemporary Issues in Early Childhood, 13 (2), 154–160.
Pacini-Ketchabaw, V. (2013). Politicizing transitions in early childhood. Global Studies of Childhood, 3 (3), 221–229.
Pelo, A. (2007). The language of art: Inquiry-based studio practices in early childhood settings. St. Paul, MN: Redleaf.
Peters, G. (2009). The philosophy of improvisation. Chicago, IL: University of Chicago Press.
Prochner, L. (2011). 'Their little wooden bricks': A history of the material culture of kindergarten in the United States. Paedagogica Historica, 47 (3), 355–375. doi: 10.1080/00309230.2010.513688
Puig de la Bellacasa, M. (2015). Making time for soil: Technoscientific futurity and the pace of care. Social Studies of Science, 45 (5), 691–716. doi: 10.1177/0306312715599851
Rautio, P. (2013). Being nature: Interspecies articulation as a species-specific practice of relating to environment. Environmental Education Research, 19 (4), 445–457.
Richards, R. D. (2009). Young visual ethnographers: Children's use of photography to record, share and extend their art experiences. International Art in Early Childhood Research Journal, 1 (1), 1–16. Retrieved from: http://artinearlychildhood.org/artec/images/article/ARTEC_2009_Research_Journal_1_Article_3.pdf
Richmond, S. (2004). Remembering beauty: Reflections of Kant and Cartier-Bresson for aspiring photographers. Journal of Aesthetic Education, 38 (1), 78–88.
Rose, D. B. (2004). Reports from a wild country: Ethics for decolonisation. Sydney, AU: University of New South Wales.
Rose, S. , & Whitty, P. (2010). Where do we find the time to do this? Struggling against the tyranny of time. Alberta Journal of Educational Research, 56 (3), 257–273.
Rosen, R. (2009). Examining early childhood spaces: Creating Sunland. Canadian Children, 34 (2), 38–41.
Rule, A. , & Stewart, R. (2002). Effects of practical life materials on kindergarteners' fine motor skills. Early Childhood Education Journal, 30 (1), 9–13.
Sawhney, H. (2004). The slide towards decentralization: Clock and computer. Media, Culture & Society, 26 (3), 359–374. doi: 10.1177/0163443704042257
Scarry, E. (1999). On beauty and being just. Princeton, NJ: Princeton University Press.
Sontag, S. (1977). On photography. New York, NY: Farrar, Straus, & Giroux.
Springgay, S. (2011). The ethico-aesthetics of affect and a sensational pedagogy. Journal of the Canadian Association for Curriculum Studies, 9 (1), 66–82.
Springgay, S. (2012). Tasting the m/other as sensational pedagogy. In S. Springgay & D. Freedman (Eds.), Mothering a bodied curriculum: Emplacement, desire, affect (pp. 255–269). Toronto, ON: University of Toronto Press.
Springgay, S. , & Rotas, N. (2014). How do you make a classroom operate like a work of art? Deleuzeguattarian methodologies of research-creation. International Journal of Qualitative Studies in Education, 25 (5), 552–572. doi: 10.1080/09518398.2014.933913
Stengers, I. (2005). An ecology of practices. Cultural Studies Review, 11 (1), 183–196.
Stengers, I. (2007, September 2). Gilles Deleuze's last message. Recalcitrance. Retrieved from: http://www.recalcitrance.com/deleuzelast.htm

Stengers, I. (2008a). A constructivist reading of process and reality. Theory, Culture, & Society, 25 (4), 91–110. doi: 10.1177/0263276408091985
Stengers, I. (2008b). Experimenting with refrains: Subjectivity and the challenge of escaping modern dualism. Subjectivity, 22, 38–59. doi: 10.1057/sub.2008.6
Stengers, I. (2015). In catastrophic times: Resisting the coming barbarism (A. Goffey , Trans.). Open Humanities Press & Meson Press. Retrieved from: http://meson.press/wp-content/uploads/2015/11/978-1-78542-010-8_In-Catastrophic-Times_Stengers.pdf
Stengers, I. , Manning, E. , & Massumi, B. (2009). History through the middle: Between macro and mesopolitics. Inflexions, 3. Retrieved from: http://www.inflexions.org/n3_History-through-the-Middle-Between-Macro-and-Mesopolitics-1.pdf
Sturken, M. , & Cartwright, L. (2009). Practices of looking. New York, NY: Oxford University Press.
Tarr, P. (2005). Drawing at the centre. Canadian Children, 30 (1), 4–8.
Tarr, P. , Bjartveit, C. , Kostiuk, L. , & McCowan, D. (2009). Supporting imagination in play through pedagogical documentation: Haunted houses, fairies and goblins, pirates and islands. Canadian Children, 34 (1), 21–28.
Taylor, A. , & Pacini-Ketchabaw, V. (2015). Learning with children, ants, and worms in the Anthropocene: Towards a common world pedagogy of multispecies vulnerability. Pedagogy, Culture, and Society, 23 (4), 507–529. doi: 10.1080/14681366.2015.1039050
Thiele, K. (2014). *Ethos* of diffraction: New paradigms for a (post)humanist ethics. Parallax, 20 (3), 202–216.
Thompson, C. M. (2008). Action, autobiography, and aesthetics in young children's self-initiated drawings. Journal of Art and Design Education, 18 (2), 155–161. doi: 10.1111/1468-5949.00169
Toumayayan, A. P. (2004). Encountering the other: The artwork and the problem of difference in Blanchot and Levinas. Pittsburg, PA: Duquesne University Press.
Trimis, E. , & Savva, A. (2009). Artistic learning in relation to young children's chorotopos: An in-depth approach to early childhood visual culture education. Early Childhood Education Journal, 36, 527–539.
Tsing, A. (2005). Friction: An ethnography of global connection. Princeton, NJ: Princeton University Press.
Tsing, A. (2011, May). Arts of inclusion, or, how to love a mushroom. Australian Humanities Review, 50. Retrieved from: http://www.australianhumanitiesreview.org/archive/Issue-May-2011/tsing.html
Tsing, A. (2012). On nonscalability: The living world is not amenable to precision-nested scales. Common Knowledge, 18 (3), 505–524. doi: 10.1215/0961754X-1630424
Tsing, A. (2013). More than human sociality: A call for critical description. In K. Hastrup (Ed.), Anthropology and nature (pp. 27–42). New York, NY: Routledge.
van Dooren, T. (2014). Flight ways: Life and loss at the edge of extinction. New York, NY: Columbia University Press.
van Dooren, T. , & Rose, D. B. (forthcoming). Encountering a more-than-human world: Ethos and the arts of witness. [abstract]. Retrieved from: http://thomvandooren.org/papers-in-progress/
Vecchi, V. (2010). Art and creativity in Reggio Emilia: Exploring the role and potentials of ateliers in early childhood education. New York, NY: Routledge.
Vecchi, V. , & Giudici, C. (Eds.). (2004). Children, art, artists: The expressive languages of children, the artistic language of Alberto Burri. Reggio Emilia, Italy: Reggio Children s.r.l.
Wien, C. A. (1996). Time, work, and developmentally appropriate practice. Early Childhood Research Quarterly, 11, 377–403.
Wien, C. A. (2008). Emergent curriculum in the primary classroom: Interpreting the Reggio Emilia approach in schools. New York, NY: Teachers College Press.
Wien, C. A. , & Kirby-Smith, S. (1998). Untiming the curriculum: A case study of removing clocks from the program. Young Children, 53 (5), 8–13.
Winston, J. (2008). Beauty and education. New York, NY: Routledge.
Wolseley, J. (2009/2010). A natural history of swamps II, purple swamphen—Gwydir wetlands. Retrieved from: http://johnwolseley.net/exhibitions/carboniferous

Wolseley, J. (2016). Artist website. Retrieved from: http://johnwolseley.net/home
Wong, A. (2006). A whole new world: Documenting in the infant classroom. Canadian Children, 31 (2), 32–37.
Young, K. (2001). Practicing the ideas of Reggio Emilia: A growing experience. Canadian Children, 26 (1), 28–32.
Zhang, O. (n.d.). Horizon statement. Retrieved from: http://ozhang.com/Site/O_Zhang,_HStatement.html
Zhang, O. (2009, August 11). O Zhang talks about her work at Vancouver Art Gallery Offsite. Retrieved from: https://www.facebook.com/video/video.php?v=135155947512
Zylinska, J. (2014). Minimal ethics for the Anthropocene. Ann Arbor, MI: Open Humanities Press. Retrieved from: http://quod.lib.umich.edu/cgi/p/pod/dod-idx/minimal-ethics-for-the-anthropocene.pdf?c=ohp;idno=12917741.0001.001