SPECIAL ISSUE
Performative and Relational Ontologies in Education

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A brief history: The SFU Ed Review published its inaugural first issue in the spring of 2007. Originally, the Ed Review followed a traditional academic journal format; however, in 2012, the Ed Review was redesigned in order to make it more welcoming and accessible. Through these changes the Ed Review hopes to:

- be more inclusive of our academic community;
- promote discussion and reflection;
- provide a medium that better supports diverse scholarship and research;
- provide a format that better supports shorter works.

Ultimately, we are hoping to initiate a medium that will promote better awareness about the current work being pursued in the Educational community, offer a safe environment for peer-to-peer dialogue, and encourage emergent scholars to explore and develop their own voice within academia.

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LETTER FROM THE EDITOR - SPECIAL ISSUE: PERFORMATIVE AND RELATIONAL ONTOLOGIES IN EDUCATION

Dear SFU Educational Review community,

Before I move forward in this editorial letter, I would like to acknowledge the work of the editorial team of SFU Educational Review: Dr. Poh Tan as the editor in-chief and Daniel Ferraz as the managing editor. Without them and their hard work there would be no special issue. I would also like to acknowledge Dr. Suzanne Smythe and Dr. Ann Chinnery, professors in the Faculty of Education at Simon Fraser University, who collaborated with their expertise to provide support and guidance. This was a team effort indeed.

Last year, during an executive meeting of the Faculty of Education at Simon Fraser University, which I attended as part of Educational Review Journal editorial team, Dr. Peter Liljedahl suggested that Ed Review should make a special issue on *new materiality*, given the recent Seminar on New Materiality in Education: "What's the Matter with Education" that took place during Spring 2018. The idea immediately began taking shape and I could already 'see' the special issue. Of course, from the virtuality of that picture to the actualization of this issue 'riding' the learning-curve has been both, challenging and exciting.

In post-humanist and new materialist theories, the human is decentered, and the performative and relational ontology of the world is emphasized. Thus, our conceptualization of reality, or how our world works, shifts from trying to understand how things *are* to embracing the *becoming* of the world. Within this conceptualization of the world, we set as the aim for this special issue to create a collective of educational work that engages with performative and relational ontological theories, and in so doing asks new questions, and creates different narratives. Thus, the journal's aim was to showcase scholarly work that disrupts the *status quo* and the 'taken for granted' in educational practice and research triggering new imaginaries and, as Haraway (2016) would say, creating new worlding speculations.

In the Western tradition of thought, relational and performative ontological theories are most often approached through post-humanist or new materialist theories. The idea to not solely focus on posthumanism or new materialism but on performative and relational ontologies was an attempt at not excluding research and inquiries that work within this paradigm but either might be difficult to locate within or predates posthumanism or new materiality, such as indigenous studies and traditions of though.

We have divided the diverse scholarship featured in this issue, in four sections: invited papers, interviews, articles, and a last section where we feature an art-film complemented with its article. In the first section, we are privileged to present an anchor paper from Dr. Iris van der Tuin, Professor of Theory of Cultural Inquiry and Director of the School of Liberal Arts at Utrecht University. The anchor paper is accompanied by two invited responses. Dr. Suzanne Smythe, Associate Professor in Adult Literacy and Adult Education and Dr. Nathalie Sinclair, Professor of Mathematics Education and Canada Research Chair in Tangible Mathematics Learning, both at Simon Fraser University provide the first response and Dr. Aisha Ravindran, doctoral candidate, at Simon Fraser University and English Lecturer at University of British Columbia Okanagan provides the second. These papers thoughtfully question our research practices within our current algorithmic condition and offer the field some possibilities in concepts such as unkinning and making kin, blurring of borders and divisive lines, and conditions of possibility and speculation modulated in relation to our local conditions.

The second section features two interviews, one with Dr. Van der Tuin and the other with Dr. Elizabeth De Freitas, Professor in the Education and Social Research Institute and co-director of the Biosocial Laboratory for Research on Learning and Behavior, at Manchester Metropolitan. The interviews took place as part of the "What's the matter with education? Faculty seminar in new materiality", which focused on new materialism in relation to the field of educational research and were carried out by doctoral students who participated in the seminar. The interview with Dr. Van der Tuin, discusses three main topics: how new materialism is being used in educational research, Van der Tuin's work surrounding "Generational Feminism," and the idea of "sexual difference" in the construction of gender. The interview with Dr. de Freitas, centres around issues in pedagogy, identity, ethics, responsibility, and assessment practices.

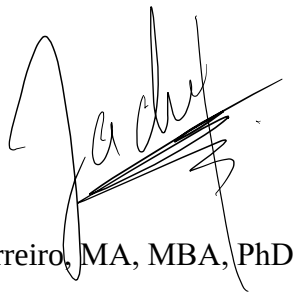
The third section presents two articles that theorize about the materiality of learning. Dr. Cher Hill, Assistant Professor of Professional Practice in the Faculty of Education at Simon Fraser University, discusses her child's tantrums through new materiality theories, which reconfigure them as a "*doing* of emotions" rather than acts of defiance, and how this new understanding echoes in the educational field. In her paper, Dr. Jamouchi, interdisciplinary artist, researcher, and associate professor in Arts and Crafts at the Oslo Metropolitan University, draws from Barad's performative ontology and re-turns to engage diffractively with felting wool as she bypasses, in her teaching, taken for granted dichotomies between subject-object and theory-practice.

In the last section, the journal is excited to present its first inquiry in the form of an Art Film accompanied by its complementary written article from Sandeep Glover, doctoral student at Simon Fraser University, where she questions the gap between oneself and the Other and encourages us to think in relational terms.

Today, almost a year after I first envisioned this special issue, we are delighted to present this collection of great and diverse scholarship to the education community. Please keep in mind that this is a dialogue, as such, we welcome further discussions from our readers.

I hope you will enjoy reading these articles as much as I have.

Sincerely,



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INVITED PAPERS

ON RESEARCH 'WORTHY OF THE PRESENT'[1]

IRIS VAN DER TUIN

Utrecht University

Abstract

How do we do our work as scholars in an age of electronic reason and computational media and under media-saturated, algorithmic conditions? In this article I suggest that the age of electronic reason, the ubiquity of computational media, and our condition as algorithmic are not only valid objects of study for humanists, digital humanists, and post-humanists today. As scholars, we are also and always/already affected by these so-called objects. We live and work with/in them, a situation that has methodological implications. By visiting concepts and arguments of thinkers like Rosi Braidotti, Donna Haraway, Achille Mbembe, and Isabelle Stengers, I ask: how not to be indifferent to knowing that algorithms repeat age-old patterns of in- and exclusion? How to act on possibilities for change as critical and creative researchers? How does research worthy of our time look?

Keywords: feminist theory new materialism, algorithmic condition, unkinning, making kin, subjectivity

[1] This title refers to Rosi Braidotti's *The Posthuman* (2013, p. 52).

On Research 'Worthy of the Present'

We live in an age of electronic reason and computational media (Mbembe, 2017). Our condition is algorithmic (Colman, Bühlmann, O'Donnell, & Van der Tuin, 2018). How do we do our work as scholars in such an age and under such media-saturated conditions? What I am suggesting here is that the age of electronic reason, the ubiquity of computational media, and our condition as algorithmic are not only valid objects of study for humanists, digital humanists, and post-humanists today. As scholars, we are also and always/already affected by these so-called objects. We live and work with/in them, a situation that has methodological implications. In my work, I am trying to make these entanglements[2] into the focal point of my research, which is to say that the research is not supposed to *reflect on*, i.e., distance itself from media, but that I am seeking to *co-respond with* them as this co-respondence[3] is also and always/already happening. There is a fundamental duration[4] or a non-linear temporality to today's research practice which is unavoidably our own onto-epistemology but also shared with others. Both co-respondence and the durational are, however, not to say that Difference as negatively balanced power and significatory practices has finally been exchanged for differing.[5] After all, whereas we may dream of equality or a different, e.g., open, inclusive or horizontal difference, algorithms predict and shape the present and the future based upon past data. And past data are always contaminated with world historical imbalances structured around sexism, racism, colonialism, heteronormativity.[6] But at the same time, "our computers execute in unforeseen ways, the future opens to the unexpected. Because of this, any programmed vision will always be inadequate, will always give way to another future" (Chun, 2011, p. 9). Or, also in the words of Wendy Chun, alongside the repetitive algorithmic effect of Difference, "new media's modes of repetition and transmission […] open up gaps for a future beyond predictions based on the past" (Chun, 2011, p. 2). So, what are the methodological implications of all of this for the work contemporary scholars do? And how does research worthy of our time look? Let me start by reflecting on the choices that I have made as a scholar.

Feminist and New Materialist Genealogies

My research concerns primarily feminist and new materialist genealogies. There are at least two ways of dealing with genealogies: classification and cartography, both of which have featured prominently in my research thus far (Dolphijn & Van der Tuin, 2012; Van der Tuin, 2015). What are the mechanisms through which open, inclusive or horizontal cartographies occur diffractively, i.e., by ways of surprise in hierarchically structured academic landscapes as

[2] The etymology of 'implication' makes it a suitable word for the 21st century: stemming from the early 15th century, implication means an 'action of entangling' from Latin *implicationem* which means 'an interweaving, an entanglement' and from *implicare* which means to 'involve, entangle; embrace; connect closely, associate.' Implication is therefore a folding-in.
[3] From Donna Haraway (2008) and Tim Ingold (2012).
[4] This term grounds Henri Bergson's entire oeuvre.
[5] See for this term Rick Dolphijn and Iris van der Tuin (2012).
[6] See, for instance, the work of Cathy O'Neil (2016) and Safiya Umoja Noble (2018).

feminist and new materialist cartographers become sensitized to "both the temporality of theory (virtual past and actualizations) and subjectivity (the new materialist placing of the scholarly subject; she is never fully fixed and therefore not in full control)" (Van der Tuin, 2014, p. 233)?[7] The classificatory approach to knowledge production and epistemology employs spatially linear arrangements of knowledge, and theories pertaining to that knowledge, based upon the process of sequential negation. Classifications are built upon the dialectical assumptions that knowledge production and epistemology relate hierarchically, and that both knowledge and knowledge theory develop progressively. Even though these very basic assumptions have, since the 1970s, been repeatedly proven wrong by critical epistemologists, these disapprovals have not prevented feminist—and other—critical scholars from using the classificatory approach at the margins of academia (Van der Tuin, 2015). In contrast, the cartographical approach provides horizontal mappings of research. Knowledges, knowledge production, knowledge theories, and epistemology are no longer strictly distinguished from one another and additionally become multiplicitous. Cartographies are thus situated in the Harawayian sense and as "theoretically-based and politically-informed reading[s] of the present" (Braidotti, 2002, p. 2). Continuing with the words of the Italy-born, Australia-raised, France-trained and Netherlands-based feminist philosopher Rosi Braidotti:

> A cartographic approach fulfils the function of providing both exegetical tools and creative theoretical alternatives. [… Cartographies require] account[ing] for one's location in terms both of space (geo-political or ecological dimension) and time (historical and gene[a]logical dimension), and […] provide alternative figurations or schemes of representation for these locations, in terms of power as restrictive (*potestas*) but also as empowering or affirmative (*potentia*) (Braidotti, 2002, p. 2).

The cartographical approach is one of the most important critical and creative responses to the neoliberal corporatization of academia. Additionally, this approach finds itself caught up in its own acceleration (exponentiality), as the embodied and embedded cartographer must immediately deal, not only with embodied and embedded images of knowing, but also with embrained, encultured, and encoded images (Collins, 1993, cited in Blackler, 1995); not only with embodied and embedded cognition, but also with enacted, affective, and extended cognition (Protevi, 2013).

In an attempt to acknowledge such complex and dynamic politics of location,[8] I have, in my recent research, begun to theorize how cartographies occur both "suddenly and seldom" (Van der Tuin, 2017) by way of posthuman interpellation (Van der Tuin, 2014). Accelerated embodiment and embeddedness can be said to act at the core of feminist, anti-racist, and queer identity politics in three fundamental ways: by operating on the interwoven levels of "differences between," "differences amongst," and "differences within" (Braidotti, 1994/2011); by

[7] The virtual and actual are Bergsonian notions referring to ways in which the present (e.g., known representations of gender and sexual relations) do not exhaust future or even past representations of what bodies can do. See Gilles Deleuze's *Bergsonism* from 1966 or recent writings of philosophers Elizabeth Grosz (2004, 2005) and Craig Lundy (2018) for introductions to these important notions.

[8] This term is from Adrienne Rich (1986).

demonstrating how critique has run out of steam (Latour, 2004); and by reaching out to Donna Haraway's call for a "sustaining [of] the possibility of webs of connections called solidarity in politics and shared conversations in epistemology" (1988, p. 584). Echoing Braidotti, Haraway's plea in 'Situated Knowledges: *The Science Question in Feminism* and The Privilege of Partial Perspective' "for a doctrine and practice of objectivity that privileges contestation, deconstruction, passionate construction, webbed connections, and hope for transformation of systems of knowledge and ways of seeing" (Haraway, p. 584-5) acknowledges and embraces multiple webs: Firstly, "[w]ebs [that] have the property of being systematic, even of being centrally structured global systems with deep filaments and tenacious tendrils into time, space, and consciousness, which are the dimensions of world history" (Haraway, p. 588); secondly, webs of connections the answer of which to world historical oppression is not 'anything goes;' and finally, "the webs of differential positioning" about which critical and creative scholars are "insatiably curious" (Haraway, p. 590). This analysis of global systems that are, on the one hand, historically determined and frequently centrally structured, and the critical goal of webs of connections and creative curiosity about webs of differential positioning on the other, boils down to a certain practice of cartography. Systemic webs, however, (amongst other classifications) unsuccessfully try to fully apprehend and represent technobodies and their (knowledge) production. Differential ethico-onto-epistemological positionings are constantly being formed by those bodies from within both confining and potentially liberating webs.[9] This process is one that occurs both consciously and unconsciously.[10] In my own words:

> […] diffraction is always/already at work when one reads, writes and converses, in a scholarly manner and otherwise, [which] challenges the boundaries of a humanist interpretation of hailing. Subjectivity as it comes into being with/in diffraction follows from what [philosopher] Henri Bergson has called a 'disturb[ance of] my whole consciousness like a stone which falls into the water of a pond.' This stone generates a sudden interference pattern on the pond's surface. But the stone only apparently sets the still water into motion (does water—the physical H2O cycle—ever sit still?), which suggests that human consciousness must also be ever in motion. After all, […] affected by [a] name-dropping, I [am] interrupted in a researcher-instrument-researched, past-present-future entanglement […] (Van der Tuin, 2014, p. 242).

Both the workings of accelerated academia and the Janus face of situated map-making uncannily co-respond. That is, they *correspond* as well as *emerge with* the affordances of Web 3.0—with the Internet of algorithmic media, automated document generation, and data subjectivity (Malabou, 2004/2008; Hoofd, 2012; Lievrouw, 2016). In my current research, I am interested in the confining and the potentially liberating implications of Web 3.0; in its conscious,

[9] Ethico-onto-epistemology comes from Karen Barad (2007).

[10] This is a reference to N. Katherine Hayles' *How We Think*, especially the argument that "[…] implicit in the concept of technogenesis, is to use digital media to intervene in the cycles of continuous reciprocal causality so that one is not simply passively responding to the pressures of accelerating information flow but using for different ends the very technologies applying this pressure" (Hayles, 2012, p. 102).

unconscious, and nonconscious implications;[11] in both Difference and in differing. How to go about this?

A Common Genealogy?

Cameroon-born and South Africa-based theorist Achille Mbembe writes in his groundbreaking *Critique of Black Reason* (2013/2017) that the world in the 21st century, as seen critically from the Black experience, is in need of the "mak[ing] possible [of] the emergence, relatively lucidly, of the new demands of a possible universalism" (p. 8). Both the capacity to formulate such demands (epistemology, methodology) and the objective of a universalist horizon itself (politics, ethics) are not without schisms, or without friction, or without historical and contemporary *fiction*. European schools of thought, enabled by and enabling violent practices of in- and exclusion, have intruded the Black experience's past and present; individually, structurally, and symbolically so; in both Africa and in the African diaspora alike (Europe inclusive). Reverberations of colonial and orientalist intrusions are ongoing and will have had foreseeable and unforeseeable effects in the future. European philosophies, situatedly desired and situatedly despised on more than one continent only, are both totalizing—they are a European reductionism, to use a concept from Martinican writer Aimé Césaire (1955/2000, p. 84)—and internally fractured along intersectional lines, the important foundation being a dialectic around issues of community. Mbembe (2013/2017) writes:

> The call to race or the invocation of race, notably on the part of the oppressed, is the emblem of an essentially obscure, shadowy, and paradoxical desire—the desire for community. Such a desire is obscure, shadowy, and paradoxical because it is doubly inhabited by melancholia and mourning, and by a nostalgia for an archaic *that* which is always doomed to disappear. The desire is at once worry and anxiety—linked to the possibility of extinction—and a project. Moreover, it is the language of bemoaning and of a mourning that rebels in its own name (Mbembe, 2013/2017, p. 33).

Community seems to always have been a lure for both oppressor and oppressed. And we (we?) still yearn for a horizon on its register.

Mbembe's work is a standpoint theory 3.0 that complexifies American feminist epistemologist Sandra Harding's theory of strong objectivity (2013/2017). Instead of reaching beyond the Hegelian standpoint to a postmodernist epistemology, thus exchanging the desire for gendered, racialized, or sexualized community for a theory of difference as diversity, Mbembe reaches back into psychoanalysis as to understand the paradoxical communal dynamics of subject formation and ethical citizenship. I must exert myself to try to understand this paradoxicality, running the risk of European reductionism and of what Suriname-born Dutch feminist and anti-racist anthropologist Gloria Wekker (2016) calls—for the Dutch in particular—a white innocence. Alongside such a striving for complication and worldliness on my part, as both a scholar and as a person, Mbembe's work on genealogy through and beyond European philosophical schools is all the more important for my research into feminist and new materialist

[11] Mark Hansen (2015) coined the term nonconscious.

epistemology as I try to observe, make observable, and visualize and to contemplate and theorize sets of references and quotations that are generative and radically open, inclusive and horizontal. The project is to refrain from continuing the Eurocentric habit of closing-down one's speculations by reverse projection of European reductionism on politics of citation while at the same time doing justice to both histories and ongoing practices of scholarly European reductionism in intersectional keys.[12]

Leveling up standpoint theory implies working through community as recognizably dialectical and beyond a diversity thinking of adjectification. Mbembe at once affirms the Hegelian dialectics, just like French philosopher Simone de Beauvoir did for upper- and middle-class white women exclusively in *The Second Sex* (1949/2010), and he searches for a new horizon beyond totalization and without individualism. Working through a Hegelian dialectics of community, on the one hand, and, on the other, working beyond the individualist horizon of diversity thinking implies the necessity of both holding on to the ideal of community and of qualitatively shifting its foundational dialectics. For one thing, individualism—the common denominator of assuming One (Man) as well as of endless adjectification (Braidotti, 2006)—must be avoided at all costs. Not only does individualism come dangerously close to advanced capitalist and neo-liberal normalizations but also does it impossibilize communal dynamic. For the carefully calibrated apparatus we must read the epilogue of *Critique of Black Reason* and turn to Mbembe's more recent monograph *Politique de L'inimitié* (2016). The epilogue suggests convincingly that the preferred apparatus implies a practice of *unkinning* (Mbembe, 2013/2017, p. 183). Unkinning (*désapparentement*) can best be explained with reference to the Bergsonian pair of virtual and actual (as opposed to the representationalist pair of possible and real). The main problem with community in most existing global, national and local circumstances—and these circumstances are entangled as well as they are more-than-human—is a discursive logic according to which we live and work as per "an approach that would aim first to enclose, to stay within the enclosure of what we call our own kin" (Mbembe, 2013/2017, p. 183). Such a logic realizes—in the sense of: it effectuates—the very possibility of difference as negation (Difference). In Mbembe's words: "In such conditions we create borders, build walls and fences, divide, classify, and make hierarchies. We try to exclude—from humanity itself—those who have been degraded, those whom we look down on or whom do not look like us, those with whom we imagine never being able to get along" (Mbembe, 2013/2017, p. 182). Here we see the Foucauldian power/knowledge structures of how intersectional analytical categories such as race and coloniality are intimately bound up with lived experience as well as with knowledge production, and how daily life is in turn intimately bound up with academic study.[13] How, then, to shift this European reductionism as it has been internalized within circumstances across the globe, across multiple scales, and across racial (and) colonial divides? Mbembe suggests starting not from the possibility of realizing what we think we know, but rather from a virtual space in

[12] Grosz has stated insightfully that according to a representationalism, "[t]he possible [is] a reverse projection of the real" (Grosz, 2005, p. 107).
[13] For power/knowledge, see Michel Foucault, 1977/1980.

which a durational apparatus actualizes different differences of which also surprising interference patterns instead of only recognizable vertical hierarchies in power and signification are part. He writes: "This question of universal community is therefore by definition posed in terms of how we inhabit the Open, how we care for the Open" (Mbembe, 2013/2017, p. 183). Inspired not by Bergson but rather by Martinican theorist Édouard Glissant's concept of *Tout-Monde* or—in the striking translation of Mali-born and New York-based cultural theorist and filmmaker Manthia Diawara (2015)—worldmentality and by ancient African naturecultural cosmologies, Mbembe subscribes to "the very possibility of the construction of a common consciousness of the world" (Mbembe, 2013/2017, p. 182) as a posthumanism. This is not an individualism indeed.

Before I move on to discussing how *Politique de L'inimitié* elaborates on unkinning, I must turn to American feminist science studies scholar Donna Haraway's (2016) seemingly opposite plea for *making kin* in her monograph *Staying with the Trouble*. How to make sense of the best of contemporary black theory advancing toward unkinning and the best of contemporary feminist theory advancing toward making kin instead? In fact, making kin argues also for a qualitative shifting of Foucauldian power/knowledge structures and its practice is equally posthumanist in spirit. Haraway writes: "My purpose is to make 'kin' mean something other/more than entities tied by ancestry or genealogy. […] Kin making is making persons, not necessarily as individuals or as humans" (2016, p. 102-103). Interestingly, whereas Mbembe's African cosmologies deal differently with ancestry and whereas genealogy has been reconfigured in Continental philosophy (Foucault, 1971/1977, Deleuze & Guattari,1991/1994) as well as in black (Césaire, 1955/2000) and feminist theory (Van der Tuin, 2015), Haraway's plea for a denaturalization and a posthumanization of kinship relations is precisely what Mbembe's complex take on community-to-come stands for as black people have more often than not been seen as nonpersons—and continuing—and given that we must move beyond both individual personhood and the totalizing humanism of Man. Haraway is explicit about these requirements when she writes: "Kinships exclude as well as include, and they should do that. Alliances must be attentive to that matter. […] Making alliances requires recognizing specificities, priorities and urgencies. […] Intending to make kin while not seeing both past and ongoing colonial and other policies for extermination and/or assimilation augurs for very dysfunctional 'families,' to say the least" (2016, p. 207, n. 12). Diffracting unkinning and making kin ultimately makes for an important interferential practice of epistemology/methodology and of politics/ethics.

Politique de L'inimitié, Mbembe's latest monograph, takes up the gauntlet of (explaining the necessity of) theorizing unkinning. Characterizing today's globalized world as enmitous and racism as informed by old and new nationalisms, Mbembe studies "what could be the foundations of a common genealogy and, hence, of a politics of life beyond humanism" (2016, p. 8; my translation). Mbembe argues, in a Fanonian key, for perpetual becoming (ontology) and for vulnerability as traversing enmity (politics, ethics), demanding reciprocity and caring relationality amidst the actualization of a renewed project of racial classification and differentiation, the biologico-genetic basis of which has in point of fact disappeared as a result of

research in the technosciences of life, but—unfortunately—so has the difference between truth and fiction in the contemporary screenage (Mbembe, 2016, p. 161-162, 167-169). After having established, by taking the work of the Martinique-born psychiatrist and intellectual Frantz Fanon as exemplary, first, the being of both one Earth and of a multiplicity of places as a permanent replacement for Europe as the center of gravity of the world and, second, the need to responsibly dwell on Earth and cross borders, Mbembe writes in answer to *Critique of Black Reason*: "Then, in relative clarity, will emerge the demands, if not of a possible universalism, then at least of an idea of the Earth as that which is common to us, our common condition" (2016, p. 178; my translation). This emergence of the posthumanist demands of a transformed notion of universalism[14] happens in a fragmented, earthly language "rooted in the paradoxes of body, flesh, skin and nerves" (Mbembe, 2016, p. 179; my translation). Historically and affectively embracing the body multiple, borrowing a term from Dutch medical anthropologist Annemarie Mol (2002), is the only way in which a situated knowledge as well as a new community can emerge (Mbembe, 2016, p.179). This is also how we may elaborate the necessary demands for the 21st century.

Importantly, given the sociological, psychic and algorithmic workings of the racialized and racializing unconscious, contributing to and being part of a common genealogy in a posthumanist key is not easy to do for either white or black scholars, whether in the African diaspora or on the decentered European continent. Why? Because the following of Mbembe's questions from *Politique de L'inimitié* have the greatest relevance in relation to the actual doing of political and ethical genealogical work today:

> But to say that [Europe] is no longer the center of gravity of the world, does that mean that the European archive is exhausted? Besides, has this archive truly been the product of a particular history only? Since the history of Europe has been confused for several centuries with the history of the world, and since the history of the world has been confused with that of Europe, does it not follow that this archive does not only belong to Europe? (Mbembe, 2016, p. 178; my translation)

Trying to see critically and creatively, i.e., intersectionally and interferentially[15] from the European experience, we must start by way of situatedly affirming historical and affective multiplicity, which is one of the tasks that I have set myself in my feminist and new materialist research. How do we act on Mbembe's important insights and musings?

[14] This notion is of course informed by Césaire's complexification of the notion as the result of black consciousness raising: "[…] we asserted that our Negro heritage was worthy of respect, and that this heritage was not relegated to the past, that its values were values that could still make an important contribution to the world. […] Universalizing, living values that had not been exhausted" (cited in Depestre, 1955/2000, p. 92). From Césaire (1955/2000, p. 52) also comes the notion of Negritude not as past- or as present-oriented, but rather that "[i]t is a new society that we must create" from the past and in the present, just like there is the need "to create a new language, one capable of communicating the African heritage. […] an Antillean French, a black French that, while still being French, had a black character" (cited in Depestre, 1955/2000, p. 83). Indeed, "[w]e are not men for whom it is a question of 'either-or'" (Césaire, 1955/2000, p. 51).

[15] For intersectionality and interference, see Geerts and Van der Tuin (2013).

On Not Being Indifferent

In the year 2000, the Belgian philosopher of science Isabelle Stengers published the article 'Another Look: Relearning to Laugh' in the most significant journal of feminist philosophy: *Hypatia*. The argument she presented was about ways of being a critical scientist and ways of critically reflecting on science. She asked whether feminists would have to abandon 'normal science' and embrace a woman's science. Her answer was a firm 'no.' After all, such a science of our own would leave us with the paradoxical situation of isolating ourselves ('another' science, objectivity, truth) on the one hand, while, on the other, putting normal science on a pedestal. Normal science would receive serious attention in the move away from it. Normal science *comes into being* when we argue against it. Perhaps normal science is more perverse than only being top-down, paradigmatic, control-driven? Stengers follows British philosopher and mathematician Alfred North Whitehead instead, who has suggested that philosophers of science study what scientists *have to assume* in order to make their claims.[16] This methodology permits the critical philosopher of science to take all forms of scholarship seriously and to ask fundamental questions about their conditions of possibility. These are not the conditions of possibility that can be laid down in normative rules for scholarly research, but these are the *situated* conditions of possibility of *virtual possibility*. Questions asked are: how has this (mechanistic, narrative, empirical, philosophical, conceptual, …) research been made possible? How did it come into being? What is affirmed here resembles what Haraway demonstrated in 'Situated Knowledges,' namely that even studies stirred by the God-trick lose their seemingly disembodied and disembedded status when we ask what they, too, had to assume. The technocratically mediated eye is not neutral. Decisions have been made that can be accompanied by other decisions, affected by mistakes, and be flawed.

The proposals of Haraway and Stengers should not be seen as relativist: Stengers affirms, and this is what I would like to borrow for the future of research in the 21st century, that it would be really "frighten[ing]" to be "on our way to the bureaucracy of 'objective' figures, 'rigorous' statistics, 'duplicable' protocols indifferently defining rats, the 'youth,' or women as the objects of scientific knowledge" (Stengers, 2000, p. 43). What I like about this statement is twofold. First, special status is ascribed to "rats, the 'youth,' or women." Animals, members of a certain generational cohort, and marginalized subjects—not only women but all beings affected by processes of perpetual pejorative Difference—remain firmly positioned as the objects of our research. Second, these objects should not be "indifferently defin[ed]" following a bureaucratic procedure. The seeming *objects* of our research become firmly positioned as agential *subjects*. This has exactly been Mbembe's move in both *Critique of Black Reason* and in *Politique de L'inimitié*. Taking the two aforementioned aspects together: research in the 21st century must continue to embrace a power/knowledge that would lead to choosing as research topics those nodal points in our society and cultural production that have something to do with in- and exclusion, but we must also make sure to work from a theory about how these inequalities and

[16] See for this take on Whitehead: Stengers (2002/2011, p. 79).

possible universalisms may feed back into the work we do at the university. We must not work indifferently, because we want to make a difference with our work. We need the space and the time for fundamental research in this era of vehement bureaucratization of research, especially in the turn to externally funded research. Take Stengers' example of 'youth.' The youth is a strategic research area at many universities and in many (trans)national research funding schemas, but we all know that generations are nothing but actualizations of the more fundamentally dynamic processes of growing up, of zigzagging movement in thinking and doing. Does funded research manage to reach this movement? Can we base our conclusions in datasets? What counts as data? Is a datum a statistical generalization or should we also look at individual cases in the data set and beyond?[17] These kinds of questions are my preferred questions. Taking questions about the conditions of possibility of *virtually possible* research on board allows us to also affirm the many different approaches we choose for our scholarship into power/knowledge and into un/kinning. From the huge statistical projects of the digital humanities that keep on getting funding to the baby steps we are making in the direction of trying to understand what digital humanities can actually do. From the hermeneutical textual studies that humanities scholars keep on refining up until devising projects that explicitly traverse the two cultures of British scientist and writer C. P. Snow[18] by developing the affective turn, the material turn, the computational turn. The humanities are methodologically versatile, well versed epistemologically and contribute to issues of societal concern… by posing the right questions. In that sense I would also wish for questions about the foundations of the human sciences. There is an age-old tradition of studying the history and philosophy of the natural sciences. I plead for us to take on board questions of history and philosophy of the human sciences. In his *Keywords: A Vocabulary of Culture and Society,* the Welsh cultural theorist Raymond Williams (1976/1983, p. 219) defined nature as "perhaps the most complex word in the language." But if we look at his definition of 'culture,' it "is [too] one of the two or three most complicated words in the English language" (Williams, [1976] 1983, p, 87). It is 'naturecultures' that comes out of such studies.[19] Is there a need to draw the line?

[17] Ezekiel J. Dixon-Roman's *Inheriting Possibility: Social Reproduction and Quantification in Education* (2017) answers these questions by seeking alliances with the work of Vicki Kirby (2011).
[18] See Snow (1959/1965).
[19] 'Naturecultures' is a term from Haraway (2003).

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TO CO-CO-RESPOND: A RESPONSE TO IRIS VAN DER TUIN 'ON RESEARCH "WORTHY OF THE PRESENT"'

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To Co-co-respond: A Response to Iris van der Tuin 'On Research "Worthy of the Present"'

Iris van der Tuin's provocative and intellectually generous cartography of 'research worthy of our time' spurs us to consider, or more to *co-co-respond* with the most pressing questions and problems of contemporary academia, those spilling out from the algorithmic condition (Van der Tuin, 2019. p. 9), the drain of hyper-individualism, the precarious but necessary project of decolonizing research.

We co-co-respond with these ideas situated in a North American university officially committed to reconciliation with indigenous peoples (SFU Aboriginal Reconciliation Council, 2017), and equity, diversity and inclusion (Simon Fraser University, 2018). We are learning that these goals are fraught with contradictions and vulnerable to competing forces, to the overdetermined practices and discourses of competition, individualism and whiteness. Van der Tuin encourages us to *attend* to the differences that have been produced in our schools and other learning environments—differences of race, gender, language, ability, economic status—but make sure we use theories that do not continue to reify these differences so that they become further inscribed in our institutions. We must be wary of the rush to a universalist vision of reconciliation, diversity and unity that erase differences and complexities. In these entangled colonial and algorithmic pasts and presents our researcher lives too are implicated, we are respons-able for the agencies of our research materials, their lives, our lives in the world. Van der Tuin maps the potential to shift as we must from diversity to radical multiplicities, from indifference to difference.

As Van der Tuin reminds us, our everyday academic life and labour are already deeply entangled in the coded objects of the algorithmic conditions, pulling us into new realms of academic capitalism. It is tempting in this hyper-individuated new world to hunker down and play it safe, or to play the metrics, compete, be visible, but perhaps not *present*, and to police our disciplinary (and physical) boundaries very carefully. After all, it is in the disciplinary space of education that we make connections, that we share stories, that we connect to teachers and

students, that we create spaces and places for new ideas to grow. But we must resist this pull to stay "within the enclosure of…our own kin" (p. 13) and to exert ourselves to live paradoxicality, as Van der Tuin also does with the *making kin* of US-American feminist scholar Donna Haraway and the *unkinning* of Cameroon-born and South Africa-based theorist Achille Mbembe. Within this paradox, she identifies a new creative space in which to "move beyond both individual personhood and the totalizing humanism of Man" (p. 14).

How else but in these paradoxical spaces we engage with "wicked" problems (Coleman et al, 2018), such as those of the algorithmic condition and its ethical-mathematical-linguistic-social-political philosophical-ecological effects and consequences, or of climate change as carbon-jet streams-pipelines-extraction-settler colonialism-racism-white privilege-wild-fires-markets-green-economy, and, and, and… ? It is daunting, especially in our work as educational researchers, where we feel not only the weight of these macroscopic, geo-political forces, but also the urgency of what's at stake at the scale of students' and teachers' lives, and even the microscopic scale of imperceptible affects that circulate in our educational institutions. Van der Tuin exhorts us to resist the indifference and apathy that such multi-scale, multi-actor issues involve and to "start by way of situatedly affirming historical and affective multiplicity" (p. 15).

Suzanne read Van der Tuin with her internet browser open to a pre-print public review version of '*Generous Thinking: The University and the Public Good* by Kathleen Sylvester (2019). She too is thinking with Van der Tuin of the limits of critique (Latour, 2004) and of the constraining, stultifying Euro-centric individualism in the university that "must be avoided at all costs" (Van der Tuin, 2019, p. 13). Sylvester wants a university and a research culture of more generous thinking, "an openness to possibility […] a means of learning to think with, rather than against." This is, says Sylvester, much like the rule of agreement in improv theatre, that an opening gambit be met with 'yes, and…' To do otherwise shuts down the flow and the game sputters to a stop. To do other is not only ethically bankrupt, but also philosophically problematic in its assumption that there is one, right way to read the world.

This is not, for Sylvester, or for Van der Tuin, a wet noodle, anything goes, relativistic kind of equity, diversity or inclusion, pivoting around Euro and white-centric claims to neutrality and innocence. After all, "Intending to make kin while not seeing both past and ongoing colonial and other policies for extermination and/or assimilation augurs for very dysfunctional 'families,' to say the least." Co-responding with Cesaire, Mmembe, Stengers, and Haraway, Van der Tuin offers us a radical, situated, political-ethical 21st century research that "take all forms of scholarship seriously and [asks] fundamental questions about their conditions of possibility" (Van der Tuin, 2019, p. 16).

Nathalie read Van der Tuin as she was preparing a talk for a conference focusing on a specific sociocultural theory on mathematics learning, a talk she had been invited to give as an outsider, as a critic of sorts. She was inspired by the idea of setting critique aside in order to ask questions about the situated conditions of possibility of this particular sociocultural theory. By asking questions about how the constructs used came into being and how the theory was made possible, the desire to overturn or replace gave way to a constructive work of imbrication,

towards new concepts that could be oriented to the social *and* the biological, to language *and* the body.

Van der Tuin thus offers a method of sorts, a method that she proposes for the humanities, but that is worth thinking about in the social sciences as well. In examining the conditions of possibility, we trace assumptions back to their animating forces, to the very questions that were posed and required solving. What would happen if we took this orientation into our thinking about quantitative versus qualitative methodologies? As we taught our psychology-based and sociology-based theories? As we thought about traditional versus non-traditional forms of research? We have a lot to learn about our own ways of thinking, of doing research, of mobilizing theory and practice. All these binaries that have become dead because of dogmatism, arrogance, laziness, convenient making kin, and sometimes, just lack of creativity.

That these questions about the conditions of possibility are always situated, through and through, means that if we want to continue asking them, we must modulate them in relation to our current contexts. We repeat the question that Descartes wanted to know about knowing but it cannot be the same question anymore. Questions are no more eternal than answers. In doing this work, in examining the conditions of possibility, educational researchers have a method for producing new concepts, that is, for speculating on how things could have been otherwise. In education research, where we often focus on what has happened, be it in a particular classroom, or in a set of policy documents, or in the latest crisis. This speculative method that Van der Tuin proposes shifts our attention to the virtual, both to what could have been and what still could be. This is not about imagining utopian futures. But it is about inquiring into the boundaries we make, the splits that continue to encumber us and that produce things that matter.

We hand this text back and forth from Suzanne in a café in Vancouver, to Nathalie, who is in Germany, maybe home today in her apartment in Berlin or in Utrecht by now, about to walk out like Suzanne has done, into the warm blanket of snow. As we travel in different directions, in great circles that will always intersect somewhere in the world, Nathalie plugs into Suzanne's words, and Suzanne into hers, weaving across the grain the hopes of producing new ideas that can matter.

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DIFFRACTIVE LINES AND BORDERLINES: A RESPONSE TO IRIS VAN DER TUIN'S "ON RESEARCH 'WORTHY OF THE PRESENT'"

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Diffractive Lines and Borderlines: Response to Iris van der Tuin's "On Research 'Worthy of the Present'"

Iris van der Tuin concludes her article with a provocative question: "Is there a need to draw the line?" I begin my response with this thought-provoking query, infused as it is with the ambiguity of language and the ontological paradox that undergirds her article. What does the line bring to theoretical contexts if we are to engage in a diffractive reading of the line? Does the line divide as a borderline, or trace the mirroring and replication of existing structures, patterns, or arborescent hierarchies? Is the line the flattened rhizomatic movement of networked horizontal connections and links, or is it the line of flight that ruptures, disconnects, and connects once again in iterative deterritorializations and reterritorializations (Deleuze & Guattari, 1987)? Do we draw the line between these lines, or is the line a word imbued with all of these diverse permutations and ramifications, an assemblage of dynamic and contingent meanings, at once a speculative imaginary that is empowering in its immanent possibility, and a degenerating enterprise in the desperation of the unattainable? In the context of the entanglement of data, machine, media, and the varied forms of the human and the non-human, drawing or not drawing a line has implications that are concomitantly constraining and liberatory.

In the current environment where the omnipresence of data generating and data storing machines and processes are conjoined with human lives, speed and change are foregrounded. Research 3.0 allows access to data and genealogical onto-epistemological progressions, but also allows the creation of dynamic cartographies. Cartographies open up the possibility of reading diffractively, finding new connections, and dismantling others. A cartography is not the exact replication of the original but a speculative and adaptable configuration of elements, an assemblage that is "coextensive with the whole social field" (Deleuze, 1999, p. 30). The diffractive quality of the map is its relationality, interferences (Barad, 2007), heterogeneity (Haraway, 1997), transversality (Van der Tuin, 2018), and the potential to connect through differences, such as between the institutionalized enclaves of the Humanities and the Sciences, to dismantle intransigent and restrictive epistemological borderlines. As Van der Tuin (2019) states, "the cartographical approach is one of the most…critical and creative responses to the neoliberal

corporatization of academia" (p. 10). How is this to be achieved or even speculated as we envisage the university as a "multiversity" (Braidotti, 2013, p. 179)? The cartographical approach also dismantles structured, striated, and gated communities of knowledge that are separated by their ideological, conceptual, epistemological, or theoretical incommensurability with each other in an either/or and a for/against rhetoric or binary, and bear the vestiges of the humanist pivot. This approach is embedded in the reconceptualization of literacy in the 21st century where "quantum literacy" illuminates traditional notions through the entanglement of technology, data-production-storage-application machines, and informatics that configure the "algorithmic human condition" (Bühlmann, Colman, & Van der Tuin, 2017, p. 55). Within this transdisciplinary context, De Freitas (2018) envisages a new way of doing empirical research and theorizing across the disciplines through biosocial research and data garnered through "sensory technology" (p. 293), a pathway through "the more-than-human *so as to imagine* a future for the human" (p. 304, emphasis in original), in order to grapple with its challenges. What is the nature of the relationship between the structured, digitized and data-driven, and stratified entity that is the university, and the research generated from it? What changes and impact are effectuated within the world, from these theoretical reconceptualizations of the world that flow from the research contexts within academia? How do these "thinkings-in-the-act" (Manning & Massumi, 2014, p. viii) diffuse and disseminate meaning diffractively? Van der Tuin (2019) suggests that the response-ability of researchers is to bring the world into academia through the choice of appropriate research topics and theoretical drivers to enable change and "make a difference [in] our work" (p. 17). The process also requires mutuality and recursiveness, as academia has to connect with and move within the world, enabling and motivating change with a greater sense of responsibility and collaboration in the socio-cultural, environmental, and political realms, or change remains ineffectually hypothetical, enclosed, and separated from the world. Change, however, embeds both what was, and what could be in the present moment.

Braidotti (2013) argues that to be "worthy of the present" and being embodied and embedded within the conditions and spaces that are becoming *with* us in the present, a valid research pathway is to be grounded in "posthuman thought [that] inscribes the contemporary subject in its own historicity" (p.189). Here, Barad's (2011, 2014) concept of *spacetimemattering* is an important illumination of human subjectivity as an assemblage that embodies all three elements as constant flow and affect. We see how Van der Tuin (2019) introduces some of the sources she cites not as static individuals but as becoming-subjects-assemblages: Braidotti is "Italy-born, Australia-raised, France-trained, and Netherlands-based;" Mbembe is "Cameroon-born and South Africa-based;" Wekker is the "Suriname-born Dutch feminist;" and Diawara, "Mali-born and New York-based." Van der Tuin's conceptualization of posthuman subjectivity is that of a nomadic, multiplicitous, and rhizomatic assemblage.

My subjectivity unfolds a diffractive reading of Van der Tuin (2019) that allows epistemological pathways to proliferate rhizomatically through its *suddenness* (Van der Tuin, 2017), the interferences and patterns emerging through Mazzei's (2014) theoretical intertextuality, Miller's (1977) relationship between critic and host/guest and host, Derridean

(1978) epistemological coalescence of différence and deferral, a Gadamerian (1997) fusion of horizons, and Barad's (2007) coalescing intra-activity. Miller (1997) writes about the paradoxical relationship between host and guest that "is always a chain, … in which there is always something earlier or something later to which any part of the chain …refers …. [in] that strange opposition which is of intimate kinship and at the same time of enmity" (p. 444). How does historicity become a pathway to a transformatory world when the histories of the oppressor and the oppressed remain intertwined cartographies? Deleuze and Guattari (1987) state, while identifying differences between the tracing and the map that cartographies are not static reproductions like tracings, but possess protean versatility. However, they also state that "It is a question of method: *the tracing should always be put back on the map* (p.13, emphasis in original), as one form is imbued with traces of the other, thus dismantling the dualism and discreteness that may be inferred in the definition of the two terms.

Mbembe's (2017) explication of paradoxical difference and similarity in the human condition and the movement towards renewal and regeneration is akin to Indigenous scholar Tuck's (2009) call for a "moratorium on damage-centred research" that represents Indigenous communities as "*only* damaged, as *only* broken" (p. 422, emphasis in original). She seeks, as in "standpoint theory 3.0" (Van der Tuin, 2019, p. 12), researcher acknowledgment of *survivance*, a term that suggests empowered resistance and renewal that is "simultaneously an acknowledgment of historic pain and taking action against that pain in order to reframe that history" (Tuck, 2009, p. 424). The relational ontology of new materialism connects and links concepts, time past and future in the present, location, and narratives and discourses of oppression and freedom, with both oppressor and oppressed entwined in a common history and impacted in the cartographies they continuously co-create virtually and speculatively. History implicates the actions of the oppressor, but when communities are liberated from being interpellated or adjectified in difference or deficiency *by* the discourses of the oppressor, there is movement towards, as Van der Tuin interprets Mbembe, an investment in "universal community" and "a common consciousness of the world" that is onto-epistemologically posthuman (as cited in Van der Tuin, 2019, p. 14). Similarly, there is an intrinsic reciprocity and co-response of entangled relationship between an academia that is global and dispersed, yet connected, and the technology that makes its work accessible through a proliferating network of relationality that delimits and multiplies. It is dislocated and borderless, and paradoxically, also located spatially within the virtual world. This extends the margins of research impact to a broader community, and increases the responsibility of the researcher as Van der Tuin asserts, beyond disciplinary borders.

Asberg and Braidotti (2018) state that the "post" in posthumanities "signals both critical and creative framework for performative and generative accounts of technoscientific or other naturecultural practices across disciplines and categories"(p. 18). Van der Tuin (2019) endorses a similar responsibility in identifying and speculating the possibilities that the entanglement of academic and research responsibility, cartography, and technology can generate through an ecological "double becoming" (Massumi, 2015, p. 124) where there is reciprocal and

concomitant affect on both the individual and the environment. In his vision of a borderless world, Mbembe (2018) writes about the border as an invention of the western world. In contrast, in the African context, it was movement and intensities that linked places, and "what mattered the most was the extent to which flows and their intensities intersected and interacted with other flows…. These were more important than points, lines, and surfaces" (p. 3). However, Mbembe (2019) also warns us about the manifold dangers of the liaison with technology, where "technological intelligence" has become entangled with every aspect of life, and the human element has been relegated to one of apparent powerlessness and cooptation through "technological escalation." Braidotti (2018) bids us to think about the critical reconfiguration of the human through posthumanism:

> If a cartography is the record of *both* what we are ceasing to be and what we are in the process of becoming, then critical thinking is about the creation of new concepts, or navigational tools to help us through the complexities of the *present*…of *actualizing* the virtual. (p. 7, emphasis in original)

The Penticton-born, Indigenous scholar from the Okanagan Nation, Jeannette Armstrong (2001), in attempting a translation of the Okanagan Sylix term for the "thinking-intellectual self" into English finds the closest linguistic approximation to be "the spark that ignites" (p. 464). She also cautions that, paradoxically, the spark can also kindle the destructive force of a fire. Is this not akin to Braidotti's encouragement for a reconceptualization of our subjectivities, when these experiential and conceptual paradoxes, the situatedness and the assemblages of individual subjectivities, and the diffractive flow of intra-acting concepts from varied contexts are embedded within the cartographies that are being created within the present moment? Van der Tuin (2019) explicates our responsibility as academicians and researchers in the 21st century to enable us to meet these contingent demands of current times. If we are to draw lines, then let it be the diffractive borderless flowing lines of flexible cartographies, and not volatile and divisive borderlines.

Word *Indigenous* has been capitalized on May 12, 2021. Revisions made post publication date at the request of the author.

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INTERVIEWS

"POSTHUMANIST PROCESSES ARE ALREADY ALWAYS AT WORK": AN INTERVIEW WITH IRIS VAN DER TUIN

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Introduction

This interview took place as part of the, "What's the matter with education? Faculty seminar in new materiality," which focused on new materialism in relation to the field of educational research. There were four scholars invited to present during the seminar, Iris van der Tuin was one of them. Her talk was titled *Epistemology in a Speculative Key* (SFU Faculty of Education, 2018) and focused on her current research on algorithms creating new knowledge. As graduate students participating in the seminar, we had the opportunity to interview her.

For Iris van der Tuin's presentation, the seminar read Karen Barad's interview in *New Materialism: Interviews and Cartographies*, which became the basis for many of our questions. But as two of us, Caroline and Sam, were new to the scholarship around new materialism, we took this as an opportunity to start a focused reading regimen, and to ask about those things which we did not yet understand. We dived into reading various articles (Geerts & Van der Tuin, 2013, 2016), interviews (Centre for the Humanities, 2014; Iliades, 2016), presentations (Disruptivemedia, 2014; Van der Tuin, 2017, Manchester Met Faculty of Education, 2017), books (Dolphijn & Van der Tuin, 2012; Van der Tuin, 2015), and other readings (Ramina van Midde, 2016). The third member of our group, Jacqueline, had a little more experience with new materialist theory and brought in ideas of different scholars to broaden our understanding.

As this interview was tied into the education seminar, we wanted part of the interview to discuss our lingering questions about new materialism, but we also wanted to inquire into Iris van der Tuin's past and current research interests, so we expanded the scope of our questioning. Eventually, we decided to focus on three main topics: how new materialism is being used in educational research, Iris van der Tuin's work surrounding "Generational Feminism," and the idea of "sexual difference" in the construction of gender.

The organization of the seminar into interviews, presentations, and group discussion allowed us to deeply research a challenging theory. Having the opportunity to interview a renowned scholar in the field expanded our learnings and sparked our curiosity further. We thank Iris van der Tuin for her time and energy as she sat with us for this conversation.

Question 1

Sam: *In the introduction of your book New Materialism: Interviews and Cartographies, you comment that you conducted interviews with some of the most prominent scholars of new materialism. If you were to add to the book, who are some of the other scholars you would want to interview, and what would you hope they add to the conversation?*

Iris: This is a fantastic question, but where to start? Maybe I should first say a little bit about why there are interviews in the book in the first place. Because actually the new materialism book that I wrote and undertook as an interviewing kind of thing, together with Rick Dolphijn, grew out of a seminar. When I met Rick, who's a Deleuze scholar, we realized that we shared ideas but not necessarily concepts. He comes from media theory, I come from feminist theory, so we compiled a list of each of our five favorite footnotes. I'm not able to write without Donna Haraway's situated knowledges or to speak without it, so that was on the list and nine other texts. And then we looked at this list, and we were like 'wow!' This is also interesting for other people, this is not just between the two of us, let's say. So we opened up the conversation about the texts to whoever wanted to join at the Faculty of Humanities at Utrecht University, and we really liked that conversational model in a way, because, to say it resembles new materialist ideas would not do justice to new materialism, but the generative nature of a conversation was something that interested us. So then we wanted to do something around conversation in the book and with multiple voices.

Karen Barad was the first one we interviewed. It was actually an online interview, she was in California and we were in Utrecht. And it was part of a conference, not necessarily meant for publication, but when somebody had typed it all up we decided again 'oh this is interesting for more than one person.' So then Karen Barad became the first one we interviewed for our book. We chose Rosi Braidotti and Manuel DeLanda, because of the fact that they coined the term neo-materialism, as you know. And because we didn't want new materialism to be too smooth in a way, we chose Quentin Meillassoux who is somebody who doesn't self-identify as a new materialist. I don't know if he calls himself anything? Maybe a speculative materialist or speculative realist or something like that.

Your actual question was: if you were to add to the book who are some of the scholars you would want to interview and so what would you hope that they add to the conversation? I would go for younger scholars, because I think that all the scholars that we have included are pretty established, so that is something that I really would want to do. And of course these younger scholars are not necessarily very known, so giving you their names wouldn't necessarily ring bells or anything. I am thinking of Felicity Colman, Astrid Schrader, Katerina Kolozova, Vera Bühlmann, and Anna Hickey-Moody. Achille Mbembe is definitely one of the established

thinkers that I would like to add because of the connection he makes between critical race studies and, I don't think he calls it new materialism, but he writes about the Anthropocene a lot, and talks about it a lot as our common condition, so that's something that I would like to add to the book.

Question 2

Sam: *I'm always interested in what people have had to leave out. So in your writing up of the interviews in New Materialism: Interviews and Cartographies, Rick and you obviously had to do some editing of your conversations. Is there anything that was left out as it maybe did not fit with the book that you were writing, but you still feel is interesting or important talk about?*

Iris: That's an interesting question. We pushed the interviewees to the limit. Manuel DeLanda and Quentin Meillassoux are not actively pursuing feminist research projects but we did invite them to talk about gender. And also, the interview questions were co-productions. That is something that is not in the book I think, I don't think we say anything in the introduction about how the questions came about.

I already said that the first interview was with Barad and over Skype because she was not able to attend a conference we had organized. And I was like 'there's all of these people that have decided to come to Utrecht because of Karen -- how can we make her present in a different way?' This is how we came up with the interview on screen. And we sent her our questions in advance, and she edited the questions, because she was like 'this is something that has to communicate to an audience that I'm not necessarily in the same room with, so let's be very clear about things.' She wasn't editing our opinion, or our reading. I think at some point when we ask something about critique, her answer is: 'I don't like critique.' So it's not that everything had to be smooth. And this is what we've done with all of our interviewees. So we sent the questions, and then we got some feedback on them, like 'what do you mean?'; like 'if you're interested in this, perhaps also look at that.' And we also returned the transcribed interviews to the interviewees. Often we wanted to clarify how scholars like Meillassoux and Delanda talked about feminism, about gender. We wanted our book to be as good as possible.

It was very difficult to find a publisher, because nobody understood the format, so they were asking 'it's a co-authored book that includes four interviews so… there's six people involved?' And that was exactly what we wanted to communicate. That one does scholarship, one does theory with a lot of people, and usually these people are not made present or acknowledged, only as footnotes maybe. And then not everything fits into a footnote. Lots of publishers wanted the names of the of the four interviewees on the cover, in terms of famous people will sell well... Open Humanities Press was interested because they published more co-authored volumes, they also have a project called *Living Books about Life*, consisting of books consisting of previously published materials that editors link to, so stuff that's online already, so they knew about formats with multiple voices. But what they wanted us to do is to change the order. We had the chapters first and the interviews last, and they asked us to put the interviews first and the chapters last. Didactically it works very well to have the interviews first and the

chapters last. And we wanted the interview questions to communicate with the chapters. So ideally, question one refers to chapter one, etc. So yeah, that's what we did.

Questions 3 & 4

Jacky: *Scholars in the educational field, working within new materialism or posthumanist theories (e.g., St. Pierre, 2013, 2017a, 2017b, 2017c; Weaver & Snaza, 2015; Mazzei, 2016; Taguchi & St. Pierre, 2017) have been pushing towards a turn in our approach to research, that moves away from qualitative methodologies centered on a humanist logic towards a reorientation of thought in using 'concepts as methods' (Taguchi & St. Pierre, 2017). However, this push has met some resistance, where some scholars would call it 'policing' the boundaries. Could you discuss the debate a bit and explain your stand on the issue?*

Iris: This is a really challenging question, and I want to ask something in return before I continue. I completely get the question and I also think it's a timely one, but there is also some sort of binary in the question, like qualitative methods center on a humanist logic and concepts as methods do not. Qualitative methodology centered on a humanist logic like, for example participative observation, or filming situations, and immersing yourself completely into what you are observing, so you are your own instrument, or using the video camera to create or recreate some sort of visible overarching eye, right? So that is qualitative methodology centered on a humanist logic, but I think using concepts as methods is also very qualitative, isn't it a new form of qualitative research?

Jacky: *Yes, but it's coming from these scholars who are working from a new materialist or posthumanist perspective. For example, they suggest using concepts like rhizomes or diffraction and starting from there, without moving forward with a preestablished idea. My reading into this issue is: a humanist logic in research methodology implies that you take a framework and you go with that framework and it establishes what you are going to be looking at, which immediately excludes something. This makes the research very rigid. In that sense, what some new materialist or posthumanist scholars in education are saying is that we need to do away with that and really start from a posthumanist view of research. For example, St. Pierre is very strict, she writes about it in several articles (St. Pierre, 2013, 2017a, 2017b, 2017c). Others, though, are saying, wait a minute, we don't need to be restricting these things, we don't need to be saying what is posthumanism or what it isn't, or how do we approach posthumanism or not, while others are more policing what is and what it is not, you know, checking the boundaries a bit. So, there are these two discourses going on right now in what I have read recently.*

Iris: I think that, it is always the research question that defines what methodology you are going to use, and I think that it is still possible to use these qualitative methodologies and at the same time unpack, you know, the posthumanist logic and also being posthumanist in the sense of trying to really also include in your writing what maybe this method has made visible or what it has excluded from view. So, I think you can be posthumanist in a way around video apparatuses and all of those things. What I notice is that, in education, new materialism is being picked up as

a response to precisely these qualitative methods centered on a humanist logic, but what I see is that research projects become extremely, and please correct me if I'm wrong, but they become all case studies and beautiful articles zoom in on very small, very tiny instances or instantiations of in- or exclusion in or around the classroom. I'm not saying that it is not good, but these are often beautiful articles about one exemplary boy, one paradigmatic encounter, and maybe there are scholars that need something else. I recognize the debate, I can understand why people find it policing, and I would say, if there is a need to work with more data or to generate more data, you can also be aware of the fact that it may show patterns, it may invisibilize certain subtleties and you can write about that. It depends on your research question. Is that an answer to your question? What is your own perspective?

Jacky: *As I was thinking about all these dynamics, I was also thinking about what you wrote about the archives that we all come with (Van der Tuin, 2015) and that they probably mark a little bit our thinking and the directions that we go, so in the same way, I think these methodologies narrow your view.*
Iris: The new ones?

Jacky: *No, the old ones. Qualitative methods. I don't think it necessarily excludes the possibility to analyze the generated data with a posthumanist perspective, but I know that some of these scholars feel very strongly about it. A very strong feeling that you cannot, for example, analyze a face-to-face interview with a rhizomatic concept. Or at least, this is what is being discussed at this time.*

Iris: I wonder if we can flip the discussion, because if it is true that most very conceptual research projects in education focus on unique encounters, I guess we all know that in order to have one of those encounters, you'd need to spend a lot of time in a classroom, for example, or with children, so perhaps we can also say that the very rich posthumanist interpretations of the specific encounters, they also make certain other encounters invisible. So perhaps we can also flip the argument around a little bit.

Jacky: *Something comes to my mind from St. Pierre. She says that while she was doing her research that she had to interview all these people, right, and she had been to this place before and she had lived in this place so she had had all these experiences. And she also had a dream that she was talking to somebody about these issues, but because of the framework that she was using, she could not include this dream, she just could use the interview as data. So, the interviews were her data, but all these other experiences were excluded. The interviews were the data, so she did not know where to include the other experiences because they were not part of the data. They were real and they obviously mattered in her analysis, but she says that they weren't data so she could not classify it or code them (St. Pierre, 2017a).*

Iris: So what you are saying is also that these qualitative methodologies are really strong on what is and what is not data and when you are doing research and when you are not. I know a really good article that is actually working creatively with interviews, it's by a Norwegian scholar, Ingunn Moser. She is a science and technology studies person, and she has an article in

which she writes about a project she was going to do. She is going to do a research project on disability. She is a white, able bodied woman and she is going to interview a disabled man, a man in a wheelchair. She very productively writes about the fact that even within such a framework or with horizontalizing intentions you can end up entering the research site, and in a split second becoming something completely different. In this case, because of the first split second of the encounter with the man, she is there not as an interviewer. So, I think you can also sensitivize yourself to more counter intuitive and very open moments in your so-called humanist research. I think these posthumanist kind of processes are always already at work, you just need to be sensitive to them (Moser, 2006; Geerts & Van der Tuin, 2013).

Jacky: *So, what you mean by sensitive is maybe, registering them in your writing?*

Iris: Yes. You need to be able to record them in some sort of way. And I think the conceptual work allows you to record those instances. What worries me about a debate like this is that it creates a binary that might not be necessary, because it devalues certain methods and uncritically accepts others. I mean, binaries are dangerous, they very quickly devalue one of all options. If this is true, should we choose sides? I don't want to choose sides. Should we all become conceptual researchers? Should we leave qualitative methodologies behind? Should we no longer read that work? Affirmative answers to these questions would worry me. So, I think, there is a lot of policing going on indeed, but I would position it elsewhere.

Question 5

Caroline: *Last year, during the Gender and Education Association Conference, you presented a keynote addressing the interactive curriculum and Liberal Arts Education in Europe. In the keynote description you introduced your view of Liberal Arts Education as a space for programmes with "a generative perspective" that enables students' effective citizenship, expressed for instance through self-authorship and agency. More recently, you lectured at Leuphana University of Lüneburg to students engaged with the Studium Individuale, thinking about the students' development, the generative curriculum, Indigenous epistemologies, and the role of the educator through Paulo Freire's "generative theme". Since we are addressing new materiality through the Faculty of Education, could you share with us some of the ideas discussed in these events? Especially with regard to Freire's generative theme in relation to this topic?*

Iris: I've always liked the term generation because it is a double notion. The term denotes both generational classes, generational categories, and etymologically this term also means 'to generate', the verb *to generate*. I think because of this double nature it allows for both, critique, because we have to critique generational classifications, and also from a new materialist perspective, we want to record or become-with generative processes that do not fit into these classificatory logics. So, when I was invited for the Gender and Education Association conference, I was trying to prepare myself, I was like "what do I actually have to say at this point about gender and education? How can I bring something to this community and have a

conversation?". I decided, that I wanted to do something with this double nature of the word generation: generativity and linear generations. And I found out that there is an entire body of work that calls itself generative curriculum. That work is not necessarily coming from Freire, but Freire is also a pedagogy person, so I try to connect the two.

The work on the generative curriculum comes from Indigenous Studies, and it has only been applied to Early Childhood Studies, I think. This work is all about making sure that there are no dualisms imposed on classrooms, not like inside-outside the class, or in-groups and out-groups. It wants to foster curiosity and stuff like that in very young children. But, by connecting the scholarship on the generative curriculum with Freire, I mean with his idea of teaching with a generative theme, we do not address these very young kids, but older youth and even adults, and the discussion becomes one about teaching with something that matters to you and moves you. Likewise, generative curriculum work is also about mattering.

Trying to connect the two I basically worked through Spivak's notion of unlearning (Danius & Jonsson, 1993). Spivak has two notions of unlearning: the first time she used this word she said we have to unlearn what we've learned and we have to unlearn our privileges. But the second time, years later - maybe ten years later or something, when she wrote about unlearning again - she said that unlearning is also about creating or generating positions of agency, and also positions in which we can be affirmative about something. Unlearning in the first sense can become very negatively critical, you know? When you say 'we have to unlearn our learning, and unlearn our privileges', it's only about something that has to go away. But, then, what is this bringing to the conversation? Where is the creativity? She is a French theorist, so she always wants not only *potestas* but also *potentia* in her analyses. I found that *potentia* in Freire's doubleness, in Freire's generative theme. It's just a way in which I managed to bring my discussion around the concept of generation to the field of Education through theory that was already there. But it was very scary to give a talk to an Education community, using Education sources, and not really knowing how these sources are now being debated within the field.

Very practically speaking, I connected the theme of generativity also to Liberal Arts Education and to the *Studium Individuale* program. This has to do with ways in which people think about interdisciplinarity. My program, the program that I'm responsible for, but also *Studium Individuale* in Lüneburg, they are considered interdisciplinary programs. And the theory of interdisciplinarity in the curriculum, let's say, it's all about making sure that that students get to work on complex societal questions. You know? So not on a pre-set kind of questions that teachers come up with. We want to teach students how to work on real-world problems, I guess that is also how you can say it. But then, at least in Europe, you have to do that in a situation within a university system that is based on disciplines. We've got three years in the bachelor, and it's not that me and my colleagues are teaching our students three years long like Real-world Problems Studies or whatever. We send them to all kinds of corners of the university to get all kinds of insights, methodologies, ideas. What we do is: we help them to formulate a theme, hopefully, a generative theme through which they can make sense of what they have encountered in all those corners, and they can still choose a discipline to specialize in the end. Imagine

there's a student, a first-year student, that is interested in sustainability. That student came to study with us because they realized, very early on, that sustainability is bigger than Economics, Biology, Earth Science, Psychology or whatever. They need information from all of those disciplines. Maybe the sustainability person decides "Okay! I'm going to specialise in the circular economy", then all of a sudden Economics becomes relevant for that person, whereas first that student was like "No. Economics? The rational subject? I don't want to do that". In order to enter a master's program, or take classes in the first place, they have to go through the disciplines. And generative themes are helpful in that exercise. This is kind of how I am using the generative theme to help students choose a discipline. You choose this discipline because it adds to a certain problem, instead of that you have the discipline decide what the phenomenon is that you study. Because these students know that disciplines narrow down and reduce reality.

Question 6

Caroline: *In your book you proposed a generational feminism based on an open cartography in which we could responsibly think about generational dualism, as you said now, "understanding genoi as nothing but spatial-temporal actualizations for genesthai" (Van der Tuin, 2015, p. xx). In other words, this acknowledges the fact that generativity envelopes generation but also to generate. So how do you think that your ideas of traversing, explicit in your jumping generations methodology (Van der Tuin 2009), constitute a qualitative shift away from our conflict-based feminist past?*

Iris: Well, let's go anecdotal on this one. When I was writing my PhD - this book *Generational Feminism* came out of my PhD - I was doing research, but I was also teaching. I was teaching history of feminism kind of classes. And when I was doing my research for my PhD I found out that feminists tend to talk about their own history in a very conflict-based way. There is the second wave critiquing the first wave, and, then, the third wave is critiquing the second wave. But also, in terms of how we talk about different, more theoretical tendencies in feminism it is always conflict, conflict, conflict. But when you're teaching the very same material that's not at all what happens. You give students Simone de Beauvoir and they are not going to say immediately "oh my god! Simone de Beauvoir compares women to laborers and blacks which means that Simone de Beauvoir has a white upper-class perspective". But they are saying "this idea 'one is not born but rather becomes a woman' is actually a very interesting way of thinking about gender", although she didn't use the word gender yet. I got more and more interested in ways of talking about feminism that I knew from the classroom. So, I started to find feminists' written rationalizations of our own history pretty boring. It was like "this is not at all what happens when you read a feminist text".

Also, I've always been really influenced by scholars, feminists like Gayle Rubin and Adrienne Rich, who talk about the necessity to find continuities between women and between the generations. Why? Not intrinsically, but because of patriarchy. One of the definitions of patriarchy is the exchange of women (Rubin, 1975). I was like… if we do, as feminists, what patriarchy does to women, what are we doing? So, I tried to find an alternative way of thinking

about feminist history, and, in the end, I found it in the notion of generation because of its double etymological roots. You can both criticize certain ways of talking about feminist history, in the feminist past as well as in the feminist present, and you can be creative with the very same material. I think these two tendencies always happen at the same time. Sometimes I want to be very critical, I want to keep that very negatively critical angle too. This is why jumping generations is a qualitative shift away from the conflict-based feminist past. The notion of generation can situate the conflict-based narrations of a feminist history and it can also make sure they open up a little bit. We can find allies throughout history.

Question 7

Sam: *Your diffractive reading of Simone de Beauvoir and Luce Irigaray (Geerts & Van der Tuin, 2016), as well as Karen Barad and Henri Bergson (Van der Tuin, 2011) created something new in both works. In both cases, while the scholars wrote about similar subject matters some of their ideas could be read as oppositional. Is this the procedure of diffractive reading, or how do you decide what authors' works, or what works, to read diffractively? And also would this be related to the idea of the archives that we all carry?*

Iris: The two texts came about rather differently. The diffractive reading of Beauvoir and Irigaray was conducted because of the fact that these feminists are very often seen as each other's opposites. And me and a student, we wanted to show that that's not the only possible reading, so that was a very conscious decision to do that research, which was a master's thesis of Evelien Geerts, my co-author. The Karen Barad and Henri Bergson diffractive reading happened more spontaneously. So I said that I wrote the new materialism book with Rick Dolphijn from within a seminar situation, and after maybe one or two years I got a little annoyed by the fact that our seminar conversations were in the end always about Deleuze. Deleuze was the big, you know, New Materialist or whatever, and that can be very productive for a burgeoning field, but I was also getting a little bit bored. So, it was summer and I always like to have a summer reading project, so I decided to read Henri Bergson from the beginning to the end, like his main four or five books. And doing that, I found myself constantly writing Barad references in the margins. Eventually I wrote that article not because there was some sort of oppositional reading going on, but simply because I wanted to expose that reading apparatus. My Bergson is always Bergson plus Barad. And, you know, I did this in 2009 so it's been nine years of researching with Bergson, so there's also different Bergson now. It is possible for me now to read Bergson without Barad, but initially I wanted to write about the fact that reading Bergson with Barad creates a certain Henri Bergson. That's how that article came about.

You ask if there is a standard procedure for a diffractive reading, or how I decide what authors' works, or what works, to read diffractively. There are multiple reasons and the closest to methodology that I ever got, like a bottom-up kind of methodology, is when I talked about posthuman interpellation in the *Parallax* article 'Diffraction as a Methodology for Feminist Onto-Epistemology: On Encountering Chantal Chawaf and Posthuman Interpellation' (Van der Tuin, 2014). Interpellation is this idea that you're already a subject before you know it, so when

that door opens and somebody yells "hey," intent meaning to reach you, you will know that that's the case before you're actually conscious of it. So you'll always look back, you look around milliseconds before you're consciously deciding to respond. This interpellation into subjectivity and the fact that it happens before you know it consciously, before you've processed it rationally, I've used that in order to think through why I diffract certain authors and not others. Because I think when you're scribbling down something in the margins, it's not necessarily considered knowledge production. Knowledge production is considered to be something that happens consciously, whereas when you're writing stuff in the margins, you're not making these connections with every word or with every sentence you want to make a link, these links present themselves to you. And some of them just keep you busy. And you want to do the work of trying to figure out how both authors are connected and change when you write about them through one another, like I did with Barad and Bergson.

Barad, after I had sent her my text, she was like 'I didn't agree with you at all, I wanted to write you an email after each page I read.' And that's because, with diffractive readings you also show where the differences and the dissonances occur. So you don't necessarily have to be faithful to a certain scholar, you're faithful to an observation, an intuition, a posthumanist interpellation.

Question 8

Sam: *New materialism seems to go past postmodern feminisms' look at both the body and mind as social constructions to bring gender back to the material, also giving it equal weight with the mind, hence staying away from essentialism. As you and Rick Dolphijn stated in your New Materialisms: Interviews and Cartographies, both people are defined more by their "essence, [which] is determined by what affects the thing and by how it is affected, [and that feminism can be opened up] by affirming the molecular ways in which the body and mind can be conceptualized as 'female' and how they are created (as one)" (2012, p. 152). How do these ideas of gender, or sexual difference, incorporate the newer areas of research such as transgender studies?*

Iris: I'm happy you mention in the question 'sexual difference.' Because for me sexual difference has always been a very important concept. Also, in relation to transgender studies, and there's not that many people that are very convinced of this, but I am. Partly because I think we should also keep that legacy of sexual difference feminism alive in a way. So what is sexual difference for me? It's really a Braidottian notion, a notion of the feminist philosopher Rosi Braidotti (1994/2011). She wants to say that, let's call it gender relations, happen on three different levels. So she says there's differences between men and women, there's differences among women, and there are differences within each and every individual woman. That's how she has always written about it.

So now there are two things I want to say. First why am I so interested in that model? Because of the third layer of sexual difference. Why is the third level of sexual difference so interesting? Another way of talking about the theory of gender is to talk about the fact that

there's difference between men and women, and then there is diversity, which is the second layer of sexual difference, the difference among women, the differences among men, we can also say. That's diversity thinking, but Rosi Braidotti adds the differences within each and every individual woman. Which means that the way in which you are a woman differs constantly, according to the constellation you find yourself in. And also with psychoanalysis, we know that we can surprise ourselves. You know, we seriously do, you can do something, say something, you surprise yourself in positive or negative ways. You can embarrass yourself. Psychoanalysis in many corners of feminism has disappeared. Whereas also in terms of philosophies of becoming, we must keep that level of what it means to actually be human.

Secondly, let's go to the transgender issue. Many scholars have said that sexual difference is an essentialist concept, because of this idea that the starting point is the difference between men and women. I think we can very easily say, and this is something that I think we can all agree with, that we all were born and thrown into this gender binary. You can be transgender, you can be intersex, the first layer of sexual difference has nothing to do with essentialism for me, but it has everything to do with the social order, the structure of medicine as a profession, all of these things. By rephrasing the first layer of sexual difference, it's not the differences between men and women as if those differences are essential differences, but it is the world we're still living in. And then the second layer of sexual difference becomes the differences between whoever is gendered female, and whoever is gendered male, it doesn't necessarily mean that these people identify with these labels, but the fact that the categories may not actually account for that diversity. And then there is the third layer, you can surprise yourself.

Before I came to Vancouver, I visited Evergreen State College with a group of interdisciplinary colleagues and I heard a talk by Jonathan Leggette, who's leading one of Seattle's, and maybe US-wide, most important intersex self-organizations. He was super eloquent, as if he had been working on the theme of intersex for 25 years, and then very well timed at some point in his talk he said that medical doctors found out about his "intersex condition," it's not a word he wants to use, but let's use it for the sake of brevity, less than a year ago. So that must have surprised him. And this is how he talks about it, he had to incorporate something into his identity, because he found out that his medical records were all blacked out, and all of these things. It was both a terrifying story but also a very empowering story. And that's what I mean with sexual differing and the importance of the model of sexual difference in a Braidottian key. The concept of sexual difference can do justice to all of the Sandra Harding's layers of gender, like the individual layer, the social layer, the structural layer, and the symbolic layer (Harding, 1986). And very profoundly so.

Your question was: How can we incorporate the newer areas of research such as transgender studies? I think that these newer areas both confirm and deepen the notion of sexual difference. Most scholars and most people think of difference as very dualistic, and that logic has become stuck to the notion of sexual difference. Sometimes that's justified, I'm not saying that there are no French feminists that don't use difference in a dualistic way but it's not necessarily so.

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AN INTERVIEW WITH ELIZABETH DE FREITAS

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Introduction

In the spring of 2018, the four authors were involved in a graduate level directed readings course entitled, "What's the matter with education? Faculty seminar in new materiality." The course was offered collectively by an interdisciplinary group of faculty members within the Faculty of Education at Simon Fraser University in order to introduce some of the theories, research and pedagogies of new materiality and to delve deeper as a group into these diverse theories and concepts which are becoming more widely recognised and used in many areas of study. The seminar was organized around presentations given by guest speakers who are leading thinkers in new materialities scholarship, followed by interviews led by groups of students. This article presents our interview with Dr. Elizabeth de Freitas, following her presentation titled, "Calculating matter and worldly sensibility". Dr. de Freitas holds a PhD in education and has a background in mathematics, as well as in the history and philosophy of science. As doctoral students, we are intrigued by possible applications of new materialist theories in our chosen fields of research. As such, our questions reflect our interests in pedagogy, identity, ethics, responsibility and assessment practices.

The Interview

Q1: *You've written extensively using new materialist approaches in a variety of areas, including mathematics education, science and technology, while pursuing the implications and applications of this work across the social sciences and humanities. This is a broad range of areas, what initially drew you to using new materialist approaches in your research?*

Elizabeth de Freitas: When I first started in educational research, I was focused on school mathematics cultures, mathematics teacher identity and the political framing of mathematics. I was always interested in the material culture of mathematics, in the lived experience of mathematics, and the kind of unusual encounters entailed in mathematical activity, and I was always looking for new ways of examining mathematical practices that attend more carefully to its specificity. One of the things I was really frustrated about when doing earlier political work on mathematics education was how the mathematics itself was treated as though it were immaterial and transcendent, untouched by the political framing of its lived experience. Much of the earlier work in our field on the socio-political framing of mathematics education doesn't actually dig into the specificity of mathematical practices, attending only to how these are elite gate-keeping practices. So I've always been looking for ways to get deeper into mathematical activity itself, at a more micro scale, in order to really track social, material, political life at all scales.

Certain theories, perhaps associated with new materialism, were appealing for that reason. I'm trying to remember specifically which texts came first for me, because I don't really know what would be considered a new materialist text, as it is such a debated tag. So many people would refuse that tag. The most important theorist for my own approach would have been Gilles Deleuze – I organized reading groups and attended the Deleuze Studies conferences. But my earlier reading in the 1980s had focused on Foucault and feminist history and philosophy of science– Haraway, Harding, Fox-Keller, Latour, etc. – while I was doing graduate work in Science and Technology Studies. My interest in more recent work in that field – through Karen Barad for instance – is linked to my past scholarship.

Q2: *Recently, we read your 2008 article, 'Troubling teacher identity: Preparing mathematics teachers to teach for diversity' in which you used theoretical tools such as self-study narratives and critical discourse analysis to explore questions of pedagogy and social justice issues in pre-service mathematics teachers' experiences. If you were to revisit this question and the field that you were exploring at that time again now, using a new materialist lens, what would change? Is there anything that could be added that would help make sense of this research in a different way?*

Elizabeth: Well, in 2015 I returned to this topic and co-wrote a paper on the posthuman future of identity with my colleague Matt Curinga. In that paper we revisit critical discourse analysis and conversation analysis as powerful methodologies that allow one to track the way people negotiate and mediate their identifications through discourse. But the paper also turns to the work of Manuel Delanda on language, to try and consider language in more material and non-symbolic ways. Nathalie and I also do this in our 2014 book, *Mathematics and the body: Material entanglements in the classroom*, in the chapter on language. We play around with the protocols of classroom transcript data. I think someone like Delanda keeps the focus on language, but begins to examine language a little differently in terms of its material force or its material activity. Brian Rotman does that as well, looking at prosody and the corporeal labour of

producing and understanding speech. It's important to note that neither of these thinkers would describe themselves as new materialist.

However, the question of identity is more problematic. There's this great piece of writing by Stuart Hall that he wrote about twenty-five years ago, called 'Who needs identity?' (Hall, 1996). In my article with Matt, we started with that question, and we asked what was this identity that so many of us had used to examine life in in all kinds of contexts? How would you begin to look at identity in a post-human ecology? Sometimes a term just gets too weighted down with associated meaning to be useful.

Q3: *In the 2015 article you mention above, which is called 'New materialist approaches to the study of language and identity: Assembling the posthuman subject" you refer to Braidotti's "alternative political ontology for a more ethical future" (de Freitas & Curinga, 2015, p. 261) and there is reference to your work with Nathalie Sinclair "advocat[ing] for an 'inclusive materialism' that might also meet ethical demands of the future" (p. 261). We are interested in how the issue of the human's responsibility may shift when viewed through a new materialist lens, and what ethical implications this may have. Can you share your thoughts about how a new materialist lens can help understand the human / non-human intra-actions, and if new ways of thinking can contribute to a different way to identity formation and offer a path to taking responsibility for one's actions?*

Elizabeth: We deliberated over the tag "Inclusive materialism" and whether that would be helpful for readers – we hoped that it might capture the 'more-than-human' as well as underscore our concerns about dis/ability in mathematics education. Our particular mixture of theory in the book is principally based on the historical work of Gilles Châtelet, and the philosophical work of Deleuze, but we wanted to link to other literature that was being published under the banner of new materialism. The problem with our inclusive term is that it can be read as being all encompassing, as perhaps too self-serving in its affirmation. There is a lack of responsibility really, I think, in imagining that pure inclusiveness. On the other hand, response-ability has to involve some sort of inclusive or sympathetic act, movement or tendency.

Obviously, there have been many, many, many different kinds of materialisms, and they have certainly been fascinating in different ways around the world. So this idea about being responsible for a theoretical position is important to consider – there is a responsibility to know as much as you can about the history and diversity of related theories. Tags come and go, and people claim new theories all the time. I've spoken about Mark Hansen in my lecture today, and he would never consider himself a new materialist. My commitments, in terms of responsibility, are to understanding particular texts and theorists, because they speak on their own behalf and not, usually, on behalf of a tag or school of thought.

I see Deleuze's work as really political and really concerned with an ethical future. On the other hand, some people see Deleuze and Guattari's work as invested in advanced capitalism and a kind of empty accelerationism. I would argue that Deleuze and Guattari are attempting to confront and engage with our capitalist condition, and that doing so involves a disturbing process of understanding it (learning it). I think this is what they do so well; they go to that hard place,

and look for counter-forces and lines of flight. So I see that as a kind of ethical responsibility in my work as well; I try to push theory into places where it is uncomfortable, where we have to face the hard questions, and yet still affirm creative and inclusive perspectives.

But over the years I have also written various papers that bring theory to bear on classroom events or curriculum documents or other specific practices. Of course it's easier to write a theory paper, but when you write a paper that actually tries to use theory to make sense of an everyday kind of experience or a classroom experiment, that's when you see your theory in all its nakedness. And often there is an embarrassing clash where you feel like 'the theory's not fitting, it's way too heavy-handed, it doesn't apply well'. But I enjoy the challenges of this practical venture. I think that this kind of practical application is another form of ethical responsibility, in research and intervention.

A few years ago, when asked to deliver a talk on new materialism at the American Education Research Association, to the Arts-based Research Special Interest Group, my first slide was "Is this really new?" and then I listed all these competing theories and philosophies, and tried to explain how they might differ. How do non-Western and Indigenous philosophies differ from new materialist philosophies? We need to take up these kinds of questions. This kind of work involves trying to make sure that you are carving out a contribution that is notable and distinctive, and that you haven't trampled on someone else's territory, while declaring yourself to be the next best thing.

Q4: *In your book Mathematics and the body: Material entanglements in the classroom (2014) cowritten with Nathalie Sinclair, you write about the pedagogy of concept. If students learn mathematical concepts, which you define as indeterminate in the process of becoming, how might this definition put current views of assessment into a different perspective? It is difficult to convert from a dualistic approach to this new materialist approach, and I am trying to think about how I could apply this (new materialism approach) in my classroom. As a teacher, I still see learning as a process. Given that the process of learning is in the realm of becoming, in order to potentially affect this process, I feel like I need some data. So I approach assessment in terms of collecting data, but if the concepts are constantly changing, then this data at one point is going to affect the other points.*

Elizabeth: I can well imagine that in classrooms where the indeterminacy and becoming of concepts is explored, you would find yourself thinking, 'I want some assessment, I need some feedback in this loop so that I can understand what they are learning.' We have been talking about learning events - what a learning event is, how it unfolds, etc. Maybe the question we need to pose is then: 'When does assessment seem like the right thing to do?' *When* would it be the right thing? Is it because you've always wanted it? I think the assessment industry makes teachers feel like they need to do it all the time, and this continued emphasis on assessment can lead to the kind of biomedical interventions in learning experiments of which I spoke today, used for that very purpose. That is a nightmare situation of ubiquitous assessment using 'pre-cognitive' physiological data in the service of predictive analytics. So there is an anxiety about the future that drives a need to assess all the time. We need to resist that. On a more practical

note, being able to figure out the appropriate time to actually assess something is important. It would be a big project to figure out when the time is appropriate, given the emphasis on process and potentiality. I am just trying to brainstorm. I think my starting point would be the question of when. If we don't use learning trajectories as models for tracking student learning 'towards' the designated concept, then how do we assess a line of flight or skills at mutating concepts and engendering mathematical monsters? Maybe looking again at the work of Imre Lakatos on the importance of a process that brings forth mathematical monsters? What makes a good monster?

Q5: *Given the diversity of the range of disciplines involved with new materiality and the complexity for those of us just beginning to learn about it, do you have any words of wisdom or any advice that could help some of us that are at the beginning stages and feeling entangled with our journey with these ideas?*

Elizabeth: It seems to me that you're already doing great work in this regard; you have this course going, you've got a community where you're sharing ideas and you're working really hard at trying to tackle these difficult texts. I think that it's important to find one text or one thinker that really works for you and then become an expert. I say this because tags like new materialism are important and powerful devices in academia, but they are also too easily open to critique. If you develop deep familiarity with the texts of Bruno Latour, for instance, then you've got your Latour, and you can debate and consider alternate readings of his work. I'm not suggesting that you become someone who only knows one theorist – but having that kind of anchor can help. You can speak through them. Then if someone asks you a hard question, you can locate yourself in those texts, because you've done that hard work of diving deep into them. But that's not the end of it. Then I suggest you start to build a theory map, tracing the differentiated links between theorists. Imagine this like a big map on the wall of your office, populated by various people, some more important to you than others.

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ARTICLES

"MAD I'M MAD!" – PARENTAL-INQUIRY AS WAYFARING

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Abstract

This paper explores a common tension for parents and teachers working with young children – the tantrum. Building on practitioner-inquiry methodologies, I engaged in a living inquiry into my practices as a parent, with the initial goal of reducing or preferably eliminating my son's angry outbursts. Frustrated with approaches informed by theories often applied within early learning contexts to address tantrums, including behavioural, attachment and self-regulation, I turned to new materiality theories, which provide a novel approach in understanding the socio-material constitution of subjectivities, emotions, and relationships. Within this assemblage, tantrums were reconfigured as a doing of emotions, occurring in the spaces in/between bodies, rather than an individual act of defiance. Through this inquiry, I shifted from a position of trying to intervene from the outside to eliminate, control or manage my son's tantrums to a place of 'intra-acting from within' and journeying with. My parental inquiry became a site to continuously work and rework everyday life and participate in the creative practice of world making. Although the tantrums, which we came to know as Mad I'm mad, continued, the connection among and between my son and I shifted, often in positive and enduring ways. I came to understand parental inquiry as a practice of 'wayfaring,' where the focus is on the journey rather than the destination. These stories may 'trace a path' for other parents and educators as they participate within their own affective and embodied entanglements, creating new possibilities for teaching and learning relationships.

Keywords: parental inquiry, new materiality, tantrum, anger, relational ontology

"Mad I'm mad!" – Parental-Inquiry as Wayfaring

Practitioner inquiry - the disciplined and intentional study of one's own teaching practice (Cochran-Smith & Lytle, 2009; Pinnegar & Hamilton, 2009; Samaras, 2011), is an approach to professional learning that positions teachers as creators of localized knowledge, rather than consumers of knowledge produced by researchers. It empowers teachers and students as agents of change within their communities (Cochran Smith & Lytle, 2007), thereby disrupting notions of teachers as mere technicians implementing 'expert' knowledge. Like teachers, parents are also often on the receiving end of expert advice, standardized routines, and pre-packed programs to resolve issues and improve their work with children. Although much scholarship focuses on mothers' first-hand accounts of their experiences as parents (see Britton, 2013; Hibbitts, 2009; Pushor, 2012), practitioner-inquiry has not (to my knowledge) been applied to parenting in a formalized way, despite the obvious parallels.

Through practitioner-inquiry, I have grown into an identity of a confident, experienced educator who can embrace the complexities of the classroom and work in meaningful ways to resolve tensions through action-oriented inquiry. My image of myself as a parent was a dark shadow compared to my sense of self as teacher. Although I identified as a caring and attentive mother, I frequently found myself at a loss. My responses as a parent often felt habitual, ineffective, haphazard and reactive. While educators are expected to engage in continuous professional development (BC Ministry of Education, 2018), parenting is often thought to come naturally, particularly for women.

As a result of the incongruence I was experiencing, I decided to rework the boundaries between my professional role as an educator and my responsibilities as the primary teacher of my children, and apply similar inquiry-based methods within my practice as a parent that had substantially transformed my work as an educator. Like Marshall (1999), I aimed to "liv[e] life as inquiry" (p. 155), explore everyday experiences that held energy, and embrace research as a holistic practice. I envisioned that this undertaking would be particularly generative as disrupting boundaries, such as those between public and private, formal education and informal learning, and teacher and parent, can generate openings, create inference, and produce creative practices and new ideas (see Smythe, Hill, MacDonald, Dagenais, Sinclair, & Toohey, 2017).

This paper describes my efforts to embark on a parental inquiry with the initial goal of reducing or preferably eliminating what would be commonly described as 'temper tantrums' in my son, who (at the time) was between the ages of four to six. While this inquiry was carried out within the context of parenting, it may also resonate with teachers as they, like parents, are commonly tasked with supporting children in managing, controlling, and changing their behaviour. These renderings outline our processes and the relations within which we are embedded rather than a recipe for others to follow. As Ingold (2011) contends, "to tell, in short, is not to represent the world but to trace a path through it that others can follow (p. 161-162). Our stories may 'trace a path' for other parents, educators and children as they enter into their own intense embodied entanglements.

Context

I have often observed strong emotions surrounding my son Alex[1]. They run through his body with an extreme intensity, and often are contagious, spreading through our household and pulling other bodies into this vortex. At times, his body exudes joy, a smile consumes his entire face, and he shakes with laughter. At other times, he radiates anger. Red and orange (like his hair) are his signature colours and he identifies with fire elements in games. "Hothead" (the name of one of his favourite video game characters) became our family's name for him when he was about to 'blow'.

Figure 1. Images of Alex

These characterizations are only some of the many stories I could tell about Alex. He is also known for his incredible strength, his athleticism, his helpfulness, his inclination to set novel and

[1] Alex's real name is used here with his permission, as well as the permission of his father. He has reviewed this manuscript several times and approved of the stories and images shared.

challenging goals for himself, and his ability to preserve to complete difficult tasks (see Figure 1).

My living inquiry (Marshall, 1999) into my parenting focused on my son, Alex, and what would commonly be classified as 'temper tantrums.' Alex is certainly not the only one in our family to express anger and to tantrum (adults included). However, around age four, I began to notice that he was enacting tantrums with an intensity and longevity that I had not experienced with my other two children at any age (see Figure 2). Initially my goal was to inquire into these tantrums with the hopes of reducing their frequency and intensity, or preferably eliminating them altogether.

"Tantrum"
Brow furrows,
Eyes narrow,
Lips curl down,
Shoulders slump,
Arms flap,
Feet stomp
Legs kick,
Hands push way,
Words are replaced by grunts.

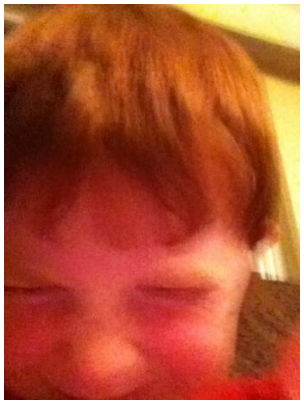

Figure 2. Documenting Anger

Thinking and Doing

Building on practitioner-inquiry methodologies (Cochran-Smith & Lytle, 2009; Pinnegar & Hamilton, 2009; Samaras, 2011), I engaged in what Ingold (2013) would call "try[ing] out things and see[ing] what happens" (p. 7), or what practitioner-inquirers would refer to as iterative cycles action and reflection. Following the lead of physicist Karen Barad (2007) who encourages us to consider diffraction as a guiding metaphor of research rather than reflection, I began to question what it might look like to invite diffraction into my practice as an educator (see Hill, 2017) and as a parent. Reflection involves the production of static representations of a reality that is assumed to be pre-existing and stable (Barad, 2007). In contrast, diffraction invites interference, illuminates differences, and reconfigures boundaries to produce something new (Barad, 2007). Here distinct bodies are not assumed to be pre-existing but continuously assembling and re-assembling to produce particular becomings, practices and identities that unfold in unexpected ways (Hill, 2017). Whereas reflection is commonly construed as a cognitive endeavor (Schön, 1983, 1987), new materiality theories disrupt binaries between reason and emotion, and attend to the affective and the aesthetic in research (Mehrabi, 2018). Consistent with new materiality theory, I tried to move beyond rational models of reflection and representation, and engage in embodied diffractive inquiry practices.

Influenced by Jackson and Mazzei's (2012) notion of 'thinking with theory,' in which various texts including theory, data, ideas, methods, selves and the like are 'plugged into' one

another, I began working and reworking my practice as a parent, and documenting what happened. The process of 'plugging in' produces different assemblages as various human and more-than-human entities that temporarily congeal to produce particular effects. As Jackson and Mazzei (2012) contend, "plugging in to produce something new is a constant, continuous process of making and unmaking. An assemblage isn't a thing – it is the process of making and unmaking the thing" (p. 1). This process destabilizes the subject, creates openings, and draws attention to the processes in which assemblages materialize. As I attempted to reconfigure my parenting and to invite change within our household, I incorporated various theoretical frameworks into my practice. I was not just thinking with theory – I was *doing* with theory. The congealing of specific theories, practices, methodologies, and documentation produced particular effects, including new subjectivities, identities and relations. My inquiry was characterized by evolving 'stories' (Ingold, 2011) produced through various theory~practice assemblages. Movement produced new assemblages and new stories, some generative and some leading to dead ends, which constituted my son and me in different ways. Certain stories became significant to us at different points in our journey. These texts were plugged into other assemblages and continue to unfold with each telling and each doing.

Initially, I began with approaches commonly applied within parenting and early learning contexts to address behavioural issues, including approaches inspired by attachment, behavioural, and self-regulation theory. According to attachment theory, strong physical and emotional connections between caregiver and child mediate trauma, stress and frustration experienced by the child and are thought to reduce tantrums (Sears & Sears, 2001). Further, awareness of cues and triggers can prevent tantrums before they occur. "Attached parents can read their child so well that they naturally create conditions that prevent temper tantrums" (AskDrSears.com, 2018). For behavioural theories, tantrums are viewed as learned behaviours that produce desired outcomes for the child. Through awareness of antecedents and consequences associated with tantrums, the child's bodily responses can be controlled through changing the environment to reinforce desired behaviours and extinguish unwanted behaviours (Booth Church, 2011). According to self-regulation theory, the child must learn to master environmental stressors and control the body (Shanker, 2013). The goal is to maintain an optimal mental state (calmly focused and alert) through awareness of self, as well as stressors, and the motivation and capacity to deal with stressors efficiently and effectively. According to Shanker (2013) the capacity to self-regulate increases developmentally and children learn to self-regulate through internalizing their experiences of being regulated by others.

The goal of creating various theory~practice~data entanglements is not to render representations of Reality or to interpret events, but rather to explore how specific assemblages works and what they produce (Lens Tagguchi, 2012). In experimenting with attachment, behavioural, and self-regulation theory, I came to understand that these theories construe the child and caregiver as independent individuals with the agency to impact other bodies, producing particular separate and distinct identities for parents (and children). Within the attachment framework, the successful parent is one who encourages the development of *inner peace* within

her child through close bodily contact and strong connections, and preemptively avoids angry outbursts through aware and attentive parenting. Thorough the lens of behavioural theory, the successful parent is construed as one who can effectively control the environment to produce the desired results. According to self-regulation theory, the successful parent is one who supports her child in developing emotional intelligence and regulatory behaviours, monitors and regulates her own neurosensory systems, and intervenes from the outside to support her children in achieving homeostasis through scaffolding and co-regulation. Incorporating strategies inspired by these three theories within my practice as a parent, such as shaping (behavioral), extending unconditional positive regard (attachment), and engaging in deep breathing (self-regulation), tended to produce assemblages that were fragile, unstable, and short-lived, and continued to constitute Alex as an out-of-control child and myself as an ineffective parent. Our frustration grew and so did the tantrums.

In order to create openings and novel solutions to a reoccurring tension in my practice as a parent, I turned to new materiality theories, which *provide a unique approach in understanding the constitution of subjects, emotions and relationships from a social~material perceptive. Grounded within post-human perspectives and* based on a relational ontology, new materialists view individuals as fluid and co-constituted in the moment of coming together with other bodies, both human and more-than-human (Smythe, Hill, MacDonald, Dagenais, Sinclair, & Toohey, 2017). Unlike psychological theories in which mothers and sons are assumed to be pre-existing, bounded, stable, and agential subjects, through the new materiality lens, they are viewed as open systems that are continuously reconfigured through material entanglements (Culter & MacKenzie, 2011). Barad (2007) refers to this process as *intra-action,* differentiating it from more common notions of *inter-action,* in which preexisting individuals are empowered to act upon one another. Within a relational ontology, agency is not bestowed on 'individuals' as such but rather involves an iterative reconfiguring of material-discursive phenomena. As Barad contends, "agency is about possibilities for worldly re-configurings. So agency is not something possessed by humans, or non-humans for that matter. It is an enactment. And it enlists, if you will, "non-humans" as well as "humans" (Dolphijn & Van der Tuin, 2012). Causation is not viewed as a linear event, but rather seen as emerging through intra-actions between and among entities in which boundaries are created or collapsed (Barad, 2007). Here the successful parent "intra-acts from within" (Barad, 2007), participating in the creation and disruption of various bodily configurations, producing identities and relations that are enabling and harmonious.

Telling Stories

What follows is a rendering of various stories that held energy for Alex and me during our journey. Within this telling our stories are organized according to three themes dominant within new materialist theories, including the affective, the material, and the bounded. Like all tellings, this account does not reflect Reality, but rather continues to contribute to the continuous unfolding of the assemblages and the reconfiguration of our world.

Attending to Affect: The Story of Mad I'm Mad:

When my attempts to control Alex's tantrums or teach him to better regulate his emotions failed, we began to work in more exploratory and collaborative ways. I asked him what he calls it when he gets so upset. He responded quickly and in a whisper, "*Mad I'm mad*" (see Figure 3). Once he named it, a new world was born and this phrase became a powerful force in shaping the emergent assemblages within which we were entangled. The 'tantrum' was reconfigured as 'doing of emotions' (Micciche, 2007) rather than an individual act of defiance, a lack of regulation, a reflection of an insecure attachment, or an example of ineffective parenting. Unlike psychological perspectives that locate emotions within individuals and establish a false binary between people expressing and receiving anger, new materialist perspectives understand emotions as dynamic and relational, and co-emerging between bodies (Ahmed, 2014; Davies, 2014; Micciche, 2007). As Micciche (2007) contends, emotions are performative and are "enacted and embodied in the social world...produced between people and between people and things (p. 2-3). Further, feelings do things and constitute various realities (Ahmed, 2014).

Figure 3. Replica of image Alex selected at age 6 to accompany the Story of *Mad I'm mad* (by Alex Hill, age 8)

With the materialization of *Mad I'm mad*, along with my new theoretical lens, we began attending more closely to emotions. We wrote poetry about *Mad I'm mad*, found images on the internet that resonated with our experiences, and read various story books[2] about anger. Kyo

[2] Books included 'How does a dinosaur say I'm mad' by Jane Yolen, 'Alexander and the No Good Very Bad Day' by Judith Viorst, 'When Sophie gets Angry – Really Really Angry' by Molly Bang, and 'Virginia Wolf' by Kyo Maclear and Isabelle Arsenault.

Maclear and Isabelle Arsenault's book 'Virginia Wolf,' with its vivid images and expressive language, resonated with us both. The book, based loosely on the relationship between Virginia Woolf and her sister, artist Vanessa Bell, describes Vanessa's efforts to rescue her sister from her *wolfish* mood. As is evident in the following poem (see Figure 4), *feeling Wolfish,* became part of our assemblages.

> ***Mad I'm mad***
> *A rhinoceros crashes into my stomach*
> *A T Rex is roaring in my ear*
> *I see Red*
> *There is a wolf inside*
> *It feels like I am the F Word*
>
> *Figure 4.* Anger poem (by Alex Hill, age 6)

Through our talking reading and writing about anger, which produced equally forceful positive emotions and feelings of connection, Alex and I were reconfigured, and there were new possibilities for action, relationships, and subjectivities. I would like to report that *Mad I'm Mad* dissipated, but that was not the case. Anger continued to flow through our house, grabbing a hold of my son and I, stopping us on our tracks. I asked Alex what I could do to help him during *Mad I'm mad*. He said that hugging helped, which surprised me because during these times with the stomping, flapping, kicking and pulling, hugging Alex would be akin to hugging a porcupine. He said that it did not help to try to explain things to him or forcibly relocate his body (common advice for parents managing tantrums).

> *C: How can I help you with Mad I'm mad? Does hugging you help?*
> *A: Yes.*
> *C: Explaining why I said what I said?*
> *A: No.*
> *C: Taking you to a quiet room?*
> *A: No.*
> *C: So just hugging. Do you know that sometimes when I hug you when you are 'Mad I'm Mad' you kick me or push me?*
> *A: No (sheepishly)*
> *C: Why do you think you do that?*
> *A: Because I don't know what you are doing.*
> *C: So keeping you in the same place, hugging you and telling you what I am doing is helpful. Is that right?*
> *A: Yes.*

Through this work, I came to understand that *Mad I'm mad* required accepting the aesthetic and allowing emotions to wash over us. It could not be understood or controlled through the reason or logic. Rather than trying to contain or constrain Alex or these powerful emotions, I tried my best not to become ensnared within this powerful assemblage that could swallow you whole, and

move creatively within the forces and flows. At times the introduction of something new within the assemblage created an interference that altered the entanglement. Just as Hermione's bluebell flames spell released the Devil's Snare, a joke or the introduction of another body could sometimes lift *Mad I'm mad*. At other times, it was like we were on a one-way track and no matter what we did, nothing could derail it. At these times, I began to understand *Mad I'm mad* as a place for dwelling *with* my son. Sometimes wolfishness needs to run its course.

Mine, it's MINE! Attending to the Material

Within new materialist perspectives, individuals are decentered and continually constituted within a complex set of embodied relations with the human and the more-than-human. I began attending to the material and observed that enactments of *Mad I'm mad* typically co-occurred in situations in which access to people, places or things were restricted. I observed that many things belonging to children in the family home including toys, books, clothes, and even toothbrushes often had joint or fluid ownership. This was not as common for adults who often held distinct possession over particular items. For some entities, ownership was inherent within the thing itself. The patriarchal chair in our standard dining room set is a good example. Although it does not belong to anyone in particular in our family, it invites the bums of some and repels others. The following excerpt exemplifies how Alex's trajectory within the family household involved a complex entanglement with things and people over a short period of time.

> *All three kids are sitting on chairs around the kitchen table working on a project with their nanny, involving leaves, glue, and paper. Alex gets up to get paintbrushes and paint from the art cupboard. Tink gets up too. Alex returns to sit in the chair where Tink had been sitting. Tink protests. Alex starts to frown, squint, slump, and grump. The nanny points to another spot at the table and says this is where your leaves are. Alex sits down in this chair and the tantrum is averted.*
>
> *Later Kai moves over to the side of the table where Alex and Tink are working. There are two paintbrushes on the table. Kai picks up one. It is the one Alex was using. Alex starts to frown, squint, slump, and grump. I say there are LOTS of paint brushes and get a whole container of them for the boys to use. Tantrum averted.*
>
> *Alex gets a house he has built out of magnetic blocks to show me. He puts it down on a table but before I can look at it, his sister grabs it and pulls it apart. Alex grumps, his shoulders drop, he stomps his foot and kicks. He pushes his sister and she begins to cry.*

More than a frustration, as these events likely would be understood within psychological perspectives, the continuous thwarting of Alex's entanglements restricts who he is becoming and his participation in the unfolding of the world. As subjectivities are constituted among bodies both human and more-than-human, growth and renewal are contingent upon movement along the entangled lines of becoming between 'self' and 'other' (Ingold, 2011). If access to other entities is limited, the potential for becoming and movement is also constrained.

Agency here does not reside within the individual, but rather between bodies. As Bennett

(2010) contends, things have power - they are actants that invite, entice, direct, repel, confer and organize. For example, the medicine ball absconded from an adult space with its shiny light green exterior, unexpected weight, excitingly malleable exterior, and unusual inability to bounce mesmerizes children and draw them into an intense struggle for its possession. It is a ball-baby to one and a Martian egg to another, each entangled within an intra-active process of becoming in relation to the ball. Things hold traces of what has happened and what is yet to occur. As Barad contends, past~present~future are entangled and bodies carry sedimenting effects (Dolphijn, & Van der Tuin, 2012). Barad (2014) refers to this as *spacetimematterings.* She says, "there is no moving beyond, no leaving the 'old' behind. There is no absolute boundary between here-now and there-then. There is nothing that is new; there is nothing that is not new" (p. 168). Within these complex entanglements in which diverse constitutive intra-actions co-occur in and through time involving the same object, emotions run high.

Besides "zooming out," as Nelia Evans (2018) would say, to view the complex intra-actions among people and things, I also "zoomed in," coming to understand Alex as a compilation of agentic entangled materials including cells and micro-organisms. As Bennett (2010) notes, "Each human is a heterogeneous compound of wonderfully vibrant, dangerously vibrant, matter (p. 12-13). At times *Mad I'm mad* co-occurred with a presumed drop in blood sugar, so much so that Alex materialized as *Hangry Alex.* Alex is no more (or less) responsible for his hanger than a stadium is responsible for a group rioting of concertgoers. Rather, various entities, including the hormone ghrelin signalling hunger to the brain, and low levels of glucose, amino acids and fatty acids in the blood stream congeal to produce particular effects.

By attending to the material, I began to see *Mad I'm mad* as distributed across entanglements involving numerous bodies rather than owned or controlled by individuals. The tantrum could no longer be ascribed or accounted for in its entirely to an individual, either Alex or myself, but rather was seen as an effect of the congealing of variety of bodies within micro, meso and macro assemblages that came together in powerful ways.

You I'm you! Attending to Boundaries

Denied access to my body often co-occurred with *Mad I'm mad*. I began to attend more closely to the creation, suspension and reworking of the boundaries between my body and Alex's body. Going beyond co-regulation or attachment that constituted our bodies as distinct entities interacting with one another, new materiality theories view bodies as continuously reconfigured through the process of intra-action. These boundary making practices that Barad calls *agential cuts,* produce distinct entities, but only temporarily. Barad describes this iterative reconfiguration of the world as *cutting-together-apart*, which collapses and produces boundaries and subjectivities. In this regard Alex and I were involved in a continuous process of worlding (Haraway, 2007) in which we were sometimes co-constituted as separate entities acting upon one another in either harmonious or conflictual ways, and at other times constituted as one of the same. Indeed, Alex is of me - he came from my body, but I am also of him. This is not a

metaphor. Cells of children have been found in the organs of their mothers' bodies (Martone, 2012), which troubles assumptions of material boundaries between 'individuals.'

One night, Alex and I had been working to keep *Mad I'm mad* at bay the entire evening. It was like we were on a one-way track and there was nothing we could do to overt this sticky emotion (Ahmed, 2014). Finally, I had had enough. I carried Alex's grumping, flapping, stomping body upstairs away from the other children. I explained that I was taking him upstairs to 'calm down.' Hands hit my chest, legs kicked my legs, and vocal cords screamed "NO!" This continued as we sat in my room. Eventually I threatened, "if you hit me again I will leave." The hand stopped hitting my body and, to my surprise, started hitting *his* body. With this act, the boundaries between us were reconfigured. We became one-in-the-same - hitting was happening to *us*. As Sarah Ahmed (2014) suggests,

> emotions create the very effect of the surfaces and boundaries that allow us to distinguish an inside and an outside in the first place. So emotions are not simply something 'I' or 'we' have. Rather, it is through emotions, or how we respond to objects and others, that surfaces or boundaries are made: the 'I' and the 'we' are shaped by, and even take the shape of, contact with others. (p. 10)

Previously constituted as separate entities acting upon each other, the differentiation between our bodies dissipated, and we materialized as one entity, entangled within a powerful emotion.

In the early stages of my inquiry, I assumed that Alex needed me to enforce boundaries when we experienced *Mad I'm mad*. Consistent with common parenting advice, I assumed that it was my job as a parent to stop his lashing out by restricting the stomping feet and flapping arms, and quieting the shouting voice. With this *agential cut* (Barad, 2007), my son and I were configured as separate entities and opposing forces. However, my critical friend, Jen Adi, a yoga therapist, warned against "sitting on anger" and suggested that instead I move my body with his body (e.g., hold his hands as the arms flap up and down) and talk to him about what he is experiencing. This practice of meshing bodies and chanting *"Mad we're mad. Mad we're mad,"* often enabled intense emotions to move through our relational field. Interestingly, this practice of moving together as one is consistent with Spinoza's notion of ontological boundaries. For Spinoza *individuality* is based on relations of motion and rest as bodies assemble and move together (Lord, 2010). For example, a person and a wheelchair are ontologically indistinct when their movement is harmonized, as is a group of people in wheelchairs moving synchronously. Similarly, when Alex and I moved together, we worked through *Mad I'm mad* as one body.

Another related practice that reconfigured boundaries involved *magic kisses* (kisses placed behind the ear that could be accessed at a later time when we were apart) (see Figure 5). In trying to create more enduring physical contact between my body and Alex's body, I drew on this practice heavily. This tradition evolved to include him giving me kisses behind my ears, as well as me leaving kisses behind his ears, and soon his sister joined in the ritual. Sometimes for fun we also would add a (pretend) fart or a burp behind each other's ears to carry with us throughout the day. These rituals appeared to produce a relatively stable meshing of my son and myself, a sedimented effect (Barad, 2014) that transcended time and space.

> *When I was putting Alex to bed I talked to him about staying in his bed (he had come to my bed at 2 am the night before because he was "lonely"). I made sure he was warm enough and had a stuffy to snuggle if he felt alone. I talked about giving him kisses behind his ear in case he felt lonely in the night. We began reading stories. A while later he whispered, "the magic kisses worked today." I said, "how do you know?" He said, "I saw your spirit at school." I asked, "what was I doing?" He said, "snuggling me."*

Between my lips and the back of my son's ears I found a fluid and transcendence space, and within this relational field, *Mad I'm mad* was often disrupted and connections strengthened.

Figure 5. Replica of the image Alex selected at age 6 to accompany the Story of *the Magic Kisses* (by Alex Hill, age 8)

Attending to boundaries highlighted the fluidness in which my son and I were co-constituted as distinct individuals or one in the same. Assemblages that produced powerful emotions and held much energy, at times could be disrupted or avoided through the erasure of our ontological distinctness and through the act of moving together.

Resting place: Teachings, learnings, and researchings

These tellings of *Mad I'm mad* flow through various personal and professional assemblages within which I am entangled, informing my work with my students, as well as with my children. Within schools and homes, we tend to create boundaries around the individual and we ascribe agency to and "treat" this bounded person when conflict occurs[3]. Teachers and parents are often expected to control the behaviour of individuals in their care, and can

[3] Margaret MacDonald, personal communication. Dec. 1st. 2018.

experience a sense of personal failure when interventions are not successful. The stories that Alex and I share provide a different way of understand and being in relation with others that may resonate with both parents and teachers alike.

Through this living inquiry into parenting, I shifted from a position to trying to intervene from the outside to control or manage my son's tantrums to a place of 'intra-acting from within' (Barad, 2007). When my parenting was plugged in (Jackson & Mazzei, 2012) to new material theories, tantrums were reconfigured as a *doing* of emotions (Micciche, 2007), occurring in the spaces in/between bodies, rather than an individual act of defiance. Although *Mad I'm mad* continued, the connection among and between Alex and I continuously shifted, often in positive and enduring ways. Parental-inquiry, like practitioner inquiry, became a site to continuously work and rework everyday life and participate in the "creative and potentially political practice of world-making" (Beyes & Steyaert, 2011, p. 104). For both teachers and parents, shifting the gaze from the individual to the assemblage, moving creatively within forces and flows, and attending to the aesthetic, the material, as well as the bounded, can produce new relations and new possibilities for practice.

As with practitioner-inquiry, the goals of parental-inquiry are as much ontological as they are epistemological, in that they aim to shift ways of being as a teacher or parent, as well as contributing to understandings of teaching and parenting. I have come to accept *Mad I'm mad* as a complex 'meshwork effect' (Ingold, 2011), and I am learning how to negotiate a path through a world that is fluid, full of vortexes, and holds every possibility. The story of *Mad I'm mad*, became one of journeying *with* my son, and I have come to understand parenting as 'wayfaring,' (Ingold, 2011), where the focus is on the journey rather than the destination. For both teachers and parents, this ontological shift of journeying *with* children, rather than trying to understand or change them can produce new ways of being and becoming.

As a parent and as an educator I find it encouraging to view my identity, as well as those of my children and my students, as co-constituted, fluid, and emergent, and to recognize that my failures (and successes) as a mother and teacher are produced within relational fields. When we have a bad day or experience conflict, I take comfort in the notion that these assemblages do not define our essence and that we will be differently constituted within other assemblages. I have come to accept that solutions to tensions at home and in the classroom are often temporary, and are never resolved in a permanent way. They are continuously enacted and reenacted, worked and reworked, done and undone. Each incident creates an opportunity for another spiral of inquiry, which produces new assemblages, and enables new possibilities for thinking, doing, and becoming.

When we were reviewing this manuscript, nearly two years after our active inquiry subsided, Alex created a drawing to include with our work (see Figure 6), that continues to contribute to the unfolding of *Mad I'm mad*.

Figure 6. "Anger volcano" by Alex Hill (age 8)

When asked about the drawing Alex said, "*... a volcano is erupting it made a river of lava. There is a rock with a tree on it with two owls (Cher and Alex). Grrr bzbz zzzz bhh sounds of the volcano … or me getting mad."* In my reading of this rendering, Alex and I materialize as birds of a feather standing united in a safe place, firmly grounded, while surrounded by an eruption of emotion. The drawing, which moves me greatly, features repetitions of elements included in the images Alex selected from the internet two years ago that resonated with our stories, such as fiery lava in Figure 3 (associated with the story of *Mad I'm mad)* and an image of two birds in Figure 5 (associated with the story of the *Magic kisses)*. Our dialogue with and through this drawing encircles us in love, carrying sediments of our lived journey and the journey that is yet to come. Like *Mad I'm mad*, this doing of emotion produces particular effects and entangles our bodies. As Ahmed (2014), contends, "What moves us … connects bodies to other bodies: attachment takes place through movement, through being moved by the proximity of others" (p. 11). We hope that the stories that we have shared might move you and be moved by you, as you participate within your own affective and embodied entanglements.

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EXPLORING ART AND CRAFT IN TEACHER EDUCATION WHILST GOING TOWARD A PERFORMATIVE APPROACH: SOME REFLECTIONS ON RE-TURNING AND ENGAGING DIFFRACTIVELY WITH FELTING WOOL

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Abstract

Since 1997, I have returned to and revisited textile materials through different types of approaches. As an artist, I have been working with soft sculptures and immersive installations. As an artist-teacher, I sought to (re-)introduced wool felting tradition to teacher students in Norway. As a researcher, I re-turn (Barad, 2014) my approach to wool felting and engage diffractively (ibid.) within teacher education.

I am now still exploiting a performative approach to the subject of arts and craft within teacher education. This approach is conjointly inspired by contemporary visual art form of expressions and by Barad's performative ontology.

In this text I attempt to convey my working processes as I relate how I started to engage with a performative approach to drawing in the field of arts and craft in teacher education, and how I now aim to enact further a performative approach to wool felting. This approach is inspired by post-humanism perspectives. Consequently, traditional binaries or dichotomies one can find in assumptions related to the humanities, as subject-object and theory-practice (Van der Tuin & Dolphijn, 2010), are here deterritorialized to be simultaneously and differently reterriorialized (Deleuze & Guattari,1980). My approach goes thus beyond the theory-practice division to hold an intra-active pedagogy (Lenz Taguchi, 2010) and an ethico-onto-epistemological framework (Barad, 2007). This implies a set of mind considering an intimated relationship between making, being and knowing: all those aspects are present under a creative process, not isolated and nor independent of the process. Adopting a performative approach with my students, I do not necessarily privilege a linear approach and I do not necessarily privilege human agency above non-human entities. Following an ethico-onto-epistemological framework means here to merge the phenomenon of felting (beings) and its written study and analysis (ways of knowing).

Keywords: arts and craft, teacher education, performance, performative teaching, wool, felting

Exploring Art and Craft in Teacher Education Whilst Going Toward a Performative Approach: Some Reflections on Re-Turning and Engaging Diffractively with Felting Wool

Since 1997, I have returned to and revisited textile materials through different types of approaches. As an artist, I have been working with soft sculptures and immersive installations. As an artist-teacher, I sought to (re-)introduce wool felting tradition to teacher students in Norway. As a researcher, I re-turn (Barad, 2014) my approach to wool felting and engage diffractively (Barad, 2014) within teacher education.

I am now still exploring a performative approach to the subject of arts and craft within teacher education. This approach is conjointly inspired by contemporary visual art form of expressions and by Barad's performative ontology.

In this paper I attempt to convey my working processes as I relate how I started to engage with a performative approach to drawing in the field of arts and craft in teacher education, and how I now aim to enact further a performative approach to wool felting. This approach is inspired by posthumanist perspectives. Consequently, traditional binaries or dichotomies one can find in assumptions related to the humanities, as subject-object and theory-practice (Van der Tuin & Dolphijn, 2010), are here deterritorialized to be simultaneously and differently reterriorialized (Deleuze & Guattari, 1980). My approach goes thus beyond the theory-practice division to hold an intra-active pedagogy (Lenz Taguchi, 2010) and an ethico-onto-epistemological framework (Barad, 2007). This implies a mindset considering a close relationship between making, being and knowing: all those aspects are present under a creative process, neither isolated nor independent of the process. Adopting a performative approach with my students, I do not necessarily privilege a linear approach and I do not necessarily privilege human agency above non-human entities. Following an ethico-onto-epistemological framework means here to merge the phenomenon of felting (becoming) and its written study and analysis (ways of knowing).

Re-turning the act of making and engaging diffractively with a making process

To re-turn, according to Barad (2014), is different from going back to something. For Barad re-turning is to put things up-side-down and intra-act with materials or entities anew/diffractively. Re-turning as such is not "returning as in reflecting on or going back to a past that was, but re-turning as in turning it over and over again – iteratively intra acting, re-diffracting, diffracting anew, in the making of new temporalities (spacetimematterings), new diffraction patterns" (Barad, 2017, p. 168). Re-turning things over and over again is an attempt to reach a richer approach and acknowledge other entanglements, other possible ways to intra-act, and other optics. Re-turning wool fibres, in my case, means to not simply go back, repeat or replicate the traditional felting technique I learned for 20 years ago. By re-turning wool fibres I wish to practice felting and convey diffractively the practice/making of felting to my students.

The concept of diffraction, beyond reflection, is also borrowed from Karen Barad (Barad, 2104), to distinguish it from the idea of reflection, by having a more explicit understanding of what is more than just a displacement. Diffraction is dissimilar to reflection when one look at the

sameness of a phenomenon displaced in time or space, as for example reflected on a mirror. Barad proposes an understanding of diffraction as to be(come) aware of and responsive to the differences and what those differences can do.

In this project, diffraction as more than just a displacement, means to alter earlier relationship between the wool fibres and my making. That is a new, becoming *in situ*, relationship between the materials and the making that take place. I address diffraction when I work with felting wool as I see the affect is produced when we value the process itself, relegating the final product (the terminated felted object) to a less predominant position. Concretely that means that when my students and I undergo a performative approach to wool fibres, we are not necessarily only interested in the finale/finished object. But we give attention to what wool can do with us, as the affect and effect it produces, the way we intra-act, and how different relationships arise within the groups of students.

These last years, I have worked with a performative approach to art and crafts subject: I look at the values that lie in the process (not just the finished product), such as aesthetic experiences, non-verbal communication, social relations, and material transformations. My initial step toward a performative approach to the subject of arts and craft within teacher education was made through collaborative drawing sessions, first by using a method I called "visual dialogue" (Jamouchi, 2017) as a way to unveil student's personal experiences of the city. And a few years later by using performance drawing, as a way to involve the students bodily and emotionally in the act of drawing (Jamouchi, 2018). In both cases I consider artistic and didactic approaches as an essential and joint parts of my practice as an artist-teacher.

Figure 1. A performative drawing session with my students at the Oslo Metropolitan University in 2018.

Written feedback I collected earlier, from students with whom I undertake performative drawing, underline the evocative and emotional experience we had during a drawing session. Some students expressed those experiences as the following: "I became a part of the paper", and "Silence and movements became art. Combining dance and colours" (Jamouchi, 2017). Those statements reveal the intra-action experienced during the phenomenon of drawing. It seems like the materials - both paper and bodies - became an entangled entity. And the making became the leading event. It was not only the human hands that created the drawing.

Bodily engaged with the task, we performed drawing on a large space in the classroom, we evolved collaboratively on wide-ranging craft paper displayed on the floor and the wall, and we explored this two-dimensional form of expression through non-verbal communication. The students hardly mention the final product (the finished drawing itself) in their feedback. But they emphasized the drawing process as a prevalent moment. A moment under which they could explore the material, become aware the relations that occur between both material, students, musicality, temporality, and moments of flow.

Re-turning drawing processes, drawing anew and diffractively was a rewarding way to reposition the working process and give it the more valuable status it deserved. I believe that a performative approach to wool felting can help to look deeper into the complex relationships we can have with malleable materials, with ourselves and each other. I do not believe so only because we can work on a large-scale project, using our whole body, and evolving freely in a larger space. I believe so also because the plasticity of wool fibres hold natural material that allows metamorphosis and entanglement.

Repositioning the felting process as experience and experiment

Stimulated by my earlier experiences of visual dialogue through drawings to unveil personal urban experiences, and performative drawing with teacher students when emphasising the drawing process, I wish now to approach the arts and craft subject through felting wool fibres, looking for how to allow fruitful experience and experimenting. From a post-humanistic and new materialistic perspective, I am interested to look further at the metamorphosis, entanglement and intra-action that occur between the materials and the students.

Art as experience (Dewey, 1934/2005) and experimentation (Deleuze & Guattari, 1993, p. 371, cited in Parr, 2010) seem to be given less attention than teaching methods focusing on foreseen outcomes or products. In September 2017, the Norwegian Directorate for Education and Training published a first proposal for school subjects.[1] In the subject of arts and craft, this first draft seems to largely concentrate on predefined approaches through established techniques and methods. The teacher team from the university of Kristiansand in Agder (South Norway) responded critically to the proposal by calling for a new curriculum that meets what they regard as relevant for a contemporary arts and crafts subject. They mentioned sensory form of experiences, they emphasis approaches that are closer contemporary art strategies as meaning

[1] See this link for the core elements in art and crafts: https://hoering.udir.no/Hoering/v2/151?notatId=227

making, questioning and wondering, participation, as well as dissent and interaction.[2] This critical response is in line with my views of an artist-teacher position and my wish to not only teach about materials or techniques, but allow aesthetical experiences.

Experience is a central and crucial moment in the art and crafts subject at school (Dewey, 1934/2005). And experimenting 'Without goal or end' (Deleuze & Guattari, 1993, p. 371, as cited in Parr, 2010) is essential to a creative process and aesthetical experience. It is indeed during the making of something, the process of becoming that we can make experiences and experiments. It is under the working process that we can explore, discover, make sense, as well as seize and capture different aspects of materials. It is also during a working process that we can relate to both the materials and other participants. As well as we can experience intra-action and relational aesthetic.

Engaging diffractively with wool involves to constantly re-explore the possibilities that this malleable material offers. In addition to the strictly technical aspects of felting, it is a unique sensory approach that takes place. I want to explore and convey some of the sensory aspects experienced during the process of felted wool. Sensory aspects as for instance the changing texture of the fibres, tactility going from soft to harder structures, alternation between wet and dry fibres, and the change of temperature we experience with our hands. Embodiment and imaginative approaches are intimately connected to the felting wool process. It is those forms of tactile, visceral and first-hand experiences I wish to invite my arts and craft students to become a part of. I deem those unique moments of sensory experiences as great potential to undergo experience and experimentation.

Felting wool and intra-action with different entities

Engaging diffractively with felting wool, as I recently started to do with my students, involves intra-action with different materials and other than ourselves. When we engage together with a felting process we bring a togetherness that involve our material bodies and the materiality of the wool. A togetherness that engender also immanent trajectories, experiences and experiments, memories, gestures, and identities while approaching and investing ourselves in a transformative intra-action.

The plurality of the students and materials do not merge. The plurality is rather more explicit and its complexity expand in the classroom. It is, as Barad express it, a generative process. A moment of becoming as “an iterative (re)configuring of patterns of differentiating-entangling” (Barad, 2014, p. 168). When voices and sounds, combined with ideas and acts, (be)come through a variety of different agencies, those intra-actions entangle with each other and participate equally to the becoming moment of making in a shared “spacetimematterings” (Barad, 2014, p. 168).

[2] Author translation of the abstract send by the teaching team from the university of Kristiansand to the Norwegian national conference organized by *Nasjonal senter for kunst og kultur I opplæring* in January 2019. The teacher team was composed by Helene Illeris, Monica Klungland, Lisbet Skregelid, Anna Svingen-Austestad.

Figure 2. A performative approach to wool felting with my students at the Oslo Metropolitan University in 2018.

The picture in figure 2 shows the students using the weight of their bodies and their feet working collectively to step on, pack and flatten a large piece of wool on the floor covered with bubble plastic to felt a large mass of natural fibres under their bodies. The space is intimately shared and gestures made of combined rhythms, repetitions, and different cadences create a qualitative space and moments of duration and *ritournelle* which emanate from their working process.

"The world is not populated with things that are more or less the same or different from one another. Relations do not follow relata, but the other way around. Matter is neither fixed and given nor the mere end result of different processes. Matter is produced and productive, generated and generative. Matter is agentive, not a fixed essence or property of things" (Barad, 2007, p. 136-137). This approach to relations and things, as Barad states it in that quote, underlines the performative approach to wool we experienced together. Our session with this felting process is a performative act. (I shall come back to performativity in the next section).

Figure 3. A performative approach to wool felting with my students at the Oslo Metropolitan University in 2018.

The picture in figure 3 shows repetitive and non-identical movements of twisting, turning and throwing large pieces of wool on the air and on the table. Those movements made by the students are not anticipated and not foreseen movements, thus they result in non-identical recurring movements. The movements in this felting process create waves of rhythms between the different student groups. The groups work simultaneously individually and conjointly. This is because the groups work individually since each group focuses on its own process, by creating they own time-space-actions through iteration, following the bodies and wool in motion within the group. At the same time the overall aspect in the classroom (visually and auditory) gives the impression of an ensemble bringing together similar actions in the workshop. Movements and sounds that create the felting process contribute to create a time space rooted in the making (felting process).

Spatially and temporality are also intra-acting in this felting process. The notion of space can be considered as something more than its metric definition. Space can be identified though our behaviour and daily creative processes, like tactics and strategies (de Certeau, 1990). Space can be defined as a topological entity related to aesthetic and our body (Trageton, 1995), or as poetical and oneiric (Perec, 2000; Bachelard, 1957), or identified from the concept of duration (Bachelard, 1957, and Bergson, as cited in Van der Tuin & Dolphin, 2010).

Space can also be seen through its temporality. Lefebvre (2004) used rhythmanalysis related to repetitions, frequency, and the human body own rhythms as a reference of unity and in relation to everyday life and urban space. With Kevin Lynch (1976), time and place has been looked at from a human sense of time, a biological rhythm that differs from an objective/external calculation of time. With the concept of duration, instead of linearly or scientific time inspired by

Bergson, one can focus on metamorphosis or transformation. "What endures, what is fundamentally immersed in time is not what remains unchanging or the same over time, a Platonic essence, but what diverges and transforms itself with the passage of time (Grosz, 2005, p. 110, as cited in Van der Tuin & Dolphin, 2010, p. 164). The wool fibre undergoes a metamorphosis, but it simultaneously remains the same entity. Going from a loose fibre it becomes a part of a smooth, felted material.

Away from a mindset promoting stabilization (of time) and standardization (of objects), my students and I find ourselves elsewhere. Space becomes more qualitative than metric. Working away from a table, leaving small scale projects for larger formats, and not sitting on a chair but standing freely in the room enable us to freely use our whole body, enable us to use large movements. This also enables improvisation and cooperation not only based on our fictive idea, but generated by the actual making during a creative process.

The intra-action between all those entities, as space, time, bodies, wool, water, floor, table, air, soap, etc., shaped the performative process and our experience of it.

Performance related to visual art and performative ontology

A performative approach to arts and craft can bring powerful experiences into the classroom. As I am now starting to work toward a performative approach to the subject of arts and craft by using wool fibres, I see that performance and performative approaches can be related to both visual contemporary art-working processes and Karen Barad's ontological framework.

Performance, in art history, has evolved from happenings, interventions, simulacra, action art and relational art (Ferrier ,1990). Hence, within visual arts, forms and categories of performances are constantly evolving. My intention here is not to give a definitive definition of what a performance is in the context of visual arts. My purpose is to recognize features that can be fruitful to articulate the way I work with performativity in teacher education. To that aim, I find the discussion of performance/performativity relevant. Inspired by performance in contemporary visual art I have been questioning a dominant way of teaching the subject of arts and craft in our universities. A teaching practice mainly focusing on technical and methodological instructions and artefacts production. This seems to be, still today, the "regular way to teach". I have myself been practicing teaching like that for years. I have previously been working as a pedagogue teaching about art education, rather than an artist-teacher training students through the arts. Today I see that creative and critical inquiry during experimentations, process-oriented training and relational aesthetical experiences are fundamental aspects in the subject of arts and craft. Without those aspects, we risk failing our mandate as arts and craft teachers.

The works of the visual artist Marina Abramović using her body and other materials as a medium is clearly inviting the public into intra-action. Her work changes the traditional position of (passive) viewer to (intervening) actor. Especially her performance "Lips of Thomas" (1975) created an intimate and unpredictable relationship between the artist and the spectators. The

object of the performance was not a fiscal item nor the production of an artifact. The object of performance art is the ongoing action itself. Her performance differs from a theatrical representation. The event that occurs is not a dramatic representation as one can find in traditional theater performances. The artist is not playing a role as an actress would. Marina Abramović's performances are ones of the works within visual art that mark a fundamental shift in our understanding of a piece of artwork independent from the artist. This transformation from a traditional work of art into an event is named "the performative turn" by Fischer-Lichte (2008, p. 23).

The classical formality established by having the exhibited object on a specific place of the gallery and standing spectators in front of it has vanished. The close contemplation of the other, the artist, involves consciousness about oneself, our own being. An alternative approach to the traditions and standards of the visual or performing arts that stresses the "the present, live moment" (Fischer-Lichte, 2008) and that challenges a classical interpretation focusing on the artefact and its visual components is what is relevant here.

The works of Marina Abramović enrich my understanding of what a performance can be within a contemporary art context and have an impact on how I can engage with a performative approach to my work in school setting context. I use the word performative, not performance, to distinguish between how I understand a performance related to the art world, from my didactical use of it related to the subject of arts and craft in school settings. My aim is to first and foremost deal with the event or phenomenon of felting as the main element of a teaching session.

From another perspective, performative research has been stated to be a "new" paradigm in scientific research, succeeding to the established quantitative and qualitative research methodologies. Haseman (2006) and Bolt (2016) identify it as a new paradigm, mainly related to the field of artistic research. They both call attention to the characteristics of performative research that distinguish it from earlier way of conducting research projects. Performativity, with its iterability and differentiation as Bolt (2016) puts it, is a possible way to explore and investigate a felting process ongoing a transformation, when the wool intra-act together with our hands.

By introducing performative research, which Haseman (2006) and Bolt (2016) identify as new research paradigm, they do more than adding or formulating a new working method after the well-known quantitative and qualitative research methods. Performative research has a more profound *raison d'être;* -it deals with fundamental beliefs about the nature and value of research that practice-led researchers have struggled to formulate within the binary of quantitative and qualitative research (Haseman, 2006, p. 1). Haseman stipulates that his contribution is confined to performative researchers who carry out practice-led research, which is "intrinsically experimental and comes to the fore when the researcher creates new artistic forms of performance and exhibition" (Haseman, 2006, p. 3). In my work, the idea of performance does not take place in an art gallery, but in the classroom with my students. My research is located (in time, space, and the making) everywhere I meet my students when we perform wool felting diffractively.

Haseman writes also that the practice-led researcher starts with "an enthusiasm of practice" (Haseman, 2006). That means that the research is not driven from a problem or an issue. In my case, it is an enthusiasm for the artistic practice and a concern for the teaching practice of arts and craft that drives my curiosity and will to engage with this performative approach to arts and craft. Note that the word concern in my case do not mean to find a normative solution to a problem, but a desire to question and reflect on the possibilities that reside in a performative approach to the subject of arts and craft in our universities. In other words, the issue here is related to my concern and care for the students I meet every day and with whom I endeavour to explore what the art world can be about in school settings. Concretely, I wish to look for an alternative way to teach in the subject of arts and craft by choosing an explorative performative approach to wool felting, rather than a traditional felting procedure guiding us safely on how to obtain a felted object. It is less a performance than an iterative intra-action with diffraction. After years of different felting experiences, I now want to re-turn to wool fibers as a known material to differently reiterate the encounter between us. I envisage this encounter close to a performative act (not a representational performance) in line with what Haseman and Bolt introduced as a new paradigm. This re-encounter with wool is not a repetition or mimesis of what I can do or what I know about wool, but a search for intra-action and creative play with it.

As in dance, like for example salsa involving two partners, the relationship between the partners emerges during the dance. Following each other's intentions and movements and "operating according to repetition *with* difference" (Bolt, 2016, p.139) other intentions and movements will appear. That idea of repetition with difference is comparable to the concept of intra-action introduced by Karen Barad (2007).

Barads' idea of intra-action produces an echo to my work. Her posthumanist performative framework that proposes an ontology in which entities are not taken as given, but as constituted through material entanglements contesting classical dualist view in scientific research (as object/subject, material/discourse, nature/culture). Her concept of intra-action describes the phenomenon as a relationship that emerges between entities from within their relationship (not prior or outside it). This acknowledges agency I have seen in the classroom when the students work with performative drawing and express this experience as "I became a part of the paper" they were drawing on.

For Barad (2007)

> "Discursive practices and material phenomena do not stand in relationship of externality to each other; rather, *the material and the discursive are mutually implicated in the dynamic of intra-activity.* The relationship between the material and the discursive is one of mutual entailment. Neither discursive practices nor material phenomena are ontologically or epistemologically prior. Neither can be explained in terms of the other. Neither is reducible to the other. Neither has privileged status in determining the other. Neither is articulated in the absence of the other; matter and meaning are mutually articulated" (Barad, 2007, p. 152).

Barad proposes "a *posthumanist performative* approach […]. The move toward performative alternatives to representationalism shifts the focus from questions of correspondence between descriptions and reality (e.g. do they mirror nature or culture?) to matters of practices, doings, and actions" (Barad, 2007, p. 135). This movement from representationalism to agential realism involves the idea of no pre-existing phenomenon in the world we are a part of. For my study this means that the phenomenon of felting is a process involving wool fibers and our hands equally in what happens during that process. When I use the word equally here, I refer to Barad's position of posthumanism when she intend to: "… not calibrate to the human; on the contrary, it is about taking issue with human exceptionalism while being accountable for the role we play in differential constitution and differential position of the human among other creatures (both living and nonliving)" (Barad, 2007, p. 136). We, equally human and non-human entities, are reciprocally constituted and intimately entangled in the world of which we are a part. Barad sees phenomena as material-discursive practices, this implies the idea that material as well as discourse are constructed, as we are embedded in it.

My engagement with Barad's (2007) work is grounded in my interest of diffracting and enacting non-representational knowledge of making practices. Her posthumanist, performative conceptualisation of knowledge production and practice suggests taking material and body simultaneously into account, as she acknowledges a relationship between the material and the discursive with no Manichean dichotomy between them. Matter is considered as agentive and dynamic, not as subordinated actions established by human hands. Similarly, in my teaching, I wish to encounter wool with our hands and allow experimentation rather than reproduction.

A performative approach to the subject of arts and craft? Still asking questions

The following suggestion for teaching program in arts and crafts is published on the website of the Norwegian Directorate for Education and Training: "With this task pupils will become familiar with wool as material. They should felt seat pad in an ice box using water, soap and colorful wool. They can sew large stiches around the edge of the seat pad surface when it has dried. Pupils will learn where we get wool from and how it can be used".[3] As mentioned previously, the new proposal published by the Norwegian Directorate for Education and Training in the subject of arts and craft seems to largely concentrate on predefined approaches through established techniques and methods. As for instance in the way it is mentioned here when the pupils are simply expected to (re-)produce felted seat pads.

By exploring a performative approach to the subject of arts and craft when felting wool fibers, I mean to relegate in the background the recipe-like teaching practices that mainly use a technique to achieve the finale product. A performative approach to arts and craft materials should deal with the imaginative and creative forces a person can reach when intra-acting with transformable materials. When a student immerses herself/himself in the material this allows her/him to perceive, explore, feel and comprehend a creative process.

[3] This suggestion for teaching program is proposed for 1st and 2nd grade in primary school. Retrieved (in Norwegian) January 2019 from https://www.udir.no/laring-og-trivsel/lareplanverket/fag/kunst-og-handverk/

A performative approach to the subject of arts and craft puts the event as the focal moment. That central element can be understood as the intra-action between the (teacher's and student's) hands and the materials. Performativity is also a central element in the work of Karen Barad. For Barad "A performance…is just such an intra-action among internally related components" (Bryan, 2016, para. 14). And "In the case of an ontological performance, the being *is* the result of this performance or intra-action" (Bryan, 2016, para. 20). A performative approach includes experiences and experiments of different possible ways of transformations, in terms of textures, sounds, temperatures, movements, duration, rhythms, odors, and so on, as those elements are parts of a working/creative process. The intra-action invites the students to a togetherness allowing relationships immanent within/from the performance. It is then the performance as an event, beyond the teacher only, which invites students to an experience of what the subject of arts and craft can be.

Drawing from a couple of teaching sessions with my students engaging with a performative approach to felting wool, as shown above in figures 2 and 3, I see that the essential quality of an experience does not reside in the repetition of the same, it is rather contextual and therefore unique. It is characterized by its ability to be experienced in different surroundings, and yet it is intimately related to the space, moments and people that found themselves there.

Some of the questions that have brought me further in my practice are: How can artist-teachers in arts and craft invest the space of the classroom differently? How could I invite students to experience felting, not only apply a felting technique? How could I invite students to immerse themselves in *feeling* wool fibres, more than only *felting* wool fibres?

Repetitions of an arts and crafts teaching session and displacement from a classroom to another are actually a feature of our daily meeting with our students. Questions that might bring our teaching practice further are: How can we allow for the students to meet again, and again a material diffractively? How can we "enter the phenomenon" in the classroom by bringing the essential quality of an experience?

Those are the questions I address in my teaching. Those questions might also be relevant for others working within educational contexts in the subject of arts and crafts.

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ART FILM AND COMPLEMENTARY ARTICLE

WALKING ALONGSIDE MY RELATIONS: A TRANSDISCIPLINARY EXPLORATION OF INTERCONNECTEDNESS

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This piece was created to accompany a video submission. Watch the video by scanning the QR Code in your mobile device or using the following link: *https://journals.lib.sfu.ca/index.php/sfuer/article/view/614/525*

Abstract

In this article, the author explores the multidimensional nature of relationality in its various complexities, vulnerabilities and possibilities through the lens of experience. By delving into the recollections of the unexpected events of an evening in July, the author ruminates on conditions that promote and hinder interconnectedness in society while also considering the significance of relational ways of knowing and being in present times. The author's experience is theorized across the disciplines of contemplative inquiry, arts-based research and Indigenous epistemologies. In envisioning pathways forward to foster interconnectedness, a complementary art film is included wherein alternative responses to a ubiquitous question in society, "How are you?", are offered. Given that interrelationality traverses a range of experience and emotionality, from wonder and joy to sorrow and grief, the article and art film contain sensitive and mature content.

Art Film Abstract

This art film is a five-minute breathing snapshot representing the author's experience on July 10th. Through the modalities of embodied, poetic and performative inquiry, the author offers alternative responses to a ubiquitous question in society, "How are you?", in the hopes of fostering interconnectedness.

Keywords: relationality, interconnectedness, pedagogy, wholistic

Walking Alongside my Relations:
A Transdisciplinary Exploration of Interconnectedness

Spoken Word Poem Transcript:

How are you? Exploring Alternative Narratives in Fostering Interconnectedness

Where is goodness found these days?
Is she masked in cordial conversations?
In this century's question of entry:
"How are you?"
"Good", you say.

This story of glossy goodness deludes my senses,
Depth of dialogue replaced with a better look: augmented lip service.
Where does Goodness reside?
Does she hide in shadows or is she out there
Found on Social Media
Concealed in real truths, fake truths at our fingertips twenty-four seven?

Is goodness defined by the evenness of epidermis?
Didn't you see it yourself, my selfie posted two minutes ago?
Skin: a synecdoche for spirituality
A lightweight look easily applicable.
We're all good right?

Good
The singularity of this narrative
At first glance, natural, non-hazardous
But as we ruminate on empty rituals
"Good" etches itself on tips of tongues
Where small talk is safe talk
Or is it stylish strangulation by tongue?

How can we chat about the weather
When the weather vanes of our hearts are rusting?
Pain staking its territory taking too many loved ones.
Brothers and sisters have hurled themselves off of bridges, skytrain platforms.
These falls marking an expanding distance between you and me,
Smokescreens and reality.

If I avert my eyes maybe it's not happening,
But if I choose to be present
Where are there spaces to lean into
oscillations, reverberations, pulsations,
To cradle the broken bits of oneself with
compassion?

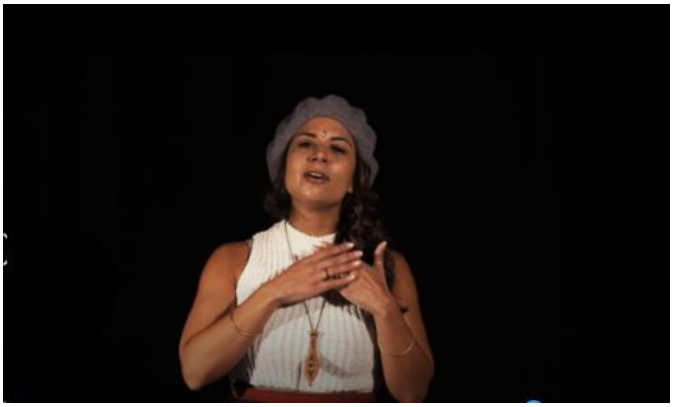
Listen.
As a little girl, I listened to the laws of
nature.
Soles buried in soil, this was the birthplace of my wholeness
Where good did not mean struggle free,
But free to be with whatever was stirring.

Isn't strife a birthright?
Does it not begin in the birth canal?
Babies transitioning from darkness to light
Attuning to conditions like trees who root
for each other
Amidst changing weather,
Sharing nutrients with sister, brothers.

Then why do we isolate ourselves in photoshopped walls
When these fronts are load bearing?
Are we ready to hear, to say, "Today, I'm not okay"?
Replacing artificial turf with the soil of a new day
Where conversations mirror variations of the Earth's biosphere
Calling us to hear the rhythms that are yours, mine,
Finding our stories intertwined
Woven together like the limbs of ants
Co-creating lifeboats to withstand the waters of life.

Earth's creatures acting as teachers
Guiding us to fresh water pathways
The hermeneutics of fluidity.

Instead of small talk of the weather
What if we inquired about the weather
within?



Clouds of climbing guilt, rays of hope amid rains of grief.
In our schools, our places of work
How may we foster cultures of connection?
Resilience via heart,
Knowledge sourced from the inside out.

Indeed, to connect is an act of love,
To love, an act of living.
How may we learn to live and love in these times of hiding?
Let us honour our weather
Attend to Nature's insights untethered
For encoded in her veins is the roadmap of our unravelling home.

My sister, my brother, step outside of your shadows
And into shades of shared experience
For goodness resides in this moment.
She is the essence of your truth awaiting to be heard, seen, freed.
So today let us start anew
As we inquire with open heart: "How are you?"

Introduction

> From our very first breath, we are in relationship. With that indrawn draft of air, we become joined to everything that ever was, is and ever will be. When we exhale, we forge that relationship by virtue of the act of living. Our breath commingles with all breath, and we are a part of everything. That's the simple fact of things. We are born into a state of relationship. (Wagamese, 2016, p. 44)

As a mother, educator and graduate student, I have been exploring what it means to live in relation with the whole self, fellow human beings and the natural world within the current cultural milieu. Relationality, I have come to fathom, is integral to who we are as human beings for it reflects our wholeness within the greater whole, our cosmos. Wagamese, an Ojibway author and storyteller, elucidates how the act of breathing, itself, unites us with "everything that ever was, is and ever will be" (Wagamese, 2016, p. 44). In this way, when I carve out time to align with the rhythm of my own breath, I am continually reminded that I am a relational being, that the essence of relationality flows in and through me. From these dynamic sites of breath, blood and tissue, there exist profound potentialities for connectivity with inner and outer landscapes.

A high school educator of 19 years in the B.C. school system, I have become increasingly aware that teaching is deeply and inextricably relational. Before students set foot in the classroom, I take time to tend to my breath as I arrive in this place, creating a spaciousness for engagement. This has become a ritual, and by doing this, the details that typically occupy my attention like the logistics of planned activities, temporarily dissipate or fade, allowing for openness conducive to the receival of my students and their relational worlds. I greet my students at the door knowing that each person is entering the classroom with unique associations which transgress the audible "hello". As I continue to adopt and enact relational ways of seeing, knowing and being in the classroom, I reflect on how I engage with my students; how we co-create classroom community together; and how curricular approaches are chosen, crafted and implemented. Teaching is inevitably relational, commencing even before students enter the classroom doors, coloring all interactions whether they are tied to planned curricular modalities or not. Here, I am reminded of Cajete's view of education stemming from Indigenous epistemologies whereby "education is, at its essence, learning about life through participation and relationship in community, including not only people, but plants, animals, and the whole of Nature" (Cajete, 1994, p. 26). Indeed, salient potentialities for learning exist in and through sites of connectivity with oneself, one another and the natural environment.

Over the last decade, by placing relationship at the nucleus of my pedagogical practice, I have witnessed my students' emerging capacities to attend to inner and outer resonances as personalized pathways for inquiry. These classroom experiences have fuelled my interest in relationality. During my graduate studies, I have examined the multidimensional nature of relationality through the theoretical lenses of contemplative inquiry, arts-based research and Indigenous epistemologies. For me, it is when theory interweaves with life experience that the

essence of relationality is illuminated with its nuanced ambiguities, perplexities and complexities. In this article, I sojourn a notable personal experience, one whose ripples of awareness are generative, and here, I lean into relationality and its boundless expressions of wonder, joy, disorientation, sorrow and tragedy. The experience of July 10th unexpectedly placed itself on my path and as I digest the intense events of this evening, I ruminate on key questions: How is relationality experienced in and through the body, and how does this way of listening promote interconnectedness? What conditions support and hinder experiences of relationality? And importantly, in our present day, is interconnectedness a luxury or an ethical imperative? In reflecting on the dynamics of relationality, I envision new pathways for living well with oneself and one's relations and these possibilities are proposed in a complementary artistic film. Through embodied and performative inquiry, I offer alternative responses to a ubiquitous question in society, "How are you?", in the hopes of fostering interconnectedness through artistic representation. In this film, the theoretical and reflective threads from this article's explication of events from July 10th are interwoven. Given that interrelationality traverses a range of experience, this article and art film contain sensitive and mature content.

Relationality: Listening to and through the Body

On the evening of July 10th, 2018, I sat in the audience of the Firehall Arts Theatre awaiting the performances of the *Dancing on the Edge Festival of Contemporary Dance*. As a mother, educator and student, the insurmountable to-do lists were consuming and I relished the opportunity to plant the fullness of my weight in designated seating. A colleague, Carolina Bergonzoni, had choreographed one of the dances and I was excited to relax and enjoy the show from the comfort of the sixth row. The performance started and after what seemed to be a few minutes, I noted that my initial frame of reference, which reflected a demarcation of audience and performer, had, at an indefinite point, slipped to the backdrop of my awareness. I detected an emerging vitality in the core of my body. I was not just enlivened *by* the dancers, but enlivened *with* them, the essence of their movements inhabiting my torso. I wondered if this physical simulation occurred because I loved to dance and carved out time for this practice on a regular basis.

Curious about this unexpected shift, I was reminded of Fel's accentuation of Applebaum's concept of "the stop", integral to her work in performative inquiry. A stop moment is "an unexpected stranger that calls our attention to what is hidden- a vulnerability, an intimacy, a curiosity" (Fels, 2015, p.112, 113). Here, I felt compelled to pause and align with what was unfolding in and through my body, each moment born anew with sensory guests, an echoing of the dancers' rawness of emotion revealed through their grace. My hands and feet flowed in synchronicity with the dancers' movements, surging energetically from beneath my flesh, blood pulsating rapidly through my veins as though I too was emulating the dancers' motions. I peered down at my animated limbs, assessing whether I was physically in motion or sitting in the relative stillness of the sixth row for boundaries of real and imaginal had become blurred.

How had my spatial associations been altered by the performance? What conditions promoted this sense of malleability, the rendering of perceptual penetration? Cajete, in referencing Indigenous ways of knowing, highlights how human observance influences energy relationships through the quality of one's attention, whereby radiating concentric rings of spiritual essence affect the nature of existence at the level of subatomic particles; thus, reinforcing a sense of energetic exchange even in the absence of physical intervention (Cajete, 1994, p. 57). Similarly, Kelly, an Indigenous scholar of Anishinaabe descent, reflects on her life experience and practices as an artist wherein zones of receptivity are not only depicted in the act of creating, but "each art form acted pedagogically on [her], and [she] learned to move, to see, [and] to hear" with new sensibilities (Kelly, 2015, p. 49). In exploring her "senses and sensibilities…through deep attention and contemplation", Kelly shares a quote by Wolfram von Goethe which illustrates how engagement, in this way, expands our perceptual capacities for "every object well contemplated opens a new organ of perception in us" (Goethe as cited in Kelly, 2015, p. 46). Quality of attention seemed to shape and re-shape inner and outer landscapes like my experience of engagement when witnessing the dancers in motion.

In the classroom, I had pondered processes of observance in the context of inquiry-based learning with my students. Reciprocation of inner and outer attentiveness influenced their inquiry processes and as a class we played with this interplay. Sometimes, we directed our attention to one vessel of self as part of an inquiry. For example, students learned how to plot emotions as part of their learning. Other times, the focus was solely sensation whereby students wrote from sites of the body while interacting with objects of study. This reciprocal dance of inner and outer awareness seemed to underpin inquiry processes. But what was it that promoted the merging of these landscapes, the perceptual absorption that I had noticed when examining the dancers' movements? And how did my students experience the shifting and melding of inner and outer experience in the classroom?

This kind of intermingling of experience was not completely foreign for me. It occurred when I was absorbed in practices of writing, singing, dancing and teaching. The quality of these engagements seemed to reflect Csikszentmihalyi's psychological concept of flow, a kind of perceptual absorption that transcended time and space (Csikszentmihalyi, 2008). During times of flow, inner and outer boundaries blurred and it was as though I was witnessing the expressivity and wisdom of my spirit and body in full blossom while my typical mental dialogue was muted. From these experiences, I had come to recognize how the body, with its sensitivities and nuanced cues, was an animate site conducive to openness and connection. I was first introduced to the experiences of listening deeply to the body during inquiry processes in Dr. Snowber's classes at SFU. Snowber illuminates how listening "is not just an activity of the mind, but everything within us mind, heart, body, soul, imagination and cognition" and from the receptivity of our pores, "listening to the body is one of the greatest gifts we are given as humans" (Snowber, 2016, p. 55). Over time, I practiced listening to and through the wisdom of physicality where murmurings of gut and palpitations of heart summoned me to experiential and creative engagements. Snowber explicates this dynamic in sharing that "listening happens through our

senses and is central to the creative process" (Snowber, 2016, p. 56). In this way, listening was inherently relational and the body's knowledge in her twinges and energetic pulsations allowed me to connect with my own "human beingness" even in the midst of a public dance performance (Snowber, 2016, p. 6).

How often was this way of listening, listening in relation to and through the body, integrated in classroom activities? For me, after having been schooled in a curriculum steeped in cognitive frameworks, my coming to understand knowledge as constructed through various facets of self, with the sensuous as an expansive gateway to knowing, was a hermeneutic revelation. By listening deeply to the body, multiple possibilities for connection existed. Along the same vein, Cajete acknowledges that learning, echoed in the foundation of Indigenous principles, is embodied through the various vessels of self including the body, heart and spirit" with "art [as] a vehicle of utility recognized as an expression of the soul and a way of connecting people to their inner sources of life" (Cajete, 1994, p. 30, 31). Artistic inquiry encompassed the active participation of the whole self often including imagination, emotionality and the body. Cajete's words reminded me of my students' gravitation to artistic modalities of representation of and for learning. As my attention was drawn back to the Firehall Arts Theatre where I listened to the grace of the dancers' movements in relation to my internal responsiveness, Cajete's words rang true.

Interconnectedness: A Teaching, a Knowing, a Truth

Fascinated, I continued to watch the dancers at the Firehall Arts Theatre. Following their gesticulations of hands and feet while tuning into the varied flow of my own breath, I sensed that there was not one dance taking place, but many. The three performers had drawn me into their worlds, engendering a sense of wonder. The dancers' articulations activated a vitality from beneath my fleshly encasement where senses, emotions, thoughts and imaginings intermingled, where the mundane and habitual dissipated. At one point near the end of the performance, I became fixated on the dancers who stood side by side, their limbs extended, connected by the tenderness of touch. In witnessing this, I became flooded with compassion as though, I, too, was physically embraced. I absorbed the warmth of their physical contact from afar and spatial boundaries dissipated. From this intimate orientation, the performers and audience members were not separate, not strangers, but my relations.

I perceived that I was an extension of their extension and at that moment, I experienced a deep connectedness rooted in and radiating from my bones. In *Embers: One Ojibway's Meditations,* Wagamese foregrounds the phrase, "all of my relations" in honouring the relationality and interdependence of all creation (Wagamese, 2016, p. 36). Wagamese speaks of all relations as "every person, just as it means every rock, mineral, blade of grass, and creature" and that the awareness and enactment of our relationality is "hugely important…[pointing] to the truth that we are all related, that we are all connected, that we all belong to each other…not just those who look like me, sing like me, dance like me, speak like me, pray like me or behave like me. ALL my relations" (Wagamese, 2016, p. 36). And within this paradigm, espoused in

Indigenous ontologies, conceived in the circularity of life stages, processes, seasons, ceremonies and concentric rings of cosmological embeddedness, there was no existence outside of the circle for "everyone is a part of it" (Ross, 2014, p. 57). At the end of the show, I felt as though I had been gifted. The performance had moved me to experience new insights and ponderings. I exited the theatre, making my way to Waterfront Station by foot to catch the sea bus. I walked, blanketed in warmth, in the lingering satiation of the performance.

Interrelationality: To Attend or Exit?

When I arrived at the station, something was awry. I had travelled this route many times. On this night, there was an exaggerated bustle outside, while inside, the building was unusually vacant. Uncertain about the eeriness, I proceeded to the station gates, beeping through with my Compass Card. This was when I noticed that the Sky-Train entrance was completely obstructed. A transit attendant stood in front. He quickly discerned my concern and informed me that the area was closed. Without having time to process the information, a man was walking in my direction. Our eyes met for a brief moment and with a slight shrug of his shoulders, he uttered, "…uh, another suicide" and proceeded on his way. My face burned as though I had just been slapped. The juxtaposition of experience from warmth to shock was utterly destabilizing. With each step, I tensed my thighs for my legs felt weak and my heels spoke louder than usual, drawing attention to the emptiness of the long corridor. Focussing on the loud reverberations of shoes to avert the noise emerging in my mind, I realized that these distractions were futile.

Again, Wagamese's words rang from my inner ear, "all of my relations" (Wagamese, 2016, p. 36). Suddenly, I felt the weight of grief knotted in the pit of my gut making it difficult for me to breathe- grief for the agony that this human being, my relation, must have endured before taking their life; grief for family, friends and students who had left this world after having experienced hopelessness, despair; grief for the way the man had said, with seeming nonchalance, "another suicide". For me, this gesture symbolized a severed connection from our relations. If we were interconnected, why were our relations taking their lives? How had we become so disconnected? Or perhaps the disconnection arose from feeling too much. Similar to the beautiful energetic exchange I experienced at the dance performance, it was possible that this situation mirrored empathetic responses, but conversely, in its tragic form. If this was the case, the potency of emotion would have been overwhelming, prompting some people to numb themselves, to avert their eyes. Did the enactment of relationality imply leaning into the boundlessness of emotionality? This experience was humbling and I wondered about its implications as a mother and educator. When engaging with my students, there was no way of truly knowing what emotions and experiences students were bringing into the classroom as relational beings.

The sea bus doors opened and I sat in the closest available seat. People poured into the vessel, all of them having walked past the sky train closure. The illuminated "Exit this Side" sign above the door called my attention. I believed the sign would serve me well as a fixture in bearing the twelve-minute ride. While gazing at the glowing letters, questions spilled into my

mind, questions that I realized would probably never be answered. This knowing exacerbated inner tumult. I glanced at my surroundings, observing the majority of people staring at screens, seemingly unaffected. I wondered if they were utilizing their phones in the same way I employed the signage, as a means of coping with discomfort. Or had they checked out? Again, I looked at the sign, my attention drawn to the word 'exit' and then to the juxtaposing echo of "all my relations" (Wagamese, 2016, p. 36). Not a single set of eyes met mine for they were occupied, soaked in the glowing aura of iPhone interfaces. A slight nausea set in and I felt utterly disconnected from the people around me. Instead, I befriended the ocean view. Questions swelled and dissolved in my mind: When do we choose to exit ourselves, to exit one another and when do we choose to attend to internal oscillations? Had we become accustomed to avoidance in the face of tragedy?

Questions of the mind continued to mimic movements of moonlit undulations. I sensed an alignment with the waves, trusting the transience of turbulence, that calm waters would inevitably follow like the changing of seasons. Water's image outside the door mirrored another in my mind's eye, reflecting the Indigenous wisdom of Hogan's stunning descriptions of the interconnectedness of human beings and the natural world in highlighting how "we are water people…our salt bodies, like the great round of ocean, are pulled and held by the moon" (Hogan, 1995, p. 108). This embeddedness, which signifies the interrelationality of humans and nature, according to Hogan, is informed by nature's wisdom in that "terrestrial intelligence lies beyond our human knowing and grasping" (Hogan, 1995, p. 11). And here, pausing with Hogan's penetrating imagery, I became aware of the emerging plasticity of my body molding into plastic seating as though I was nested in the ineffable cosmos. Breath inhabited my core with greater expansion and flow. Held by water's rhythmic teachings, my attention oscillated back to the people around me in this vessel. Indeed, we shared an experience of being transported through life's ocean together, from point of origin to final destination, reflecting a commonality of purpose transgressing diverse historical, social and political positionalities. How could such a kaleidoscope of experience be held within one vessel?

Relationality: A Luxury or Necessity?

From the window of the sea bus, the moon's glow led me to a familiar structure standing robustly in the not so distant backdrop. I examined the Lions Gate Bridge, my eyes starting at the pointed peaks, following the cables' descent to the roadway, and then from restless vehicle to the bridge base where the dark waters were accented by the bridge's lights. My eyes darted back and forth from roadway to base, base to roadway. Is the knowing of interconnectedness sufficient in our time or is there an ethical imperative to enact it? Is it a luxury to care for oneself and one another or is this a necessity? Wagamese speaks of living from the truth of relationality in that "we live because everything else does. [And] if we were to choose collectively to live that teaching, the energy of our change of consciousness would heal each of us- and heal the planet" (Wagamese, 2016, p. 36). Accentuating this truth, Wagamese states that this is "our saving grace

in the end", but, I queried, how do we to collectively "live that teaching" (Wagamese, 2016, p. 36)?

As I sat in the sea bus, I noticed the distance from the bridge's roadway to base. This gap was emblematic of the growing disconnection between us and the sorrowful evidence of this could not be averted. Since 1991, over 100 of 'my relations' had jumped off the Lions Gate Bridge with 28 deaths occurring within the last 5 years. Of these relations, the highest percentage of victims were between the ages of 20 and 29 (Seyd, 2013). Numbers mentioned in summation, I felt, were reductive, ceasing to capture the essence of loved ones who were with us. The North Shore News, in referencing a report by the *Child Death Review Unit of B.C.,* reminds us that "'[these] children and youth were sons and daughters, sisters and brothers, nieces and nephews, grandchildren and cousins…they were the kid down the street and captain of the hockey team'" (Seyd, 2013). Based on this report, one of the responses in deterring suicide was the installation of phones on both North Shore bridges starting in 2009 (Seyd, 2013). But I wondered, were higher railings and bridge phones the answer to these tragedies?

The air suddenly tasted stale and I wanted to leave the sea bus and drink in the freshness outside the vessel doors. I peered beyond the doors that insulated us, keeping us safe. How may we cultivate interconnection if "…it's our saving grace in the end" (Wagamese, 2016, p. 36)? Though we carried propensities for connection in our genomes, mimicked in our own mirror neurons for empathy (Schonert-Reichl, 2015), our internal wiring did not preclude intentionality and agency. Connectedness was certainly not a given, but rather, seemed to be an ethical enactment, a conscious way of living founded on principles of mutual respect and an awareness of our interdependence. A bump awoke me from my inner meanderings. Our vessel had docked at the Lonsdale Quay, the doors lined with my people. We had arrived at our final destination, but I felt far from it, distant from 'home'. Upon exiting the "Exit this Side" doors, I could not exit this inquiry.

I walked up the Lonsdale Quay ramp and was enveloped in a collective swarm of pedestrians who swiftly proceeded past me. I wondered where we were headed and why we were running. What was our final destination? Was it a place outside of ourselves? Or was our destination accessible in the now, in relational ways of seeing and being, nestled beautifully in the Anishinaabe principle of ""kiizhewaatiziwin" whose closest translation is "living a life of love, kindness, sharing and respect" (Kinew, 2016)? Kinew emphasizes that "every culture on earth could benefit from this way to approach challenges of our time", that from this hermeneutic of respect radiated possibilities for constructing bridges of connection across difference (Kinew, 2016). The Lonsdale Quay gates gave way and the image of the open gate served as a reminder for me to linger in the reverberations of the evening for they would endure and shape shift with the passage of time and quality of attention.

A Call to Action

Over the next months, I tended to the resonances of that evening. I visited sites related the experience of July 10th. These places included the Lonsdale Quay, the Lions Gate Bridge and

Waterfront Station. I wrote and danced from these places in attempting to make sense of what unravelled that night. In digesting this experience through artistic practices, the practices began to cross-pollinate. My writing took on rhythmic qualities while my limbs expressed the storied spectrum of joy through grief when I danced. Consequently, a soundscape of understanding emerged, and here, further wonderings and possibilities for interconnectedness surfaced in my field of awareness. Though I had not arrived at a destination of absolute answers, I sought to share my inquiry process with 'my relations' to explore resonant questions and alternative narratives in envisioning new pathways of being together. This is when I recalled the dance performance at the Firehall Arts Theatre and how it engendered a sense of perceptual penetration, paving the way for experiential connectedness. Greene elaborated on such active states of consciousness, of being moved from passivity to "wide-awakeness" nurtured by artistic engagement (Greene, 2008). The arts, in this way, provoked an openness and malleability conducive to relational ways of seeing, knowing and being.

Like the dance performance, I sought to represent my inquiry artistically in a way that was accessible for "all of my relations" (Wagamese, 2016, p. 36). Sepideh Yadegar, a Digital Arts media student and I created a five-minute breathing snapshot in an artistic film that includes spoken word poetry and embodied inquiry. In this film, theoretical and reflective threads are interwoven from the events of July 10th. Through this piece, I offer alternative responses to a ubiquitous question in society, "How are you?", in the hopes of nurturing interconnectedness. This film is my contribution in supporting connection with one's whole self, one another and nature for I believe that each of us has a role in its enactment. Like Dukdukdiya, the little hummingbird in Yahgulanaas' parable (2008) who would not abandon the forest fire, but rather, picked up a single bead of water at a time in addressing the forest fire, relational ways of seeing and being begin with a single bead of intentionality whose ripples carry infinite possibilities for honouring wholeness, both individually and collectively. Connection begins in our homes, our schools, our places of work. Let us find fulfillment in the goodness of being in relation for "it is time to articulate and practice an epistemology of love instead of one of separation" (Zajonc, 2009, p. 179).

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