

Teaching With Feminist Materialisms

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Edited by Peta Hinton and Pat Treusch

Teaching with Feminist Materialisms

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Edited by Peta Hinton and Pat Treusch

Teaching With Feminist Materialisms

Teaching with Gender. European Women's Studies in International and Interdisciplinary Classrooms.

A book series by ATGENDER

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© "Diffraction is a material practice for making a difference, for topologically reconfiguring connections." (Karen Barad, "Meeting the Universe Halfway", 2007, 381), by Tristan Dupuis

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Berlin, May 2015 Peta Hinton and Pat Treusch

INTRODUCTION: TEACHING WITH FEMINIST MATERIALISMS

Peta Hinton and Pat Treusch

The *Teaching with Feminist Materialisms* volume was borne of a workshop that took the title of "Learning and Teaching with European Feminist Materialisms," held at the AtGender Spring Conference "Learning and Teaching in Gender, Women's and Feminist Studies" in April of 2012. Initially conceived as a project through which to discuss teaching methodologies, as well as the challenges, concerns, and successes of teaching with feminist materialisms, organizing questions for this inquiry involved: how do we go beyond text-based learning and teaching in contemporary Gender Studies and related disciplines, and how is text-based learning and teaching always already exceeding the standard linguistic frame that we are used to applying to it? How are relations of knowing, being, and responsibility enacted in the classroom?

What might be unique to a feminist materialist approach is already highlighted in this set of questions: taking as our first point for discussion the attention given here to what it is that textual work consists in and of, both in its conventional, but also in a more complicated, sense. Since an excavation of the nature/culture binary is one of the foremost priorities for this field of feminist research, the nature of text and of text-based work becomes a less familiar creature in its hands. If we take a brief amble through feminist terrain that has contributed to this reworking of language - a body of work that plays a key role in what shapes contemporary feminist materialisms — the strangeness of this project to denaturalize language becomes a little clearer. The starting point we take for this intervention is the period of the 1980s and early 1990s, when the question and nature of *difference* began to take a more prominent role in feminist analyses. The work with sexual difference around this time, for example, marked an approach for revealing and negotiating inequalities conceived along the break-line of a binary logic that has characterized and sedimented Western traditions of thought. Thus, it was shown how mind/body, culture/nature, and masculine/feminine line up to naturalize the privilege of one term over the other, which, in all cases, has been the side of mind, culture, the masculine, and

their affiliates. Against these terms the difference of nature, body, and woman is found as lacking or inferior.¹

In the work of corporeal feminisms and those concerned with the sex/gender distinction, such structures came to be disassembled.² This was achieved by reconfiguring the binary apparatus itself, as well as the terms it contains. The materiality of the body was claimed as a political substance, a marker of differences through which power relations take effect. And the oppositional logic that sustains the hierarchies between bodies and their representations, nature and culture, and male and female, was meticulously scrutinized and shown to exceed its own, limited coordinates. Correspondingly, the nature of nature and culture could be opened up. Without being able to separate it from, or deprioritize it in relation to cultural practices, biology was found, instead, to be enmeshed in, and as, the political grammar of social change. Similarly, the individual's interior life cannot be leveraged out of its corporeal frame or the social materialities to which it might respond. Thus, for feminists such as Rosi Braidotti, the matter of the body can no longer be conceived as "the sum of its organs - a fixed biological essence - nor the result of social conditioning - a historical entity," but instead "as the point of intersection... between the biological and the social, that is to say between the socio-political field of the microphysics of power and the subjective dimension."³ In works such as Braidotti's, sexual difference emerges as a strategy through which bodies are shown to be constitutive both of the meanings derived through them, meanings that give them cultural value and political legitimacy, as well as the subjective life of the individual.

As this reworking of subjectivity might already announce, the strident inquiry into the political complexities of matter undertaken by these feminists was also motivated by an investigation into the nature of inquiry itself, and the subject who performs that inquiry. In this vein, questions of embodied difference

¹ See, for example, Kelsey Henry, Iveta Jusova, and Joy Westerman, "Nomadic Encounters: Turning Difference Toward Dialogue," in *The Subject of Rosi Braidotti: Politics and Concepts*, ed. Bolette Blaagaard and Iris van der Tuin (London: Bloomsbury 2014), 148–157.

² Contributors to this field are too numerous to list, however a brief explanation of their collective efforts would say that they are influenced by key considerations in the continental tradition, and specifically in continental feminism and its engagements with psychoanalysis. Judith Butler is the most prominent voice within Anglo-American feminism that works with these questions. Although very different in their approaches and overall arguments, Australian corporeal feminisms find substantial contributions from Elizabeth Grosz, Vicki Kirby, Rosalyn Diprose, and Moira Gatens, among others, and Rosi Braidotti remains an important contributor to this body of feminist debate.

³ Rosi Braidotti, "The Politics of Ontological Difference," in *Between Feminism and Psychoanalysis*, ed. Teresa Brennan (New York: Routledge, 1989), 97.

were brought to bear upon knowledge production, and with the political contingencies of material bodies underscored, emphasis was given to the embodied or located standpoint through which one comes to know the world. Thus, a key intervention arising from this feminist attention to difference was to show how thought, knowledges, and representations of the world are embedded in, and therefore constrained by as well as politically enabling, the different bodies constituting the social matrices through which power is unevenly distributed.

Amongst the topics and problematics that shape and captivate feminist materialist discussions today, questions of how we understand our relationship with what it is that we investigate, and therefore how we perceive our knowledge to be produced, maintain a central focus. Sustained scrutiny of the nature/culture binary has left little room for any simple separation of an empirical world from an inquiring subject. Indeed, as we will find with our brief entry into the work of Karen Barad below and in the various chapters that comprise this volume, the question of how objects and subjects of inquiry are entangled, emergent, and contingent, continues to be posed, and also complicated in this investigation as we find that these "actors" in knowledge processes cannot be conceived of in solely atomistic *or* anthropocentric terms. With new feminist materialism's posthumanist attentions, the human no longer assumes priority as the knowing eye/I organizing inquiry. On this basis, these recent feminist materialisms shift the lens to also consider *what* participates in knowledge-making practices (not only *who*),⁴ including, as we will see, the very "spacetime"⁵ contours of the learning

⁴ It is important that the qualitative difference implied between "what" and "who" is felt here for the purposes of making clear one of the interventions a posthumanist feminist materialism can make into pedagogical paradigms. Specifically, from a feminist materialist position, the "what" (object, thing, location) is granted legitimate agency in the teaching and learning space. Inclusion of these non-human others and processes thus reframes any need to position human subjects (the "who") *a priori* as the significant political and ethical players in the classroom space, or as the only participants for whom, and through whom, learning and teaching practices are enacted and take effect. Nevertheless — and the critical thrust of this clarification arrives here — a query emerges too about whether the notions of "who" or "what" could ever be settled matters. The automatic alignment of "who" with "subject" — immediately human — that infects this denomination is already considered spurious in view of the contingent and relational ontology advanced by the more challenging posthumanist approaches, Barad's among them. An example of this relational ontology is carried with the mention, in the following sentence, of identities *emerging through* pedagogical practice.

⁵ Here, we use a shortened shorthand for Barad's notion of "spacetimemattering," which, if we were to state it simply, is a way of explaining the notion of (material-discursive) agency that she expands upon across her work. Space, time, and matter do not exist determinately or separately. Neither space nor time pre-exist the entities that are thought to inhabit them. Space, time, and matter intra-act (see additional definition in this introduction) to be the very dynamism of the universe in its becoming (differencing). Further explanations for spacetimemattering are given in the essays that contribute to this volume.

space. More perplexing is the claim that the very identities of the "what" and the "who" emerge *through* these practices, they do not pre-exist them.

With these preliminary considerations in mind, if we turn now to directly address the stated aim of this volume, that is, how we might *teach with* feminist materialisms, we find that these past and recent moves within feminist materialist analyses trouble more than they provide any clear cut responses as to how we might understand feminist materialist pedagogies. In their proposals to move beyond the framework of a "humanist ontology"⁶ in feminist research and thinking, feminist materialisms unsettle the foundations through which such (humanist) ontologies are inscribed. In the process, they are becoming more and more of a leverage point for engaging with "the materiality of language itself – its material force and its entanglements in bodies and matter."⁷ The text, or language, in this sense, is not animated by (human) student- or (human) teacher-led reading practices alone. Rather, the process of formulating "what matters" in the text is a co-productive engagement of bodies, spaces, and wor[1]ds.⁸

This suggestion for language's material liveliness (and the relational dynamics integral to it) might yet feel a little alien to those who are not acquainted with these areas of feminist materialist inquiry, or to those who feel that, in any case, such claims work against the dictates of an overriding commonsense. The energy of this suggestion is nevertheless felt in the way it declines the commonsense of the commonsense by throwing its coordinates, as well as the coordinates of the identities it seeks to preserve, into originary disarray. This energy can also be felt when we pause to properly consider the implications that such a reconfigured understanding of text, and thus the human, calls for. In the first instance, it calls for a very different sense of how we undertake our theoretical, conceptual, and ethical engagements in the feminist materialist classroom. It also calls for a critical re-evaluation of those notions of reflexivity and ethical re-presentation in feminist research practice. With the complex co-production of who and what interprets underscored, we have no certainty as to what constitutes an original identity, or to whom a standpoint or experience might properly belong. Nor can

⁶ Patti Lather and Elizabeth A. St. Pierre, "Post-Qualitative Research," *International Journal of Qualitative Studies in Education* 26:6 (2013): 630.

⁷ Maggie MacLure, "Researching without Representation? Language and Materiality in Post-Qualitative Methodology," *International Journal of Qualitative Studies in Education* 26.6 (2013): 658.

⁸ Ibid., 658.

representations of these experiences be managed in any comprehensive sense. How, where, and through what they are generated cannot be wholly accounted for, and neither can their power structures be isolated for the sake of addressing where privilege lies in the knowledge gathering and delivery process.

Indeed, if one of the key challenges that arises from a feminist materialist approach is that "the object of study, the human, can no longer be taken for granted," as Cecilia Åsberg, Redi Koobak, and Erika Johnson suggest,9 then this volume prompts us to explore how an opening of human identity carries over into the feminist classroom. Taking a feminist materialist perspective, as we have so far outlined it, encourages us to both reformulate our understandings of the types of actors and forms of agency participating in the learning environment, and to bring this thinking to bear on some of the methodological, and perhaps ethical, implications that are both raised by and attend to a feminist materialist pedagogy. The third question we have posed in our opening paragraph carries something of the essence of this project. And with the matter of who and what performs pedagogically seriously considered, the urgency and also oddity of this question are pronounced in its repetition: how are relations of knowing, being, and responsibility enacted in the classroom? If we find our emphasis on that word, "enacted," the sensation that arises is one that can only accompany the idea that there is no self-enclosed human subject. That is, these terms feel all out of proportion, unspecified, and uncertain in their productions and dimensions. Without a privileged interpreter existing (again) a priori in the learning space, queries such as how privilege emerges, and how we might grapple with responsibility beyond its usual demarcations of being possessed and performed by a (teaching/learning) subject, start to press upon us as concerns that are very relevant to a feminist pedagogy.

Before we continue to unfold some of the details of the different navigational points that we have so far used to mark out the terrain of (new) feminist materialisms, we want to consider briefly how this volume might be situated among its peers, specifically those texts that trace a dialogue between the central foci of feminist materialisms and pedagogy research. This exercise helps to foreground the poststructuralist concerns that have, and do, inform feminist materialist agendas, with a specific eye on the way these perspectives work within

⁹ Cecilia Åsberg, Redi Koobak, and Ericka Johnson, "Post-Humanities is a Feminist Issue," NORA — Nordic Journal of Feminist and Gender Research 19.4 (2011): 214.

education research. The task of this introduction can thus also be conceived of as a mapping exercise in which we map the feminist materialist pedagogies that we encounter here in terms of their genealogies to understand how (new) feminist materialisms relate to and through these trajectories. Doing so will also help us to situate the different positions that congregate in this volume in response to the question of what might be involved in teaching with feminist materialisms.

As our earlier introductions should by now have revealed, the emerging feminist materialisms that command our attention in this volume are significantly informed by a poststructuralist heritage.¹⁰ Its shared objectives to reveal and open binary structures and to reconfigure their terms via a differently conceived form of relation are clear indications of this affinity. Indeed, and at times with a potentially too simplistic reading (by feminist materialism's commentators) of the way language is conceived in its historical contributions, the feminist materialisms of today are said to be "a commentary on the linguistic turn,"¹¹ with their efforts to adjudicate and reformulate the status of "the textual, linguistic, and discursive"¹² within poststructuralist feminist research and thinking.¹³ Having flagged this above in somewhat of a preliminary fashion, when we turn to the work of those situated within or engaging with feminist materialist perspectives for research and educational undertakings, an affiliation with these poststructuralist interests is clarified.

In moving to discuss two examples from this literature, what should first be remarked is that the province of the discussion with the pedagogical dimensions of feminist materialisms is not unique to this volume. In recent years (new) feminist materialist perspectives have been brought to bear upon educational practices and education research, with interest in this inquiry continuing to

¹⁰ In a question they pose to Rosi Braidotti in the interview included in their text *New Materialisms: Interviews and Cartographies* (Open University Press, 2012), 20, Rick Dolphijn and Iris van der Tuin quote her from her 1994 text *Nomadic Subjects.*, "what emerges in poststructuralist feminist reaffirmations of difference is... a new materialist theory of the text and of textual practice.". In a very early drawing together of the posthumanist preoccupations of a new materialism and a feminism informed by poststructuralism, Braidotti makes patently clear the relationship and the genealogy we are attempting to establish here for a feminist materialism, past and present.

¹¹ Iris van der Tuin, "Review Essay 'New Feminist Materialisms," Women's Studies International Forum 34 (2011): 271.

¹² Stacey Alaimo and Susan Hekman, "Introduction: Emerging Models of Materiality in Feminist Theory" in Material Feminisms, ed. the same, *Material Feminisms* (Bloomington: Indiana University Press, 2008), 3.

¹³ Ibid.; see also Diana Coole and Samantha Frost, who argue against a "simple conflation, not least because [new feminist materialisms] reflect on various levels of materialization" (Diana Coole and Samantha Frost, "Introducing the New Materialisms" in *New Materialisms: Ontology, Agency and Politics,* ed. the same (Durham: Duke University Press 2010), 4).

build. The 2013 special issue of *Gender and Education*, "Material Feminisms: New Directions in Education," emerged as the first collection on this subject, but individual voices across the fields of education, social, and cultural research, have turned their attention to what (new) feminist materialisms contribute to a teaching and research praxis.

Elizabeth Adams St. Pierre is a prominent voice in this discussion. Engaging with the texts of Derrida and Butler, amongst many others, she takes issue foremost with the humanism she identifies in feminist education and qualitative research. For Adams St. Pierre, humanism works against the interests of inquiry and its motivations for emancipation and action,¹⁴ and hinders the ethical potential of the research process.¹⁵ On the one hand, humanist interpretations straitjacket the concepts that are fundamental to our research and teaching - knowledge and the subject being two examples¹⁶ — while on the other hand, we find inquiry committed to epistemologies that "rely on humanism's representational logic."17 In Adams St. Pierre's view, new materialism marks a departure from these rigid designations, instead working with ontology in terms that, she believes, can successfully avoid the pitfalls of humanism because this new materialist ontology "rethinks the nature of being itself."18 Here, Adams St. Pierre is most determined to emphasize the ethical charge that inheres in the deconstruction of the object/subject binary that this ontology proposes. "If we see ourselves as always already entangled with, not separate from or superior to matter," she says, "our responsibility to being becomes urgent and constant."¹⁹ Indeed, Adams St. Pierre finds a continuity of Derridean thought in contemporary new materialist ontologies on account of this reworking of subject/object positions. The ethical impetus that she discovers in new materialist ontology is attributed to Derrida in the same, directed terms. Citing the philosopher, she states, "deconstruction is justice,"20 effectively naming it a new materialist ontology.

¹⁴ Elizabeth Adams St. Pierre, "Poststructural Feminism in Education: An Overview," International Journal of Qualitative Studies in Education 13.5 (2000): 484.

¹⁵ Elizabeth Adams St. Pierre, "The Posts Continue: Becoming," International Journal of Qualitative Studies in Education 26.6 (2013): 646–657.

¹⁶ Adams St. Pierre, "Poststructural Feminism in Education," 477–515.

¹⁷ Ibid., 655.

¹⁸ Ibid., 654.

¹⁹ Ibid., 655.

²⁰ Ibid.

Raising issues of interpretation and knowledge generation, Lisa A. Mazzei, in a recent contribution to Qualitative Inquiry, demonstrates, almost in the manner of conducting and recording an experiment, how this diffractive reading process can be undertaken, as well as how it assists in processes of (data) analysis, with surprising effect. Borrowing the approach from Barad, a diffractive reading is represented as "a methodological practice of 'reading insights through one another,"²¹ a transversal process that is based on the physical phenomenon of diffraction patterns. The most accessible example we have of these patterns is one Barad provides in her text Meeting the Universe Halfway. There, she likens diffraction patterns to the patterns you see when you drop two stones into a pond and watch as the ripples that are created start to overlap and to cancel each other out.²² In her account of this analysis, Mazzei describes it as "thinking with theory,"23 that is, in reading the data with theory, texts come to "constitute one another and, in doing so, create something new."24 With diffractive reading, for Mazzei, the sense of who or what is doing the interpreting starts to shift as well. Describing it as "entering the assemblage," she explains how this practice produces a "multiplicity, ambiguity, and incoherent subjectivity."25 With the agents of interpretation unable to be located, the analysis translates through what Mazzei can only describe as a series of "co-authored texts" of "ideas, fragments, theory, selves, sensations, and so on."26

Thus, "as data and theory make themselves intelligible to one another," a diffractive analysis breaks open the data as well as "the categories inherent in coding," and generates an "unpredictable series of readings," for which Mazzei cannot locate a specific (or specifically human) author.²⁷ Emphasizing, therefore, the qualitatively different elements of the knowledge making process that this diffracting practice conjures, Mazzei locates its capacity to generate new, perhaps better understood as unanticipated, knowledges, and underscores her sense of a co-productive en-

²¹ Karen Barad, 2007, 25, cited in Lisa A. Mazzei, "Beyond an Easy Sense: A Diffractive Analysis," *Qualitative* Inquiry 20.6 (2014): 742.

²² Karen Barad, Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning (Durham: Duke University Press, 2007), 28.

²³ Mazzei, "Beyond an Easy Sense," 742.

²⁴ Ibid., 743.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

gagement of texts, bodies, and spaces involved in interpretative work. For Mazzei, the different knowledges that emerge through a diffractive reading may also potentially shift the paradigm of qualitative analysis away from what she describes as "habitual normative readings" towards the "production of readings that disperse and disrupt,"²⁸ ceaselessly surprising. Finally, we can see how this relational interpretation foregrounds what it is that a new feminist materialist ontology demands: it "prompts us to consider how discourses and texts materialize and, at the same time, produce subjectivities and performative enactments."²⁹

In both Adams St. Pierre's and Mazzei's studies, the push toward models of difference that complicate conventional logics are drawn most explicitly from a poststructuralist trajectory. Adams St. Pierre works extensively with a deconstructive strategy that she locates in her reading of Derrida's texts, while diffraction, in its play of presence and absence, endlessly traversed and ("self"-)traversing, can also be said to resemble the work of *différance* in Mazzei's account. Both scholars also vitalize questions of language, interpretation, and concept, even as they are understood for their provocative and complicated ontologies.³⁰

This tendency to work difference in other than negating or oppositional terms is found again in Iris van der Tuin's discussion with feminist generations, this time with a deliberate address to dialecticism. Taking Raia Prokhovnik's description of a "third wave feminism," based in "relational, non-dichotomous thinking and social practices,"³¹ van der Tuin proposes third-wave feminist epistemology as "a non-dialectical alternative" to second-wave claims.³² Rather than setting itself against second-wave approaches — a move that she considers to adhere to the same dialecticism that its forebears' employ — a third-wave feminist

²⁸ Ibid.

²⁹ Ibid., 745.

³⁰ Both Vicki Kirby and Karen Barad work with a Derridean grammar in their respective feminist materialist contributions. In particular, see Vicki Kirby, "Original Science: Nature Deconstructing Itself," *Derrida Today* 3.2 (2010): 201–220; and Karen Barad, "Quantum Entanglements and Hauntological Relations of Inheritance: Dis/ continuities, SpaceTime Enfoldings, and Justice-to-Come," *Derrida Today* 3.2 (2010): 240–268. Mazzei's work is primarily influenced by Deleuze, in particular the notion/nature of desire he expounds. Therefore, her encounter with diffraction in this essay makes for an interesting confluence of Deleuzian perspective and reading practice motored by deconstruction's insights. Although it has not been covered in real detail in this introduction, the Deleuzian influence within new feminist materialisms is broadly felt and the affirmative and monist directions in his philosophy contribute significantly to the political and ethical orientations of this field, Rosi Braidotti's and Iris van der Tuin's work a case in point.

³¹ 2002, xi, cited in Iris van der Tuin, "Jumping Generations," Australian Feminist Studies 24.59 (2009): 18.

³² Ibid., 18.

epistemology (in the vein of sexual difference theory) is seen to break through the dichotomizing logic of sequential and classificatory negation-opposition that characterizes dialecticism, in the process revealing this logic and the generational conflict that it establishes to be "unreal."³³ Stressing the continuity between the two, van der Tuin argues that the potential for a third-wave feminist epistemology, "can be said to be fully realized in the work of new feminist materialists."³⁴

The merge of continental sexual difference feminisms, poststructuralism, and posthumanism has so far taken up much of the space of what constitutes as the important debates and interventions of current day feminist materialisms, both in this introduction and in circulation. However, the concerns that shape this inquiry do not exhaust the range of feminist materialist engagements, or the theoretical, thematic, and sociological material from which its analyses draw. In spite of the critique of dialecticism we have just seen in van der Tuin's argument (and note: this is a critique that is far from a wholesale rejection of dialectics), approaches that maintain the relevance of dialectical relations for their materialist analyses are picking up voice in these settings. Diana Coole is one such voice. Calling for a "renewed critical theory,"³⁵ she brings a new materialist understanding of agency together with a dialectical perspective to show how the reconfiguration of the dialectic that this meeting affords offers up a more inclusive analysis of social and global change. In short, the dialectic is found to be "a de-totalised totality in which the emphasis falls on dense mediations that never, however, achieve closure" or "guaranteed progress."36 From this perspective, the failures and congestions of the systems we inhabit can be appreciated differently, and we are invited "to think realistically about ways materially to transform them."37

With Coole, and as we will also find with some of the contributions to this volume, the dialectical momentum in or of a (new) feminist materialism remains a part of its critical and political apparatus. Thus, we could say that the corpus of work that continues to emerge under the umbrella of new feminist materialism is characterized by a conceptual elasticity that allows developing and working

³³ Ibid., 19.

³⁴ Ibid., 22.

³⁵ Diana Coole, "Agentic Capacities and Capacious Historical Materialism: Thinking with New Materialisms in the Political Sciences," *Millenium — Journal of International Studies* 41.3 (2013): 452.

³⁶ Ibid., 456.

³⁷ Ibid., 463.

with distinctive (historical) materialisms. Indeed, the pressure to attend to a particular stratum of political concerns that some consider to be under-remarked by its current constituents may force the hand of critical theory and historical materialisms within this field. If we can perform a loose connect-the-dots on this example (and here we recall van der Tuin's discussion with third wave feminist epistemologies above), Angela McRobbie's remonstrations against third-wave approaches exemplify the demand for certain political attentions to be rekindled in (new) feminist materialist analyses:³⁸

It is not just a question of this third-wave approach being inimical to recent directions in feminist theory; it is quite incapable of dealing with wider social issues such as war, with militarism, with 'resurgent patriarchy', with questions of cultural difference, with race and ethnicity, and notably with the instrumentalisation of feminism on the global political stage.

Although not specifically driven by a historical materialist perspective, McRobbie's comment elicits something of the tensions that can arrive with the differing theoretical and political commitments that congregate and mingle under the banner of (new) feminist materialism. Rather than attempting to solve them, these differences could make for a lively discussion in classrooms that take the content of feminist materialisms as a focus.

When we contemplate further the place of historical materialism in and for the political and pedagogical concerns of feminist materialism, we find a strong candidate for this discussion in the contributions to this volume by Maya Nitis and Hanna Meißner, who both engage with Paolo Freire's Marxist-inspired critical pedagogy. As a prominent and influential figure in pedagogy research, it is not surprising that Freire's ideas emerge in this collection. Moreover, they make for an interesting collaboration with feminist efforts to approach the classroom as a political, and politically motivated, space. What our authors draw attention to is Freire's acknowledgment of the dialectical movements of power at work in the classroom, as these also inspire his recommendations for change. As Nitis explains for us, it is Freire's contention that an uneven student/teacher relation translates a knowledge differential in which teachers "have" knowledge and students do not. To address the forms of mastery that this classroom hierarchy encourages,

³⁸ Angela McRobbie, "Inside and Outside the Feminist Academy," *Australian Feminist Studies* 24.59 (2009): 127.

Freire proposes dialogue as a mode of engagement in learning — a method that may also work to dismantle the distinction between student and teacher, shifting participation by all in the classroom to one that is of both learner and teacher, so fulfilling Freire's call for education as a practice of freedom.

Thus, another variation on dialectical thinking arrives with this uptake of Freire's ideas, as here we see the *transformative* potential of the dialectic at work, and working at least synergistically with the feminist materialist discussions it encounters. This indicates, again, that dialectical interpretations of classroom relationships and their operations of power are not necessarily incommensurable with (new) feminist materialist ontologies, and they continue to come into view as we unearth and contemplate political and relational dynamics and concerns in the feminist classroom, as we approach it in the context of feminist materialist inquiry. Indeed, there is an interesting resonance in Freire's proposal for a teaching-learning "subject" with those suggestions we encountered earlier in this introduction for the way subject/object positions are disrupted in processes of inquiry and interpretation, leaving the question of what and who inquires and interprets largely unresolved, or unresolvable. In both cases, we get closer to an understanding of how practices, spaces, identities, and knowledges relate to co-produce those very teaching and learning subjects. For both Freire and for the feminist materialist analyses we have so far engaged, these positions are contingent and emergent, as they also spell out possibilities for change.

There is, however, an interesting point of difference in approaches here, and it is one that Nitis reminds us of as she recruits Freire's argument in the process of investigating the ways in which new feminist materialisms can be engaged in and for a teaching-learning praxis. Specifically, it is indeed a *non*-dialectical orientation in feminist materialist theorizations that motivates similar claims for the contingent and co-productive workings of the classroom. This difference is perhaps best captured in a term that Barad has introduced to the critical vocabulary of feminism — "intra-action" — and a brief definition makes this clear. Whereas Freire's interpretation of the dialectical engagements in the classroom might emphasize how teachers and students *inter*-act in their co-production, and therefore how they might co-produce the political dynamics of the classroom and hence the positions they take with respect to knowledge, intra-action suggests that there is no primary separation of teacher or student, or space or knowledge. They remain, at all times, entangled, at their very origin, already co-constituted

and co-constitutive.³⁹ Intra-action therefore also demonstrates that what comes to constitute teacher or student can never, strictly speaking, be *only* human. At its core, Barad offers a posthumanist, performative account of pedagogic formation and transformation, in which every "element" of the classroom is entangled in the production of the spaceknowledgepower, or spaceknowledgemattering; this is learning and teaching.

As our recount of Mazzei's diffractive reading of data should also help to demonstrate, Barad emerges as a dominant voice in feminist materialist debates, a status that is also represented in the chapters that form this volume. Her insights on the nature of space, time, agency, and causality radically question an atomistic understanding of either a subject or object of pedagogy. The opportunities for this reading lie with her reading of Niel's Bohr's understanding of complementarity, the crucial point being its demonstration of the indeterminate and contingent nature of matter. Through quantum physics, Barad is able to unfold a counterintuitive understanding of the relationship of matter and meaning, and to generate a theory that asks us to understand that ontology and the very nature of individual identity are fundamentally compromised. In particular, her quantum configurations of the (measurement) apparatus rework the relation between matter and meaning in a way that supposes that all practices of inquiry must be understood foremost as "onto-epistemology," that is, practices of knowing and being are "mutually constituted."40 In their intra-active entanglement, matter and meaning can never be *a priori*, or originally, separated.

As Malou Juelskjaer discusses, this move within Barad's work has been central to rethinking the nature of concepts and conceptual work. Knowledge production emerges as practice in the deepest, performative sense. As Iris van der Tuin's and Rick Dolphijn's chapter in this volume demonstrates, with no clear separation between text and matter, the very concepts that we investigate become in themselves tools and modes of investigation and transformation in and of the classroom. What we want to underscore here are the methodological implications of what Barad's notion of onto-epistemology insists upon regarding the nature of matter and thought, or matter and text. Namely, what we find is that the very nature of intellectual inquiry *is* the work of ontology in its complex mappings,

³⁹ The different essays in this volume contain more detail as to this and other terms introduced by Barad, with references to her texts included.

⁴⁰ Malou Juelskjaer, "Gendered Subjectivities of Spacetimematter," *Gender and Education* 25.6 (2013): 756.

splittings, and traversals. What we would proffer from this is that feminist materialisms demonstrate how all conceptual work is, at its core or by very definition, methodological. That is, theory *is* practice and it is (a) practice that matters.

At its heart, then, and as Hillevi Lenz Taguchi points out, teaching with feminist materialisms also constitutes as a move "beyond the theory/practice divide,"41 and furthermore, it is *this* move that opens up possibilities for new learning environments. Putting aside our hesitations about her use of the word "beyond" here, we find Lenz Taguchi's suggestion to be an important one as we discover that, even as feminist materialisms address a theory/practice divide, at times this very divide seems to emerge as a prognosis of this field of feminist scholarship, and therefore its pedagogical contexts. One of the challenges facing those who work with feminist materialisms can be drawn along quite conventional lines: what is the purchase of this theory for our practices and research? How can we reconcile the feminist work of the "material turn" with the charge that its logic remains at times inaccessible to the unassimilated audience and feminist practitioners? Sigrid Schmitz grapples with cognate questions in her contribution to this volume, pointing out that often the class that approaches feminist materialist texts is comprised of many students who are simply unsure of what to do with the theory they engage. However, in this volume we also demonstrate, as the work of feminist materialist pedagogy, expectations how such concerns can be addressed. Many of the contributors to this volume provide case studies and examples that foreground the complex relations of theory and practice that we are at pains to lay out here, in effect proposing ways of doing and practicing feminist materialist pedagogy. With these case studies in view, Kathrin Thiele's essay provides a complementary and incisive response to the problematics of the theory/practice divide, even as its terms reappear in their more limited sense to stymie the value and labor of theoretical engagement and theory production in the classroom.

While we can claim that it is the work of the current collection to perform the ways with which a theory/practice divide can be engaged, there is another suggestion in Lenz Taguchi's comment that we want to emphasize here, and that is the double movement implied in the practice of teaching with feminist materialisms. Specifically, working into and opening out the theory/practice divide as

⁴¹ Hillevi Lenz Taguchi, Going Beyond the Theory/Practice Divide in Early Childhood Education: Introducing an Intra-Active Pedagogy (London and New York: Routledge, 2010), 3.

part of the conceptual work undertaken in the classroom *also* constitutes as the work of the classroom *itself* — theoretical inquiry *is* the pedagogical practice that enacts the dismantling, or better, points to the inherent instability, of a theory/ practice split. Lenz Taguchi's next comment makes quite a lot of sense, then, when this double work of theoretical engagement is considered, namely, that "our practices need to be theorized in new ways, as new theory helps us to challenge our practices into different ways of teaching and learning."⁴²

Throwing in the new is obviously a complicating gesture, and one that has not been without debate. A relevant intervention into its operations can be found in Sara Ahmed's essay, "Some Preliminary Remarks on the Founding Gestures of the 'New Materialism," published in the *European Journal of Women's Studies* in 2008.⁴³ Here, Ahmed criticizes a reference to the "new" as one that marks an attempt by new materialists to break from earlier feminist work by way of claiming that its political investigations do not adequately take up the question of biology, thus leaving under-examined the role of matter in shaping and transforming socio-political realities. For Ahmed, this break constitutes the founding gesture of new materialism, innervating its claims for the agentic inventiveness of materiality that parades as the salient intervention of this field.

Ahmed's missives aside, with the intention to discuss possibilities for a new experience of the feminist classroom in a way that leans on its re-workings of the theory/practice divide as we have outlined it here, we propose to draw on this term — "new" — in line with Taylor and Ivinson's suggestion that "claims about newness have to be put in context."⁴⁴ Along these lines, we regard feminist materialism's explicit attention to "the problem of an ontological divide between theory and practice, between academic knowledge and our sensing bodies, matter, rooms, and material environments – spaces and places"⁴⁵ as a specific and important concern that marks this growing field of research and teaching in Europe, but one that is not without its genealogies, as we have detailed in our attempts to put feminist materialisms into context.

⁴² Ibid.

⁴³ Sara Ahmed, "Some Preliminary Remarks on the Founding Gestures of the 'New Materialism," *European Journal of Women's Studies* 15.1 (2008): 23–39.

⁴⁴ Carol A. Taylor and Gabrielle Ivinson, "Editorial: Material Feminisms: New Directions for Education," *Gender and Education* 25.6 (2013): 665.

⁴⁵ Lenz Taguchi, *Going Beyond the Theory/Practice Divide in Early Childhood Education*, 3.

In making the broad claim to position the "new" practices and possible learning environments engendered by a feminist materialist approach, we also have to agree to the possibility of our participation in the production of sustainable subject positions that emerge *for* this analysis. In doing so, we are led to acknowledge the continuity of this aim with the abiding tradition of a feminist politics of location — a tradition that highlights the relationships between bodies, knowledges, and other materialities. This practice, as we have also tried to demonstrate with this introduction, entails taking into account the ways in which theories and their applications are intrinsically interwoven, which means that they are also to be understood as the emerging work of feminist materialist pedagogy.

As it reads here, the process of accountability within inquiry is seemingly inexhaustible — it requires traversals and re-turns through the spaces-practices-knowledges that teaching and learning constitute, and through which they (re)emerge. Labor intensive as it may seem, a crucial point arrives from this description, and it relates us back to Lenz Taguchi's suggestion that our practices need to be theorized in new ways. What we want to emphasize with this idea of (re)emergence is that, in all of our theorizations, what (re)emerges cannot be a simple reproduction of existing knowledges, of existing subject positions, and so forth — the "habitual normative readings"⁴⁶ that Mazzei speaks of. What arrives through these practices of theory reading and theory building in the feminist classroom is something (always, and conditionally) new, and always capable of transforming the feminist classroom.

Thus, the theory/practice divide *should* continue to be scrutinized in the feminist classroom. Correspondingly, the ways in which this divide is discomposed in the very process of teaching with feminist materialisms is underscored here, as it is oriented towards that broader task of finding "a language that encompasses more of these complexities [of an increasingly complex world], and which can enable us to make use of them and thereby go beyond the prevailing binary divides that still haunt educational practices and topics."⁴⁷ One of these ghosts also represents one of the main challenges for recent feminist materialisms — how to research and teach across the divide of the natural and human sciences. In approaching this challenge as a task for the feminist classroom, we are also asked to

⁴⁶ Mazzei, "Beyond an Easy Sense," 742.

⁴⁷ Lenz Taguchi, *Going Beyond the Theory/Practice Divide in Early Childhood Education*, 3.

think, once again, about how feminist materialisms are put to work to continually contest and open up the logics through which such a divide is activated.

In summary, feminist materialist approaches turn our attention to the entanglements of teaching, and of teaching with feminist materialisms. That is to say, they attend to the ongoing generation of complex relations between matter and meaning, epistemology and ontology, along with the human and non-human. They complicate our understanding of the seemingly clear positions of teachers and students, along with what constitute as the objects and spaces of the feminist (and queer) classroom. And they draw our attention to how different positionalities are produced, or the ways in which pedagogical actors come to be situated and valued.

What they also foreground, and it is an aspect of feminist materialist approaches that Taylor and Ivinson regard as also significant to the appellation "new" that this field of inquiry often carries, is its anti-anthropocentric stance that reworks how "we" (humans, pedagogs) imagine our place within the world. Along these lines, feminist materialisms conceptualize the matter of *all* bodies, and not just human bodies, as having agency,⁴⁸ and thus "embrace all manner of bodies, objects and things within a confederacy of meaning making."49 This understanding of agency relates to what Taylor and Ivinson also regard as one of the key contributions of feminist materialisms to feminist pedagogies, namely, its capacity to contemplate the feminist classroom experience through *interdependencies*. As the editors put it, "new material feminisms offer ways of looking at how students and teachers are constituted by focusing on the materialities of bodies, things and spaces within education."⁵⁰ Not only does this approach account for thinking and theorizing as always embodied and corporeal, it also indicates how these processes are co-constituted by other materialities, the non-human or posthuman, even the global; and this serves to foreground the more than human material-semiotic agencies, to borrow from Haraway, that co-exist in the classroom setting.

⁴⁸ Ibid., 666.

⁴⁹ Ibid.; Stacy Alaimo's notion of "trans-corporeality" embodies the posthuman aspirations and sense of confederacy that Taylor and Ivinson point to here. With the prefix "trans," trans-corporeality "indicates movement across different sites"; opening up "a mobile 'space' that acknowledges the often unpredictable and unwanted actions of human bodies, non-human creatures, ecological systems, chemical agents, and other actors." Trans-corporeality thus foregrounds a material agency that cannot be aligned with the human alone, and its traversing activities implicate theory, discipline, and practice in a similarly elaborate cross-fertilization process. See Stacy Alaimo, "New Materialisms, Old Humanisms, or, Following the Submersible," *NORA — Nordic Journal of Feminist and Gender Research* 19.4 (2011): 280–284.

⁵⁰ Taylor and Ivinson, "Editorial: Material Feminisms," 665.

Correspondingly, though working at different intersections and on diverse foci, the authors of this volume share concerns about the ways in which theoretical engagements translate into teaching and learning practices in feminist classrooms as spaces of multiple, always more than human interdependencies. In these essays, an interest in interdependencies, or *the relational ontologies of pedagogical practice*, translate into an emphasis on group work and collective analysis as well as its continued importance in feminist praxis (see for example Schmitz, Revelles-Benavente, and Lorenz-Meyer), questions regarding the positionality of teacher and student within the classroom space (see Nitis), the production of situated experience (Lorenz-Meyer and Sauzet), the role of non-human objects and processes within and for teaching and pedagogical analysis (see Sauzet and Neimanis), the question of how we *perform* the classroom (see van der Tuin and Dolphijn) and, more broadly, an investigation of classroom spatiality as itself political, in the becoming of gendered identities (Revelles-Benavente).

As we suggest above, the call for putting claims of newness into context is also fundamental to this volume because, along with the ways it invites us to think feminist materialisms with teaching strategies, materialities, and positionalities, it also invites us to think along with thinking traditions, opening up a genealogical perspective that can also constitute a diffractive reading practice. A genealogical perspective is relevant as we regard feminist materialisms to be a continuation of, rather than a rupture with, scholarly work on feminist and queer issues, as these draw from the different traditions discussed in this introduction and represented across the essays that follow. These shared yet varied roots have led to complementing strands of new feminist materialisms across Europe, which help to produce varying engagements with materiality/ies. Thus, raising questions of a feminist genealogy motivates transversal conversations on feminist materialisms and, importantly, it helps to initiate an exchange on how this ever-growing field of research and pedagogy is received and worked within different (and therefore more than) European contexts. The exchange we encourage is one through which we can remain attentive to the relevance of each context for the theoretical and perspective-contingent inheritances that are brought to bear in that space, while we draw on a shared background, namely, the neo-liberalization of universities and research programs throughout Europe and the corresponding precarity of (queer and) feminist thinking evolving from these

economics.⁵¹ Meißner aptly explores the impact of this apparatus in her contribution to this volume, in which she queries the potential neutralization of the feminist classroom in the neoliberal academic universe.

Thus, *Teaching with Feminist Materialisms* marks an attempt to foreground this rich analytical field as an emerging topic of feminist studies that demands and invites us to re-think pedagogical strategies and methods in teaching feminist issues and topics. With this, we intend to illustrate the possibilities of turning the already innovative feminist classroom experience into an experience that brings into play the insights of (new) feminist materialisms. Importantly, and to reiterate, teaching and learning as knowledge exchange raises questions of method, methodology, and genealogy, which feminist materialisms place on the agenda and complicate.

These considerations are explored in this volume in a number of essays that work inside and with a feminist materialist canon. While we have indicated that the bulk of these chapters and case studies draw upon Barad's rich vocabulary of feminist materialist practice, other voices come into the mix here, indicating a diverse field of engagement that even, and surprisingly, refers to the thinkers who carry the appellation of political philosopher, such as Hannah Arendt, whom Thiele eloquently connects with her claim for the feminist classroom to remain a space where theory takes its due in more than uncomplicated terms. Taking a different focus, Dagmar Lorenz-Meyer asks how it is that we might teach with affect with a set of feminist texts and memory-work tools that complicate the usual associations of embodied experience, such as shame. In the process, she draws on an unusual and highly illuminating set of texts, including those from Rosalyn Diprose and Frigga Haug, to extend this mode of feminist pedagogy.

The contributions to this volume are intended to take a range of formats. These span from discussions about the issues that feminist materialist frameworks or pedagogies raise, to case study-based analyses of teaching with feminist materialist concepts and within new feminist materialist classrooms, to a suggested workshop structure. The order of chapters interweaves methodological with practical and theoretical considerations. Along these lines, van der Tuin's and Dolphijn's chapter builds a methodologically saturated entry to these discussions that also touches upon concepts in feminist materialism that remain vital to the

⁵¹ See also McRobbie, "Inside and Outside the Feminist Academy," 123–138.

volume as a whole. This is followed by Sauzet's chapter: an essay that works in some of the key terminology as it details an exercise that involves students in the process of evolving concepts that, at the same time, transform their professional practices. Working with a methodology she terms a "diffraction apparatus," Sauzet starts to emphasize the non-human elements of this research process and the professional environments explored by the students. Attention to the non- or more than human continues in Revelles Benavente's essay as she reflects through her participation in a feminist materialist seminar as it foregrounds the entangled production of knowledge about gender and sex, the activation and transformation of concepts and identities in this process, and how it might open the very definition of "classroom" by default. Schmitz's chapter follows, in which a personal reflection upon the challenges and contingencies of teaching feminist materialisms (experience that now spans several decades and therefore texts) crosses into practical suggestions for undertaking this work as well as what it emphasizes as the critical ingredients in feminist pedagogy. Lorenz Meyer's essay also offers a helpful example for teaching with feminist materialist content in the form of an exercise in memory work that invokes the materialities of affect and time. From here, we move to Thiele's rigorously argued pronouncements of the continued need for the work of theory in feminist classrooms; an argument that is deeply informed by the insights of an onto-epistemological understanding of theoretical engagement. In her chapter, Nitis reconsiders the political apparatus of the learning space as she asks how we can bring a feminist materialist approach to bear on the student-teacher relationship and its power dynamics. Meißner's chapter follows, as it does the work of putting the feminist classroom into the context of the neo-liberal university. An important provocation emerges from this discussion as Meißner asks how suitable certain feminist materialist insights might be for navigating this contemporary academic landscape, given the depoliticizing currently being enacted through neo-liberal strategies. Finally, Neimanis provides us with the rationale for and detailed structure of a workshop on weather writing — an exercise that encourages students to draw across a range of concepts, practices, environments, and sensations that can foreground some of feminist materialisms' important insights.

In addition to these diverse discussions, a range of perspectives is represented in the contributions included here, from graduate students and junior scholars to more established voices within the (new) feminist materialist corpus. From these different positions, and positions understood not merely as fixed but as constitutive, we have attempted to capture the varied work and experiences that form, inform, and transform the feminist materialist pedagogical stage.

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THE THRESHOLDS PROJECT AT UTRECHT UNIVERSITY: NEW MATERIALIST RETHINKINGS OF SUBJECTIVITY AND OBJECTIVITY

Iris van der Tuin and Rick Dolphijn, with Vasso Belia, Marit Bosman, Claire Coumans, Susanne Ferwerda, Merlijn Geurts, Amarantha Groen, Alex Hebing, Erwin Maas, Charlotte Poos, Rumen Rachev, Sven Raeymaekers, Deborah Sielert, Julia Visser, Stijn de Waal, Janice Warmendam, Lowi Willems, and Yaël van der Wouden

The Thresholds Project has been undertaken at Utrecht University, the Netherlands in the first semester of 2012–13.⁵² The project is based on the adoption of an alternative course format, in which students participate in the development of the key concept of the course, its reading list, and its final outcomes. The professors (Rick Dolphijn and Iris van der Tuin) have been teaching a ten-week close-reading seminar called "Contemporary Cultural Theory: New Materialism" on a yearly basis since September 2008. "CCT" is a staff and student seminar for the exploration of "new materialism" as a possible umbrella term for some innovative research currently being undertaken at our Faculty of Humanities (in Gender Studies, [New] Media and Communications, Art History, Religious Studies, Comparative Literature, and so on). So far, we have discussed the following themes: "Naturecultures," "Immanent Time, Immanent Space," "Linguistics/Signification/Communication," "After Finitude," "Signs & Numbers; Culture & Nature," "Rewriting Enlightenment," "Writing and Rewriting the Body," "New Materialism: The Utrecht School," "Science, Humanities, and an Ethics to Come," "The Speculative Turn," "Semblance and Event," "New Materialist Intra-Actions," and "Minor French History of Thought." Apart from intense discussions, and a broadening and deepening of the research bibliographies of all participants involved,⁵³ the first outcome has

⁵² We wish to thank Utrecht University's Open Access Fund, as well as Iris van der Tuin's NWO-VENI project "The Material Turn in the Humanities" (275-20-029) for financial contributions to this project.

⁵³ Staff participation happens on a voluntary basis; students can receive credit that counts towards their Research Master's degree in Gender and Ethnicity, Media and Performance Studies, Comparative Literary Studies, or other topics offered by the Faculty.

been the publication, in 2012, of New Materialism: Interviews and Cartographies, a research monograph published with Open Humanities Press.⁵⁴ This book has been conceived and written in the context of CCT, enriched by and at the same time enriching its growing literature list. The "shared conversation" called "new materialism"⁵⁵ has taken the form of four co-authored interviews with important players in the field of new materialist studies (Rosi Braidotti, Manuel DeLanda, Karen Barad, and Quentin Meillassoux), four co-authored chapters ("The Transversality of New Materialism," "Pushing Dualism to an Extreme," "Sexual Differing," and "The End of (Wo)Man""), and two introductory parts ("What May I Hope for?" and "A 'New Tradition' in Thought").56 Ever since the publication of New Materialism, CCT starts by reading and discussing this book, then taking new materialism in a specific direction. The Thresholds Project is the outcome of "New Materialist Intra-Actions," a topic inspired by Barad's work on the "intra-active" nature of agential reality, which conceptualizes the fact that subjects, objects, instruments of research, and the boundaries between them are only end results (if ever fully actualizing) of material-discursive processes, which is why "interaction" is a notion importing limited onto-epistemological assumptions into scholarship and/or philosophical reflection.⁵⁷ The Thresholds Project has wanted to experiment with new materialism as such, with course content emerging in conversation amongst teachers and students, and with the role of *concepts* in intra-active processes (one of such processes being the classroom itself). We see this chapter as part of this experiment, which is to say that we discuss where we currently stand in regard to certain new materialist takes on subjectivity and objectivity. We invite our readers to read our reflections on the Thresholds Project in this light: we aim to perform the Project instead of present this text as its outcome. After all, it is not in the nature of material-discursive processes (of thresholds) to reach a final destination (to

⁵⁴ The book is open access and can be found here: http://quod.lib.umich.edu/cgi/t/text/text-idx?c=ohp;id no=11515701.0001.001; Peta Hinton's review in *Hypatia Reviews Online*, here: http://hypatiaphilosophy.org/ HRO/reviews/content/195.

⁵⁵ For "shared conversation," see Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14.3 (1988): 584.

⁵⁶ Two chapters have been published in journals (earlier versions). See Rick Dolphijn and Iris van der Tuin, "Pushing Dualism to an Extreme: On the Philosophical Impetus of A New Materialism," *Continental Philosophy Review* 44.4 (2011): 383–400; Iris van der Tuin and Rick Dolphijn, "The Transversality of New Materialism," *Women: A Cultural Review* 21.2 (2010): 153-171.

⁵⁷ Karen Barad, Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning (Durham and London: Duke University Press, 2007).

be characterized by a linear causality between a before and an after). In the words of Donna Haraway, "objects are boundary projects."⁵⁸

New Materialism

One of the most pressing issues in the contemporary new materialist debate in general is the subject-object divide, a divide that has not only dominated academic thought for more than 200 years but also runs parallel (and is inextricably entangled) with a series of events that code contemporary life in many ways. We still consider May '68 the moment at which transversal thinking, i.e. the kind of thinking that refuses to accept modern dualisms such as the subject-object divide, was given a strong voice. The focus on difference, on emancipatory processes, on life, liberated a new materialism that needs to be mapped now more than ever. After all, the problems of the "now" are many: ranging from environmental crises to financial crises, from privacy issues to social movements such as the Arab revolutions or the Occupy movement, and perpetual war.

Today, a new materialism is seen at work within Feminist Theory and Postcolonial Studies.⁵⁹ Also within the "New Humanities," think of the Digital Humanities,⁶⁰ Ecology,⁶¹ and studies on Neurophysiology,⁶² a new materialism is unquestionably at work. These New Humanities, as they strongly overlap with Science Studies, also prove that new materialism is by no means limited to the Human Sciences (as opposed to the Natural Sciences). It demonstrates its own transversal point by showing how this modernist opposition is a false one and needs to be pushed to its extreme.⁶³

⁵⁸ Haraway, "Situated Knowledges," 594.

⁵⁹ Iris van der Tuin, "New Feminist Materialisms — Review Essay," Women's Studies International Forum 34.4 (2011): 271–277.

⁶⁰ Jussi Parikka, "Media Ecologies and Imaginary Media: Transversal Expansions, Contractions, and Foldings," *The Fibreculture Journal* 17 (2011): 34–50.

⁶¹ Jeffrey J. Cohen, *Ecotheory Beyond Green* (Minneapolis: University of Minnesota Press, 2013); Rick Dolphijn, "Ecosophy," in *Perpetual Peace: Re-Drafting Kant's 1795 Essay for the Contemporary World*, ed. Rosi Braidotti and Gregg Lambert (forthcoming).

⁶² Catherine Malabou, Ontology of the Accident: An Essay in Destructive Plasticity (Cambridge and Malden: Polity Press, [2009] 2012); Patricia Pisters, The Neuro-Image: A Deleuzian Filmphilosophy of Digital Screen Culture (Stanford: Stanford University Press, 2012).

⁶³ See Rick Dolphijn and Iris van der Tuin, *New Materialism: Interviews and Cartographies* (Ann Arbor: Open Humanities Press, 2012); especially the two introductory parts, 13–16, and the chapter "Pushing Dualism to an Extreme," 115–136.

The end of the Subject, announced by Michel Foucault in the 1960s, has resulted in a powerful (counter-) discourse that shows us time and again that we need a new point of departure when it comes to understanding and analyzing the crises that haunt us. The growing amount of publications that refuse to start from the Kantian "I think," or from any kind of individuality, but instead start from the "non-connective" relation, as Brian Massumi conceptualizes the force that notices an acting together, a simultaneity, or mutual envelopment,⁶⁴ has already offered us a wholly other thought of relationality, one that surely would not have been possible had we continued to think from the subject-object divide. It is thus by staging the non-dualist alternative, by an affirmative mapping of becoming, that new materialism shifts the dualist thinking that is still dominates academia today. This is what Barad means when she claims that a posthumanism, as it has been developed in Braidotti's latest monograph from 2013, for instance, is at the same time a critical naturalism.⁶⁵ Barad insists that instead of writing a direct critique on naturalist thinking, new materialist thinking prefers the affirmative stance, which means starting by fully embracing this wholly other perspective that does not accept any atomism.⁶⁶

In the Thresholds Project, instead of departing from the subject-object divide and antagonistically critiquing its dualism, its humanism, its unfitness for the variety of problems that we face today, the participants of CCT (students and staff) have proposed to start by mapping *alternatives* to this opposition. In this project, we draw four different cartographies that necessarily traverse the Sciences and the Humanities, the Aesthetic, the Rational, and the Political. Giving extensive introductions to each of these themes, we affirmatively mapped how differing relationalities come into being and can be thought. Without openly rejecting the subject, the object, or the individualist metaphysics that supports this dualism, the new materialist speculations that follow have shown us how the monist alternative has always already been developed/anticipated upon with/in all fields of thought. The introductions, which have been written by the participating students by way of co-authored final papers, are titled: "Differentiating Darwinism: Alternative Etiologies and Subjectivities," "Trans Corporeality With-

⁶⁴ Massumi, Semblance and Event: Activist Philosophy and the Occurrent Arts, 22.

⁶⁵ Barad, *Meeting the Universe Halfway*, 311.

⁶⁶ Vicki Kirby, *Quantum Anthropologies: Life at Large* (Durham and London: Duke University Press, 2011).

in Astrophysics," "Some (Non-) Vitalist Cartographies of Waste," and "Shifting Genes, Shifting Subjectivities." The titles make clear how those engaged in a new materialist experiment must be willing to run with the ways in which thought traditions traverse each other. While the Research Master's programs that offer CCT as a course pride themselves on their interdisciplinary nature, they tend to privilege the Human Sciences for pragmatic reasons. Accepting these restricted parameters has been unacceptable to the participants in the Thresholds Project, who have all struggled with the intimidation that comes with this decision to ignore the aforementioned privileging.

Thresholds

Key to the four analyses is the concept of "threshold," which we took to be the alternative point of departure from which we intended to create the new cartographies of the present for a new materialist thought that liberates the various fields of academia. More precisely, we have been interested in how this concept has been developed by Gilbert Simondon, the late French engineer/philosopher whose radical ideas on technology and individuality (developed in the early 1960s) have only just begun to get widely known and accepted, and the ways in which his ideas have been developed by Gilles Deleuze and Brian Massumi. Simondon is a remarkable scholar, not only because he has the capacity to travel various scholarly fields at once, but also because his conceptualization of the threshold is an affirmative alternative to the subject-object divide. And so he starts, as Thomas Lamarre already has noted, by assuming that "subject and object are different points of view across the same reality, that is, on the same relation."67 This means that, according to Simondon, we have long passed the subject-object distinction that captured all thinking about "individualities," as he calls them. Starting from the alternative, Simondon shows us how (technical) being must be analyzed not so much starting from different "states of being," but rather from differential processes of becoming happening in being and giving rise to a series of individualities (humans, technical objects, machines, but also so-called "natural processes" like hurricanes, for that matter).

⁶⁷ Thomas Lamarre, "Humans and Machines," *Inflexions* 5 (2012): 42; cf. Muriel Combes, Simondon: Individu et Collectivité (Paris: Presses Universitaires de France, 1999).

For Simondon, the difference between subjects and objects merely concerns an immanent *relation of power*, as Didier Debaise concludes:

Subjects, being only sheaves of possessive agencies eager to possess others, are in turn objects of possession themselves. Just as they are active agents when it comes to integrating others, they become, at the very same time, passive objects of possession for other subjects. In this way, all subjects are directly connected to one another by a set of relations, forming... real dynamics of collective existence. ⁶⁸

It is through his focus on technical being in *On the Mode of Existence of Technical Objects*, itself an alternative point of departure, that Simondon is enabled to formulate his far-reaching and creative critique, not only of the dualisms we have been using in academia, but also of the ethics generated in so doing:

[The opposition between the cultural and the technical] uses a mask of facile humanism to blind us to a reality that is full of human striving and rich in natural forces. This reality is the world of technical objects, the mediators between man and nature.⁶⁹

After all, "facile humanism," with its tendency to generate subject- or object-centered thought, emerges when we refrain from recognizing the transversal thresholding of technicity, which does not commence by opposing the cultural and the technical.⁷⁰ It is from the threshold that individualities emerge.

Simondon's refusal to accept the difference between the subject and the object not only wards off those preoccupations of the Humanities, it also immediately questions some fundamental preconceptions widely accepted in the Sciences, as Lamarre notes:

It is a general problem of modern thought that a substantial difference between life (natural object) and non-life (physical object) is presumed as a point of departure. And it is a tendency that becomes particularly pronounced and reified in the context of the natural object versus the technical object. Countering this tendency, we may have that the technical individual is initially an inchoate human individual, but then we would have to add

⁶⁸ Didier Debaise, "The Subjects of Nature: A Speculative Interpretation of the Subject," *Pli, Special Volume After Nature* (2012): 32.

⁶⁹ Gilbert Simondon, On the Mode of Existence of Technical Objects, trans. Ninian Mellamphy (Ontario: University of Western Ontario, [1958] 1980), 1.

⁷⁰ See also Aud Sissel Hoel and Iris van der Tuin, "The Ontological Force of Technicity: Reading Cassirer and Simondon Diffractively," *Philosophy and Technology* 26.2 (2013): 187–202.

that its inchoate beginning, or return to the pre–individual, is analogous, not identical, to the inchoate start of the animal in the plant, for instance.⁷¹

It is for this reason that the concept of the threshold, as Deleuze and Guattari read this in Simondon, is of great importance. For what is being established then, prior to the individualities (technical, natural, physical, anthropomorphic) by means of which a world comes to be, is what they refer to as a "threshold of perception":

If movement is imperceptible by nature, it is so always in relation to a given threshold of perception, which is by nature relative and thus plays the role of a mediation on the plane that effects the distribution of thresholds and percepts and makes forms perceivable to perceiving subjects.⁷²

Massumi takes up this notion of the "threshold of perception" and links it back to Simondon's "moment of invention."⁷³ The moment of invention is when a perceiving subject comes into being: a perceiving subject that has little to do with humanity, with any established kind of subjectivity, or with any point that allows itself to mirror an object. The object has just leapt into being too; this is not an individualist metaphysics of linear transitivity. What happens at the moment of invention is that a particular, unforeseen threshold has been crossed, from which perception and capacity of acting upon is engendered:

The moment of invention is when the two sets of potentials click together, coupling into a single continuous system. A synergy clicks in. A new 'regime of functioning' has suddenly leapt into existence. A 'threshold' has been crossed, like a quantum leap to a qualitatively new plane of operation. The operation of the turbine is now 'self-maintaining.' It has achieved a certain operational autonomy, because the potentials in the water and in the oil have interlinked in such a way as to automatically regulate the transfer of energy into the turbine and of heat out of it, allowing the turbine to continue functioning independently without the intervention of an outside operator to run or repair it.⁷⁴

⁷¹ Lamarre, "Humans and Machines," 42.

⁷² Gilles Deleuze and Félix Guattari, A Thousand Plateaus: Capitalism and Schizophrenia, (Minneapolis: University of Minnesota Press, [1980] 1987), 281.

⁷³ Arne De Boever, Alex Murray, and Jon Roffe, "'Technical Mentality' Revisited: Brian Massumi on Gilbert Simondon", *Parrhesia: A Journal of Critical Philosophy* (2009): 39.

⁷⁴ Brian Massumi in Arne De Boever, Alex Murray, and Jon Roffe, "'Technical Mentality' Revisited: Brian Massumi on Gilbert Simondon," *Parrhesia: A Journal of Critical Philosophy* 7 (2009): 39.

Remember that when Simondon talks of the technical object, he is most of all interested in the "ontological force of technicity,"⁷⁵ in showing how evolutionary processes cannot be explained by linear causality, but are constantly realizing new regimes of functioning, as he himself puts it: "any particular stage of evolution contains within itself dynamic structures and systems which are at the basis of any evolution of forms. The technical being evolves by convergence and by adaption to itself; it is unified from within according to a principle of internal resonance."⁷⁶

An interesting example, and very close to how Simondon talks of individuality, is a case discussed by Gregory Bateson. Like Simondon, Bateson, too, subscribes to the Whiteheadian idea that technology is an abstraction of nature, and it thus makes perfect sense that when talking of technology, he refers to a technology very dear to us, namely "binocular vision." Bateson concludes, "the *difference* between the information provided by the one retina and that provided by the other is itself information of a *different logical type*."⁷⁷ Depth is thus not there; it follows the threshold adjoining the individualities to come. Or more technically, in this case:

The binocular image, which appears to be undivided, is in fact a complex synthesis of information from the left front in the right brain and a corresponding synthesis of material from the right front in the left brain. Later these two synthesized aggregates of information are themselves synthesized into a single subjective picture from which all traces of the vertical boundary have disappeared.⁷⁸

Lived Abstraction

Starting from the threshold and its technologies, by means of which "lived abstraction," as Deleuze calls it,⁷⁹ comes into being, the Thresholds Project has tapped into a type of thinking that does not start from the subject or the object, nor does it take its existence *a priori* into account. By this, we mean that the processes of subjectification and of objectification can only be understood from the threshold. Prioritizing the threshold is crucial for understanding the ways in which new mate-

⁷⁵ Hoel and van der Tuin, "The Ontological Force of Technicity," 19.

⁷⁶ Gilbert Simondon, On the Mode of Existence, 13.

⁷⁷ Gregory Bateson, *Mind and Nature: A Necessary Unity* (Cresskill: Hampton Press, 2002), 70; emphasis in original.

⁷⁸ Ibid., 65.

⁷⁹ Massumi, Semblance and Event: Activist Philosophy and the Occurrent Arts, 19.

rialist life — organic AND an-organic AND non-organic, as DeLanda , following Deleuze and Guattari,⁸⁰ has often claimed⁸¹ — comes to be. It is from the threshold of perception that all is given form. As William James put it so eloquently: "The starting point becomes a knower and the terminus an object meant or known."⁸²

The fiercest critique (often implicit) of the subject-object dichotomy, and of the anthropocentrism that seems to continually accompany this dualism, has been developed by Spinoza in a famous letter (Letter LXII (LVII) to G.H. Shaller, dated October 1674). In this letter, Spinoza shows us how the threshold of perception gives form to *every possible individual and to the world it at the same time inhabits*. Discussing liberty and necessity, he discusses the stone and the infant, and shows us, very much in line with Bateson and Deleuze, how lived abstraction is by all means a monist idea:

[A] stone receives from the impulsion of an external cause, a certain quantity of motion, by virtue of which it continues to move after the impulsion given by the external cause has ceased. The permanence of the stone's motion is constrained, not necessary, because it must be defined by the impulsion of an external cause. What is true of the stone is true of any individual, however complicated its nature, or varied its functions, inasmuch as every individual thing is necessarily determined by some external cause to exist and operate in a fixed and determinate manner.

Further conceive, I beg, that a stone, while continuing in motion, should be capable of thinking and knowing, that it is endeavoring, as far as it can, to continue to move. Such a stone, being conscious merely of its own endeavor and not at all indifferent, would believe itself to be completely free, and would think that it continued in motion solely because of its own wish. This is that human freedom, which all boast that they possess, and which consists solely in the fact, that men are conscious of their own desire, but are ignorant of the causes whereby that desire has been determined. Thus an infant believes that it desires milk freely.⁸³

Similar to Massumi's idea of the non-connective relation, Spinoza shows us how the event is not so much turning parts into a sum, but rather that a threshold of perception (which he calls the "*conatus*") is not to be located *in* the body, but

⁸⁰ See, for instance, Manuel DeLanda, A Thousand Years of Nonlinear History (New York: Zone Books, 2000), 260.

⁸¹ DeLanda as well as Deleuze and Guattari have always tried to refrain from a classificatory take on life as they have taken, what DeLanda calls, "matter-energy flows" as their primary unit (Dolphijn and Van der Tuin, "*New Materialism*," 96; see also 114 and 8).

⁸² William James, *Essays in Radical Empiricism* (Lincoln: University of Nebraska Press, [1912] 1996), 57.

⁸³ Baruch Spinoza, *The Letters* (Indianapolis and Cambridge: Hackett Publishing Company, 1995), 390.

concerns the techniques according to which the body is immanently caused (to which he adds that the chain of causes is infinite),⁸⁴ as is its outside.

We could not but conclude (in the Thresholds Project) that Quentin Meillassoux' critique on Deleuze's concept of life is absurd. As he states: "For me, Deleuze is a metaphysical subjectivist who has absolutized a set of features of subjectivity, hypostatized as Life (or 'a Life'), and has posed them as radically independent of our human and individual relationship to the world."⁸⁵ Although, indeed, any kind of relation is positioned outside of the body, this is precisely so because this relation *creates* the body (as an individuality) and its relationship to the world. Agreeing with his critique on "correlationism," which comes very close to Massumi's idea of the non-connecting relation, new materialism fully affirms Deleuze's concept of life especially in relation to the threshold of perception and the techniques of existence that make up for the events discussed in the four case studies developed from the "threshold."

Pedagogically, the threshold thus implies the privileged position from which to start experimenting with new materialism. The threshold is precisely the "alternative point of departure" from which material-discursive processes, or intra-action, can be registered. Consequently, the "new cartographies of the present" can only be written from this threshold, a location that can only come about because all participants have dared to risk their (inter)disciplinary ties and to take the plunge in agential reality.

A Life

There is no reason at all to link life (and death) to a subject position or to anything (facilely) human. DeLanda already claims:

All entities synthesized historically are individual entities: individual plants and animals; individual species and ecosystems; individual mountains, planets, solar systems, et cetera. Here 'individual' means simply 'singular or unique,' that is, not a particular member of a general category, but a unique entity that may compose larger individual entities through a relation of part-to-whole, like individual pebbles composing a larger individual rock.⁸⁶

⁸⁴ Baruch Spinoza, *Ethics* (Ware and Hertfordshire: Wordsworth, [1678] 2001), 1P28.

⁸⁵ Quentin Meillassoux in Dolphijn and van der Tuin, *New Materialism*, 73.

⁸⁶ Manuel DeLanda in Dolphijn and van der Tuin, *New Materialism*, 40.

Building on the new vitalism that Deleuze, and Deleuze and Guattari develop, but that can also be found in Fernand Braudel (a major inspiration for DeLanda too), DeLanda is keen on showing how life is neither a part of nor radically independent of an identifiable body. Rather, life traverses, or better, it traverses-with, organizing and disorganizing bodies' relations of movement and rest. Deleuze and Guattari say it best when they state:

This streaming, spiraling, zigzagging, snaking, feverish line of variation liberates a power of life that human beings had rectified and organisms had confined, and which matter now expresses as the trait, flow or impulse traversing it. If everything is alive, it is not because everything is organic or organized, but, on the contrary, because the organism is a diversion of life. In short the life in question is inorganic, germinal, and intensive, a powerful life without organs, a body that is all the more alive for having no organs.⁸⁷

With the threshold of perception as its milieu, and its technologies as its determinants (as Spinoza or Bateson would have it), life raises a world. A world that is necessarily virtual; as Deleuze explains in his final essay:

A life contains only virtuals. It is made up of virtualities, events, singularities. What we call virtual is not something that lacks reality but something that is engaged in a process of actualization following the plane that gives it its particular reality. The immanent event is actualized in a state of things and of the lived that make it happen.⁸⁸

It is these virtual lives that we have experimented with in the four final papers written by the students collectively, which we now only very briefly summarize. The first one, entitled "Differentiating Darwinism," shows forms of life that *do not* depart from *genus* and species. The paper offers us a "History of Life" as a mythical, virtual complexity that has traveled in thought and theory in a myriad of ways. Following this diffractive reading of life (from Ovid to Darwin, from Feminist Theory to Serial Endosymbiotic Theory),⁸⁹ it maps how the threshold of perception offers a wholly other reading of material assemblages, radically different from the anthropocentric subject-object divide. The second paper thus focuses on the infinitely large, on Astrophysics, and analyzes individuality and

⁸⁷ Deleuze and Guattari, A Thousand Plateaus, 499.

⁸⁸ Gilles Deleuze, *Pure Immanence: Essays on a Life* (New York: Zone Books, 2001), 31.

⁸⁹ Serial Endosymbiotic Theory (*endo* = within, *symbiotic* = together) was formulated by Lynn Margulis in the 1960s (see Margulis 1998).

the composition of oneness that accompanies it (for instance, by looking at socalled binary stars). The third paper, recapturing the concept of life, then shows how this construction of the one (the subject/the object) necessarily depends on naming this (produced) outside by using terms like "waste" or "death." Thus, it proposes another vitalism that is monistic, infinite, and autopoetic (thus also non-exclusive and anti-organic). The final mapping undertaken brings us to the infinitesimal, bringing us back most literally to the concept of materialism that we have worked with throughout the CCT seminar; a "*matter*-ialism" that has a definite feminist politic in it, yet an affirmative one that always already gives form to life, known and unknown. This demonstrates how *risking* one's (inter) disciplinary ties does not at all mean *losing* them. Plunging into agential reality means, for feminist scholars in particular, that the processes that are encountered are oppressive, liberating, and transformative. After all, boundary-work is in the nature of agential reality, and it is in the nature of feminist scholarship to have a keen eye for boundary-work.

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THINKING THROUGH PICTURING

Sofie Sauzet

Drawings by Tristan Dupuis

In this article, I want to translate the tenets of what Karen Barad has called "agential realism" for the purpose of constructing a diffraction apparatus, through which students might produce situated knowledges.⁹⁰ To briefly summarize, agential realism is a methodology developed by Barad in which she draws on the philosophy-physics of Niels Bohr, the post-structuralist thinking of Michel Foucault, the material-semiotics of Donna Haraway, and Judith Butler's theory of performativity to develop a posthuman elaboration upon this thought.⁹¹ In doing so, I reflect on an experiment in which I have adapted a visual, qualitative research method called "snaplogs"⁹² to an agential-realist methodology. In this exercise, I have wanted to draw the students away from learning *about* practices, and orient them towards performing situated knowledges in and through practices in a way that is both sensible to and can render tangible the entangled "material-discursive"⁹³ forces at play in particular practices. Drawing on this experiment, I offer a way of interpreting agential realism as a methodology for educational purposes, respectively for pedagogical application. As methodology, agential realism is about creating reality, not reflecting it. It is about ontology and episte-

⁹⁰ Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14.3 (1988): 575–599. The concept of situated knowledges, as coined by Donna Haraway, guides my reading of agential realism. As "situated knowledges" are embedded in practices and embodied knowledge production, so is agential realism a methodology that underscores knowledge production as situated. But within agential realism, the "situatedness" emerges in a particular way, as I will elaborate.

⁹¹ See for example, Karen Barad, "Posthuman Performativity: Toward an Understanding of How Matter Comes to Matter," *Journal of Women in Culture and Society* 28.3 (2003): 801– 831; Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007); Karen Barad, "Quantum Entanglements and Hauntological Relations of Inheritance: Dis/continuities, SpaceTime Enfoldings, and Justice-to-Come," *Derrida Today* 3.2 (2010): 240–268; and Karen Barad, "Nature's Queer Performativity," *Kvinder Køn og Forskning* 1–2 (2012): 25–54.

⁹² Samantha Warren, "Show Me How it Feels to Work Here': Using Photography to Research Organizational Aesthetics," *Ephemera — Theory in Politics and Organization* 2.3 (2002): 224–245; Pia Bramming et al., "(Im) Perfect Pictures: Snaplogs in Performativity Research," *Qualitative Research in Organizations and Management: An International Journal* 7 (2012): 54–71.

⁹³ Barad, *Meeting the Universe Halfway*, 141.

mology in one breath: as onto-epistemology.⁹⁴ Thinking about methodology as a way of creating worlds implies a breakdown of the dividing lines between theory and practice, knowing and being.

Diffracting Agential Realism for Educational Purposes

In this chapter, I explore how a new feminist materialist methodology, such as agential realism, can allow for the production of situated knowledges in and through interprofessional practices. I try and open up the ways in which a new feminist materialist approach is about pointing at the possibilities for considering agency as a distributed and emergent effect that emerges through the production of situated knowledges, which allows for diffractive understandings of what situated conditions of possibility might be. I do this within the thematic framework of my doctoral thesis, in which I explore the emergence of the phenomenon of interprofessionalism through ethnographic fieldwork in a University College in Denmark. Usually recognized as a type of collaboration across professions, interprofessionalism is said to have positive effects on work on complex welfare issues.95 Thus, interprofessionalism is a concept that, with the organizational setting up of University Colleges (from hereon UC's) in Denmark (2007–2008), has been charged with promises of a brighter tomorrow for the welfare state. In the Danish UC's, interprofessionalism has become part of the curricula in obligatory practicums and in general curricula. Future nurses, teachers, social educationalists, and physiotherapists are being taught to work and think interprofessionally on wide-ranging welfare-issues such as inclusion in schools, health and life-quality of people with disabilities, homelessness, and body-awareness. While it seems like a good idea to orient professionals towards welfare-issues in which other professionals are involved, the currently available interpretations of interprofessionalism are anthropocentric, as (human) professionals, in the literature, are considered the

⁹⁴ Ibid., 185. See also Thiele in this volume for an explanation of the way onto-epistemology addresses the proposed theory/practice divide in relation to a feminist pedagogy that continues to value thinking; and Schmitz in this volume for a discussion of the way this approach engages the role of the student and researcher in practices of knowledge-making. Onto-epistemology is also elaborated upon below, in this chapter.

²⁵ Merrick Zwarenstein and Scott Reeves, "(Review) Interprofessional Collaboration: Effects of Practice-Based Interventions on Professional Practice and Healthcare Outcomes," *The Cochrane Collaboration* (2009); Anne Edwards, *Being an Expert Professional Practitioner* (Dordrecht, Heidelberg, London, and New York: Springer, 2010); Elise Paradis and Scott Reeves, "Key Trends in Interprofessional Research: A Macrosociological Analysis from 1970 to 2010," *Journal of Interprofessional Care* 27.2 (2012): 113–122.

main agents of change in practices. One question posed here, then, is whether interprofessionalism might rely on more than collaboration and knowledge sharing in these terms. As a feminist materialist approach underscores, everyday practices are situated, material-discursive processes, and the scope of what constitutes a participant in these practices is significantly broader than initially imagined. What this suggests is that both nonhuman actors and non-professionals partake in interprofessional practices, which makes the current curricular focus unable to embrace practices in their full complexities. In this chapter, I therefore explore the construction of a "diffraction apparatus"⁹⁶ to allow students to work with an emergent feminist materialist inspired concept of interprofessionalism through situated practices. The aim is to enable understandings of concepts as material-discursive practices that emerge as phenomena in complex practices, and to open up for possibilities for producing situated knowledges.

Agential realism can be understood as a part of a material turn, which attempts to establish matter and the non-human as active agents in social science analyses.⁹⁷ As such, agential realism explores how agency is distributed across the human and the nonhuman — whilst investigating how human and nonhuman components emerge in practices. Barad's notion of agency as an emergent quality, rather than attribute, draws attention to how and what matters in particular practices, and how these different components emerge with attendant, agential qualities. This analytical orientation allows for a specific, new feminist materialist curiosity in regard to what situated conditions of possibility for practices might be. In this chapter, I therefore want to highlight how agencies shape-shift in situated practices, and how this conditions particular productions of situated knowledges of interprofessional practices.

In an agential realist sense, the smallest units of analysis are phenomena. As Barad writes: "A phenomenon is a specific intra-action of an 'object' and the 'measuring agencies'; the object and the measuring agencies emerge from, rather than precede, the intra-action that produces them."⁹⁸ The central idea is that "the thing" "we" (the students, you, or I) research, is enacted in entanglement with "the way" we research it. Analyzing phenomena, then, is a methodological

⁹⁶ Barad, *Meeting the Universe Halfway*, 73.

⁹⁷ Rick Dolphijn and Iris van der Tuin, New Materialism: Interviews & Cartographies (Ann Arbor: Open Humanities Press, 2012).

⁹⁸ Barad, *Meeting the Universe Halfway*, 128.

practice of continuously questioning the (situated) effects that the way we research have on the knowledge we produce. This methodology can be understood as diffraction, which is the physical phenomenon that occurs as waves emerge, when water flows across an obstacle like a rock. As opposed to reflection, which is a common metaphor for analysis that invites images of mirroring, diffraction is the process of ongoing differences.⁹⁹ As tool for analysis then, diffraction helps us attend and respond to the effects of our meaning-making processes. In ethnographic fieldwork, this might be understood as how answers emerge from questions, or how analyzing through particular interests makes particular aspects come to the fore and leave others out. In this sense, diffraction is the practice of making differences, of enacting worlds by being in the world. So diffraction can attune us to the differences generated by our knowledge-making practices and the effects these practices have on the world, and in this way, it opens the way for greater sensitivity towards and within knowledge making processes.

Constructing an Apparatus of Diffraction

Barad proposes an understanding of agency that is not confined to the idea of something that someone has (an attribute); but rather as enactments of iterative changes to particular practices, through the dynamics of intra-activity.¹⁰⁰ Agency, in this sense, is a mutable force, an emergent quality that is enacted at every moment in practices. Intra-action, unlike the notion of inter-action, denotes that entities might be enacted as separable, but they are ontologically indeterminate prior to investigation. In agential-realism, ontology and epistemology are thus entangled, and Barad refers to this as "onto-epistemology."¹⁰¹ Agency, in this sense, is an emergent quality of particular practices through which different components emerge, as agentic.

As such, agential-realism profoundly shifts the possible ways we might conceptualize learning and teaching. This, for me, entails a conceptual challenge for analyzing practices. If the world is becoming at every moment, then what am I to do with my taken-for-granted understanding of fixed subject-positions

⁹⁹ Ibid., 71; Hillevi Lenz-Taguchi, "A Diffractive and Deleuzian Approach to Analysing Interview Data," *Feminist Theory* 13.3 (2012): 268.

¹⁰⁰ Barad, "Posthuman Performativity," 827.

¹⁰¹ Barad adds ethics to the onto-epistemological premise, making diffraction an ethico-onto- epistemology. See, for example, pages 185, 318, and 379 in her 2007 book *Meeting the Universe Halfway*.

(as teachers and students) in educational institutions that might not be able to perform how they are supposed to (like disseminating content and memorizing curricula)?¹⁰² How to approach these educational issues if agency is the enactment of changes, and not something that you have?

In this chapter, I follow the implications of this notion of agency by constructing a diffraction apparatus, which, in the context of my pedagogical practice, might bring to the fore how interprofessionalism is a concept that emerges as phenomenon through intra-active dynamics in practices. As Barad explains, a diffraction apparatus is the condition of possibility for researching phenomena, and it is through particular constructions of apparatuses that phenomena (the ontological inseparability of research-objects and research-apparatuses) emerge in particular ways, and through particular "cuts."¹⁰³ Despite its laboratory connotation, an apparatus might therefore be as simple as asking a question or taking a picture. The phenomenon that emerges, in this case the concept of interprofessionalism, is thus the onto-epistemological entanglement between what we might call "the doings of the apparatus" (the entanglement between the researcher and her particular way of researching) and "the doings of the research object" (in this case, the concept of interprofessionalism). Diffraction apparatus and concept are thus inseparably entangled.

A Diffraction Apparatus

In thinking about how to make interprofessional practices available for students to enact situated knowledges in an agential realist sense, I decided to use "snaplogs": a visual, ethnographic method that involves taking pictures (snap) in response to specific questions, and writing small corresponding texts (logs).¹⁰⁴ Because it involves photographing and describing practices in logbooks, snaplogging encourages thinking about practices and describing them in their situatedness, and communicating this through both images and words. This task involves the following steps.

¹⁰² See Meißner in this volume for an outline of expectations of pedagogical delivery in contemporary universities.

¹⁰³ Barad, *Meeting the Universe Halfway*, 128, 127–128; For a more detailed explanation of agential cuts, see Schmitz's chapter in this volume; for a discussion tailored through Barad's explanation of the apparatus and the Bohrian cut, see pages 114–120 in her 2007 book *Meeting the Universe Halfway*.

¹⁰⁴ Bramming et al., "(Im)Perfect Pictures," 54–71.

As part of my doctoral-work within the Danish UC, I met with students from a professional bachelor's program¹⁰⁵ on social education, and presented them with the idea of going "from learning about practices" to producing situated knowledges in and through practices. Here, I unfolded the premises for "thinking through picturing" using an agential-realist methodology, in which ontology and epistemology are intertwined. In this initial meeting, we spoke about conceptions of practices and interprofessionalism in particular ways in order to allow for a material-discursive understanding of these concepts (I unfold these below).

The students were then asked to conduct ethnographic fieldwork in their practicum processes, "snaplog assignment" in hand, which read:

Snaplog assignment:

During an agreed upon period of time, you explore interprofessional practices in your internship. Take at least five¹⁰⁶ pictures of 'that which goes across and beyond' your own conception of your professionalism: i.e. something you experience as interprofessional practice, or something you think might benefit from interprofessional practices in your internship. For each picture, write a small text answering the following questions: *What is depicted in the picture? Why did you take the snap shot? How does the image relate to interprofessional practices*?

For my research purposes and to allow for individual reflection and dialogue about the students' processes, I then organized individual, semi-structured interviews with the students, in which we discussed their snaplogs in detail: both their content and the ways the students had worked with them. In the interviews, I

¹⁰⁵ In Denmark, where this work has been performed, the official titles of programs at University Colleges are: "Professional Bachelors." It serves to note that the programs are university college bachelors rather than university bachelors. A professional bachelor's program takes between three and four years, and these are programs with obligatory internships. For the Social Education students, more than one year of the full three and a half years of studies constitute internships in workplace settings.

¹⁰⁶ Students had signed declarations of agreement for photographing at their internship locations. Students also had informational letters for management, colleagues, users, and parents to ensure available possibility to decline participation. The pictures included in this publication are re-drawn to ensure the anonymity of the students and their objects of inquiry. I also have formulated ethical guidelines for the students' fieldwork, that sound like this: Snap-log ethics: 1. Inform the staff and management, parents, and children/youth at your internship about your project, and of the purpose of taking pictures at your internship; 2. Photograph only persons who have agreed to be photographed. Not everyone cares for having her/his picture taken. Ask beforehand and respect a "no"; 3. Explain that the purposes of the pictures are for a research project; 4. The pictures must not include sensitive data, such as social security numbers; 5. If you want to take pictures of minors, obtain written consent from their legal guardians (I made a consent-agreement document that the students could adapt to their places of internship); 6. Only send your photos to the researcher. If someone wants a copy of your picture, in which he/she is depicted, they may also have a copy; 7. Do not share pictures with others. Not through internet or local intra-net. The use of the pictures is confidential in accordance with Danish research-ethics; 8. Delete the images from your camera when you have sent them to your supervisor.

asked the students to detail *how* they had produced their snaplogs and for each snaplog I asked them to describe *what* interprofessionalism was in that particular situation. I thus prompted them to consider how epistemology (how) and ontology (what) are entangled in the snaplog production.

Finally, I organized a group session in which the students met one another and discussed each other's snaplogs. The meeting around the snaplog-field work confronted the students with other enactments of the same concept. The focus of these discussions was on the students' different understandings of situated, interprofessional practices. For teaching purposes, which might be different from my own research purpose, I suggest working with different set-ups for interview/ group sessions following the fieldwork period.

The process, from the initial meeting to the fieldwork in practicum, the individual interviews, and the group sessions, is what I consider to be the basic structure of the diffraction apparatus. Throughout these processes, as well as in writing this article and reading it, the knowledges enacted will shift shape, as knowledge productions in an agential realist perspective are dynamic and ongoing processes.

On Material-Discursive Practices and Emergent Concepts

Barad describes practices as intra-active doings that are material-discursive.¹⁰⁷ There are two points to be made about this claim. Firstly, Barad hyphenates the relationship between the discursive and the material as she perceives them as ontologically entangled.¹⁰⁸ Second, the discursive and the material are enacted in different ways through practices. By way of examples, and of talking about practices as more-than-human, I encouraged the students to think of interprofessional practices as material-discursive doings to attune their snaplog productions towards the complexity of these practices.¹⁰⁹

¹⁰⁷ Barad, Meeting the Universe Halfway, 389–390.

¹⁰⁸ Ibid., 140.

¹⁰⁹ The theoretical point about analyzing the enactment of binaries between humans and nonhumans has not been part of this particular project. The divisions might therefore seem to pass un-analyzed, but it would be beyond the scope of the experiment to engage in this discussion. The concept of agential cutting can go some way to address this point — as agential cuts might also re-iterate those very distinctions they complicate.

Inspired by Annemarie Mols' work with undefined concepts,¹¹⁰ the students were asked to work from an open understanding of interprofessionalism, which they saw as "going across and beyond" (from the assignment sheet) their understandings of their own professionalism. I asked the students to develop, as they worked with the snaplogs, what this notion of "going across and beyond" meant for them. I suggested it might be responsibilities they did not feel educated to manage, or situations in which they worked with other people that had competencies other than their own. In this sense, the notion of something "going across and beyond" their understandings of their own professionalism was a way to further attune them to the emergent qualities of working with an undefined notion of interprofessionalism. By not defining interprofessionalism, or at least keeping the concept vague, I encouraged the students to work with emergent concepts to allow their curiosity to bloom beyond pre-defined text-book descriptions of interprofessionalism. The open notion of interprofessionalism was underlined in order to prompt the students to wonder or pause in particular practices that they saw as "going across or beyond" their conception of their own professional practices. The classic idea of interprofessionalism, as I have noted in the beginning, connects to a notion of collaboration and was familiar to the participating students, as it was outlined in their curricula. In contrast, working with an emergent concept of interprofessionalism has been both difficult and fruitful for the students. It has been difficult because it has proven hard for the students to "let go" of an anthropocentric notion of practices, which the examples below point to.

And it has been fruitful to work with an emergent concept of interprofessionalism as it organizes discussions on, and highlights differences in, the tension between working with pre-defined concepts and emergent concepts in situated practices. In the group session, the students saw how different the examples of interprofessionalism could become in the process of working outside the confines of pre-defined concepts of interprofessionalism. As the outlay of these examples demonstrates in what follows, this difference gave way for discussions on the entanglement between concepts and the practices through which they become meaningful.

¹¹⁰ Annemarie Mol, "Mind Your Plate! The Ontonorms of Dutch Dieting," Social Studies of Science 43.3 (2013): 379–396.

Unheeded Interprofessional Practices

Carla¹¹¹ is interning at an activity center for young people and adults with disabilities. Here, I highlight a snaplog through which Carla enacts a practice involving the activity center and the local DIY center.

In Carla's log, she writes: "*I've taken a picture of 'M*,' who's doing his job at the local DIY centre. The centre has hired a group of people to clean their outside areas. The interprofessional element is between the social educationalists and the DIY centre. Here they try getting a group of users employed at the DIY centre for a pedagogical purpose."



Illustration 1: 'Carla's snap-log'; drawing of Carla's photograph of "M" working at the local DIY-center

¹¹¹ Names are fictional, as to secure anonymity of participants.

Interview extract:112

I went on internship at the DIY center one day. I was handed a broom, and I helped to sweep the parking lot. The guy in the picture instructed me on how and where and when to sweep, what to take notice of whilst sweeping, regarding the customers and so on. He explained it was important that we wore the yellow vests to be visible when people were parking. He's proud of showing how he's an employee at the DIY center. He talks a lot about it. When he's been there, he says it's been arduous, but good, and that he knows the boss and gets along well with him. So I took the picture, and it really shows the benefits of the collaboration for the users [of the activity center]. It means a lot for them [the users], being able to hold a job, being able to identify with it. When they introduce themselves, they go: 'Hi I work at the DIY center!' And it means so much for them to be able to say that, and to help others. Even though they have disabilities, they understand that they need help. But at the DIY center they can help others. Afterwards, he kept asking me if it had been a good day, and if I was happy to have seen his work. He reminded me how he had shown me to push a shopping cart, taking them two or three at the time, putting them back in the shed. He explained how the coin went into the slit, and the dispenser into the cart. And all those details. So this exact situation was good. And I was a part of it. And he was so proud (Carla).

In the interview with Carla, a number of components emerge as entangled in the production of interprofessionalism as phenomenon as I ask her to expand on her snaplog production. To point to but at a few components of the intra-active entanglements, it seems that the dynamics unfold between the moment when the snaplog assignment makes Carla walk around with her camera in her pocket and my questions on paper, searching for possible practices to zoom in on; entangled with my encouragement for her to further describe the snaplog, through the photograph that we have before us; and the photograph's production of a moment when the two organizations, the parking lot, "M"s feeling of being useful, the DIY employees, the shopping cart, the coin-slit, and the yellow vests emerge as entangled in Carla's production of interprofessionalism as quoted above. The dynamics of these intra-acting, emerging components perform interprofessionalism as phenomenon in this example. And snaplogging thus affords a particular agential cut into Carla's practicum, allowing the production of a situated knowledge that highlights some of the possible intra-active agencies in this interprofessional practice.

In the snaplog assignment, I asked the students to develop notions of what they saw as "going across and beyond" their understandings of their own professionalism. Carla's response is to capture practices that offer other possibilities for

¹¹² Both interview excerpts have been fitted to the format of this paper by removing interjections to make the text more "fluid," with the consent of the interviewees.

the users of the activity center — other possibilities than those Carla feels able to offer on her own; possibilities that include the sometimes unnoticed activities of stowing carts, sweeping the floor, and wearing a uniform (the yellow vest).

Had the students continued to define interprofessionalism and practices in a narrow sense, as collaboration between professionals alone (that is, in anthropocentric terms in which agency is unidirectional and circumscribed), the snaplog would not have been able to accommodate those sometimes unnoticed components as also participants in interprofessional practice. The shopping cart, the coin-slit, and the parking area would not have been made visible as agentic components in this version of an interprofessional practice. Working with emergent concepts and material-discursive analysis of practices through visual ethnography thus highlights the agency of the sometimes unheeded components that intra-act in practices. A new feminist materialist approach can draw attention to these more-than-human components, and underscore how workings with emergent concepts extend beyond text-book descriptions.

Potential Interprofessional Practices

Johanne is an intern at a youth club for people with disabilities. Her snaplogs concern practices that are, in her mind, in need of an interprofessional approach. In this sense, her snaplog assignment focuses on what could be, in contrast to Carla, who snaplogged about what was already taking place. The snaplogs Johanne produces are about technologies, understood as non-human actors in this exercise, which she considers to have the potential to improve existing practices. In what follows, I present some details from a snaplog concerning a hoist in the bathroom.

Johanne writes: "We use the hoist for users [of the youth club] that are in wheelchairs. I've taken the picture, as I've helped out [changing diapers], but I don't know how to avoid damaging my back. If there was a better interprofessional collaboration with someone who knew about how to properly operate the hoist, it could be reassuring for everyone."

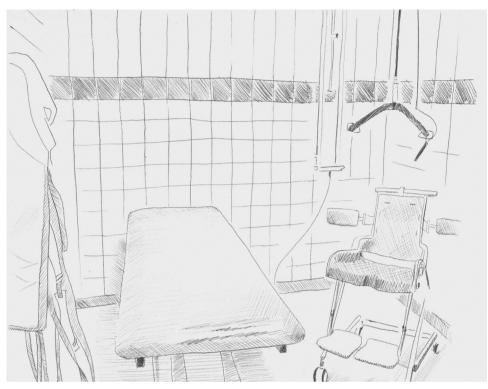


Illustration 2: 'Johanne's snap-log'; drawing of Johanne's photograph of a bathroom, and hoist, at the youth-club where she is interning

Interview extract:

The social educationalists here work out of interest. One of them has chosen to take a course in appropriate changing practices with hoists, on protecting your back when lifting and such. She showed the rest of the employees how to do it years ago. I think we're lucky to have her; it might not be every institution that has someone interested in such things. But she has 80,000 other tasks to attend to as well, so she needs to prioritize. It's been nearly five years since my counselor was introduced to it. And I keep thinking if there are new functions or guidelines to know about. Two of my colleagues have gotten sore backs, so now they just don't do it anymore. So I thought it might be cool if someone else were to take 100% interest in it. The first time I participated in a changing situation, I asked why we used the green belt, but the others didn't even know. That's just how they'd always done it (Johanne).

In the log, Johanne draws an image of the practice, writing that her uneasiness could be soothed by, what she calls, an interprofessional collaboration with someone knowing about hoists. In our interview, a slightly altered picture of the practice emerges from talking about the snaplog. Here, Johanne discusses the unquestioned use of the green belt, and draws an image of an institution where their standard processes are left largely unquestioned. Johanne describes an institution where work is organized according to the staff's personal interests. So Johanne points at the hoist, asking if someone from within the group of employees might take an interest in it to protect against sore backs. The interprofessional practice Johanne expands on in the interview is thus something that she explains must begin from within the group of colleagues. Johanne thus enacts interprofessional practices that might exist, but currently do not.

In the interview, Johanne explores possibilities within the youth club when we talk about the practices around the technologies about which she has snaplogged: practices that might benefit from a second look. In the interview, the hoist seems to echo a call for further discussion about "business as usual" at the youth club. In the interview, Johanne thus revisits the role of the snaplog in highlighting situated knowledge production in this instance as it relates to a lack of attention to the issue of sore backs at the youth club. A new feminist materialist analysis of what might be, that is, what delivers itself as requiring address, thus emerges through the diffraction apparatus, of which the interview is a part. Again, working with the snaplogs thus brings attention to those non-human components, such as the green belt, that also assist in pointing out potentialities that allow for a curiosity that goes beyond everyday routines.

Multiple Diffractions

The snaplogs function as a diffraction apparatus, that has the ability to "slow down" practices,¹¹³ be it only for a little while. Slowing down a practice can be done by photographing it and writing about it in a log, talking about it and describing it anew in an interview. Diffracting practices in different ways makes new differences and meanings appear and allows for students to delve into practices through different cuts over a period of time. It also allows students to analyze how different components (for example, the non-human or more-than-human participants in interprofessional practices) can emerge as agentic. Diffracting practices through the diffraction apparatus of the snaplog exercise enacts the students, the apparatus, and their object of observation — interprofessionalism — as entangled.

¹¹³ John Law, After Method: Mess in Social Science Research (New York: Routledge, 2004), 151.

It is through the students' snaplogging that interprofessional practices emerge in particular ways. Following this, that which is enacted as interprofessional practices emerges on the threshold between (at least) the students' understandings of their own practices, their desired practices, that which they consider as being different from their own notions of professionalism, and the different attunements the diffraction apparatuses suggest the students enter into (i.e. the particular questions and orientations in the assignment I give the students).

The diffraction apparatus is a methodological construction, in which there is no clear dividing line between theory and practice that helps with manifesting how the different processes, from working with the snaplogs in the internship, discussing them with others (myself and other students), and writing about them here, continuously shape-shift as the phenomena they enact. The diffraction apparatus hereby nurtures a discussion of the transformative possibilities when working with emergent concepts. So what does the apparatus of diffraction do? It makes the students aware of the differences with, as well as the tensions involved in, working with emergent rather than pre-defined concepts. And undertaking fieldwork with the task and objective of taking pictures makes the students see, pay attention to, hesitate during, and orientate themselves towards practices that emerge through human and non-human intra-action. The visual component, however, does not only allow visibility of "what exists," it also allows a discussion of "what might be," which creates potentialities. With her snaplog, Carla can begin to contemplate which practices work, how, and how they add to what she does. Johanne can discuss by herself and with her colleagues what to do with the practices of changing diapers, which she has brought to the fore.

Importantly, then, the snaplogs produce situated knowledges that are open for further diffractions. They are not descriptive; they do not "tell the full story," following the assumption that photographs and narratives deliver transparent meaning. Rather, they demand details and descriptions in their incompleteness. As concepts are open, so are the snaplogs. They demand discussion and further conversations, and their production changes with every "step" (from fieldwork to interview, to discussion with colleagues, and so on) in the diffraction apparatus.

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MATERIALIZING FEMINIST THEORY: THE CLASSROOM AS AN ACT OF RESISTANCE

Beatriz Revelles Benavente

Teaching is itself a relational process, in which many different elements are reconfiguring the very act in multiple ways. Teachers and students get together in a classroom in order to produce an exchange of knowledge, which varies depending on the formative level and the course. This may appear to be a very straightforward relationship, but normative patterns in which oppressions are (re)produced become (in)visible while materially affecting the relation between teacher and students. Therefore, I argue that teaching (with) material feminisms is *always-already* a political issue.

The pedagogical context of the classroom has been a focus for many governments, political parties, and social movements because of its undeniable role as developer of ideologies, creator of soldiers, and curator of "culture." As many contributions to this volume explain, the relationship of contemporary feminist theories to teaching can be a very paradoxical one. Taking a critical perspective, Maya Nitis, for example, shows how in many cases teaching involves a master who "knows" and a student who "receives" the knowledge. Altering this relationship is difficult, although not impossible. The authors of this volume try to convey different strategies for working with the concept of teaching within a new feminist materialist framework. In this chapter, I propose to approach teaching as always already a feminist political act, in which many different elements (such as the location, the teacher, the students, the content of the course, and so on) are participating in order to create differing *material meanings* with ethical implications, as will be further explained below.

One of the key concepts in and for politics is agency, and in this context I propose to think of the university as a political agent in feminist terms. However, thinking about agency is paradoxical in feminist theory because it either tends to be considered an individual, human property, or it is totally denied to any subject. This move has been identified in contemporary feminist theory as a hierarchical distribution of power that situates the human at the center of social change, or as totally powerless.¹¹⁴ Avoiding anthropocentric moves, the de-centralization of the human subject implies a new definition of agency, as well as its distribution and its relation with oppressed groups. As Diana Coole affirms, "agency is not merely displaced in new materialist ontology; rather its ontology is rethought from its perspective."¹¹⁵ Regarding feminist materialisms as instances of new materialist critical thinking requires that we (re)formulate the concept of agency in order to understand what feminist materialisms might look like.

Karen Barad defines agency as "spacetimemattering,"¹¹⁶ or a material act of resistance performed in the relation between time and space. *Spacetimemattering* refers to the locatedness of matter during the relation between time and space, and how these three elements produce differences in what is commonly referred to, separately, as space *and* time. In regards to time, it stops being a chronological development that combines past, present, and future always in this precise order, instead, it is an entanglement of the three. Space is not considered a physical conglomerate, but the materialization of different relations happening at a precise moment. Understanding space and time differently means, for political feminist theory, that no linear progression can be outlined in history and, therefore, the capacity for change, or change itself, needs to be located within the patterns that contemporary phenomena carry out. Therefore, the entanglement between matter, time, and space becomes boundary making, historically changing, and physically blurred. Thus, when structural oppressions are being repeated as part of our historiographical approach to society, feminist theory needs to situate itself within and outside these same logics, enacting the capacity for change that resides in the entanglement of the above mentioned elements instead of that which is enacted only through human action.

As a consequence, a feminist classroom attending to feminist materialist politics implies a particular understanding of agency that entails significant shifts in the way teaching is articulated. This understanding of agency demands such shifts since agency is not simply shared among human actors, but distributed and materialized within and across the entire classroom. Accordingly, drawing on

¹¹⁴ Rosi Braidotti, "Posthuman, All Too Human: Towards a New Process Ontology," *Theory, Culture & Society* 23.7–8 (2006): 197–208; Vicki Kirby, *Quantum Anthropologies: Life at Large* (Durham: Duke University Press, 2011).

¹¹⁵ Diana Coole, "Agentic Capacities and Capacious Historical Materialism: Thinking with New Materialisms in the Political Sciences," *Millenium: Journal of International Studies* 0.0 (2013): 8.

¹¹⁶ Karen Barad, "Quantum Entanglements and Hauntological Relations of Inheritance: Dis/continuities, SpaceTime Enfoldings, and Justice-to-Come," *Derrida Today* 3 (2010): 240–68.

Barad's concept of spacetimemattering, I propose to think of the classroom itself as an agential entanglement, allowing us to consider the classroom as an act of resistance. Following this argument, it is necessary to produce an onto-epistemological shift in pedagogy research that moves away from understanding the space of the classroom and its participants in conventional ways. That is, thinking of not only teachers and students, but also the course, the space, the time, and so on, as relational and mutually dependent. The following sections provide a more careful examination of how thinking of the classroom as an agential force entails differences between these elements, forged in their relation. The physical space of the classroom stops being the physical distribution of a class, the space between the walls, and so on, to instead participate in the materialization of different relations. Time becomes also dis-located, as far as a methodological approach of genealogies and cartographies, to become mutually dependent with the rest of the elements that constitute the space of the classroom. Concepts will be explained through an approach that combines their past, present, and desired future for feminist theory and politics. And matter will be the product and the relation itself between space and time, the act of resistance, the phenomena under study, and the agent of new materialist feminist theory and politics for and in the classroom.

Acting Resistance: Processing the Entanglement Between Space, Time, and Matter

Feminist materialism has often been critiqued as an onto-epistemological movement that, even when its main core is focusing on "how matter comes to matter,"¹¹⁷ becomes a discursive figuration without political grounds.¹¹⁸ Specifically, feminist new materialism has been accused of totalizing feminist history under the label of anti-biologism, with Barad being seen as one of the main representatives of such a move.¹¹⁹ However, as this chapter and the analysis of the following seminar, which serves as a practical example explaining what teaching with feminist materialisms could look like, show, matter keeps on being at the core of this

¹¹⁷ Karen Barad, "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter," Signs: Journal of Women in Culture and Society 28.3 (2003): 801–31.

¹¹⁸ Clare Hemmings, Why Stories Matter: The Political Grammar of Feminist Theory (Durham: Duke University Press, 2011); Kathy Davis, "Feminist (Hi)stories," European Journal of Women's Studies 19.3 (2012): 279–82.

¹¹⁹ Sara Ahmed, "Imaginary Prohibitions: Some Preliminary Remarks on the Founding Gestures of the 'New Materialism," *European Journal of Women's Studies* 15.1 (2008): 23–29.

move. Matter is here defined as the political engagement of an indivisible bond between time and space; and feminist materialisms a practical angle from where to engage actively with the politics of matter.

In the winter of 2014, I had the pleasure of attending a three-month seminar with Barad at the University of Santa Cruz, California, titled: "Topics in Feminist Science: 'Matters of Bodies. Nature Deconstructing Itself.'" As in any other seminar, there was, among many other elements, a syllabus, a classroom, a table, chairs, students, the teacher, some homework, a time designated for the course, and a location within the campus. Held as a round table and with plenty of light, energy coming from the outside was mixing itself with the boundaries between different types of matter. Comfortable chairs facilitated relaxing, corporeal positions that reinforced an atmosphere of commonality while indicating that this specific momentum was academically constrained. The classroom for the seminar with Barad could be described as a diffractive dancing between Judith Butler, Ann-Fausto Sterling, and Cheryl Chase, among many others, oriented to re-thinking the "subject" and/of "politics" in feminist theory, also with the aim to engage differently with ways of thinking about politics and ethics. That is, as students, we were entangled in a variety of texts that embody (sometimes oppositional) feminist theories, which we were reading with and through each other (diffractive reading) while moving between different times and geographical locations embedded in those precise readings (dancing). As Barad's claims, dancing here refers to "processes of understanding and meaning making ... bound up in 'an ongoing performance of the world in its differential dance of intelligibility and unintelligibility".¹²⁰

The limits of what is considered subjectivity permeated our discussion table, especially taking into account the "intra-active" production of subjects in their entangled relation with all else. "Intra-active" makes reference to the materialization of Barad's "intra-action," defined as the "recognition of ontological inseparability, in contrast to the usual 'interaction,' which relies on a metaphysics of individualism (in particular, the prior existence of separately determined entities)."¹²¹ That is, thinking through relations to connect elements in movement (as they always are) mutually dependent. After reflecting upon the seminar, it can be described as a collective effort of the classroom, directed towards the following

¹²⁰ Karen Barad, *Meeting the Universe Halfway* (Durham: Duke University Press, 2007), 149.

¹²¹ Ibid., 128.

questions: How to position the feminist researcher in an encounter with "the other" without assuming a type of violence that distributes power unequally? That is, how does the researcher engage diffractively with the object of study without taking for granted an ontological separability? Or, as Vicki Bell asks, how does a subject develop from within ontological inseparability?¹²² Departing from what we understand by "sex" and "gender" in a feminist materialist framework, the classroom was enabling material meanings that were able to disrupt hierarchical distributions of power, that is, the agentic capacities of terminology itself. Therefore, the conceptual tool box that the class was permanently re(con) figuring with, for instance gender and/or sex, opened up a space for feminist political possibilities, for thinking acts of resistance.

Teaching is considered to be one classical, anthropocentric move of mastering knowledge.¹²³ The same happens with the concepts of "gender" and "sex." Because of their human properties, both seem to designate the creation of knowledge based on human conditions of life. However, in that classroom, the concepts of sex and gender became a relational intra-action in which multiple political possibilities, and possible politics, were explored, demonstrating the capacity for change (that is the agentic capacities) and the capacity to resist from within theory. Considering a feminist historiographical approach to these concepts, with theoreticians such as those mentioned above (and coming from feminist queer theory), these concepts were approached with a feminist materialist framework and applied to contemporary issues by affirmatively engaging each other in spite of their dis-located nature in terms of space and time. Sex/gender became material meaning insofar as the classroom was collectively rethinking their capacities to enact social change. The syllabus was changing according to the phenomena, or the needs of the object/subject of research (those mutually dependent elements),¹²⁴ and multiple questions were informing the way this intra-activity was presenting itself as key for understanding or enacting feminist

¹²² Vicki Bell, "From Performativity to Ecology: On Judith Butler and Matters of Survival," *Subjectivity* 25 (2008): 395–412.

¹²³ For a more in depth discussion on these issues, see Nitis and Meißner in this volume.

¹²⁴ "Phenomena are ontologically primitive relations — relations without pre-existing relata. On the basis of the notion of *intra-action*, which represents a profound conceptual shift in our traditional understanding of causality, I argue that is through specific agential intra-actions that the boundaries and properties of the 'components' of phenomena become determinate and that particular material configurations of the world become meaningful" (Barad, *Meeting the Universe Halfway*, 333; emphasis in original).

politics. A "gender-in-the-making"¹²⁵ strategy was pursued in order to find a possible "ethics-to-come,"¹²⁶ and instead of trying to subvert the norm or reproduce it, these concepts were used as the "exteriority within"¹²⁷ the norm: understanding and re-producing within it while, at the same time, contesting it. All in all, we (those participating in the course) found out that the terms gender and/or sex do have significant potential for exploring a feminist ethics that expands beyond a humanist interpretation of the subject; if we understand "beyond" as "together with and more than," in the new materialist sense.¹²⁸

According to the feminist scholar Lena Gunnarsson, feminist materialisms (which I consider to be part of new materialisms)¹²⁹ are inherently apolitical because "ontological indeterminacy," meaning the impossibility to differ mutually dependent elements, "complexifies"130 the location of change since intra-actions are everywhere and nowhere. That is, by "glorifying indeterminacy,"131 new materialist thinkers deny the possibility of change because they render life to its own dynamism, and unpredictable patterns make the idea of social change theoretically impossible. I could not agree more with her when she explains how "change and dynamism can indeed follow determinations, even predictable ones."132 But there is something that is being taken for granted in this criticism, which is that through the argument for ontological indeterminacy, new materialism is against causality, or determinism, per se. If we look to new materialist texts, however, (and see, for example, Barad's work) the type of causality that is being disputed is the linear causality that produces teleological accounts of oppression, in which the origin can be easily isolated.¹³³ Such a causal ontology involves re-thinking history and the logics of oppression as if they were a recurrent pattern in history. But, from a (new) feminist materialist perspective, oppression is neither logical, nor predictable.

¹²⁵ Barad, Meeting the Universe Halfway.

¹²⁶ Barad, "Quantum Entanglements and Hauntological Relations."

¹²⁷ Barad, *Meeting the Universe Halfway*.

¹²⁸ Rick Dolphijn and Iris van der Tuin, New Materialism: Interviews & Cartographies (Ann Arbor: Open Humanities Publishing, 2012).

¹²⁹ See also the introduction to this volume for further elaboration on this trajectory, and Lorenz-Meyer's contribution to this volume wherein she comments upon those elements of feminist pedagogy that participate in this discussion.

¹³⁰ Lena Gunnarsson, "The Naturalistic Turn in Feminist Theory: A Marxist-Realist Contribution," *Feminist Theory* 14.3 (2013): 3–19.

¹³¹ Ibid., 8.

¹³² Ibid.

¹³³ Dolphijn and van der Tuin, New Materialism.

On the other hand, affirming that oppression is neither logical, nor predictable, does not mean that we are including causality in a set of prohibited terms for contemporary feminist scholarship or that change belongs in the realm of the impossible. In fact, as Gunnarsson herself states, "change is indeed a central concern for feminists,"134 even if this "change" does not follow a linear pattern. Barad argues that finding this change is only possible when "queer[ing] causality."¹³⁵ As we recall, intra-actions entangle past, present, and future, meaning that they do not fit a linear consequence that divides them. Thus, past, present, and future are part of the entanglement, producing changes in the way we conventionally think about these terms. These three elements are permanently being reworked through each other: the past stops being a static, unchangeable category, while the present is no longer a representation of what is happening contemporarily, or, the future, an imaginary to pursue. Rather, the three of them become a differing genealogy of contemporary phenomena able to engage with ethical performances of the world. This, though, does not mean that a "provisional"¹³⁶ resolution cannot be obtained. It is this provisional resolution that prompts the very act of resistance in the sense that a contemporary resolution affects the way we think about the past and the future, altering politics in the very capacity of disrupting oppressions. Coming back to our classroom, we find that, "provisionally," spaces, times, and matter conflate to promote the creation and re-creation of political knowledge; a knowledge cartographically based in and on feminist theory to assess contemporary problems that help to better understand certain patterns within hegemonic oppressions.

In Barad's own words, "indeterminacy is only ever partially resolved in the materialization of specific phenomena: determinacy, as materially enacted in the very constitution of a phenomenon, always entails constitutive exclusions (that which must remain indeterminate)."¹³⁷ Therefore, indeterminacy does exist, but it is always partially or provisionally resolved through constitutive exclusions or "exteriorities within" at a particular moment in time. These exteriorities within

¹³⁴ Gunnarsson, "The Naturalistic Turn in Feminist Theory," 8.

¹³⁵ Barad, "Quantum Entanglements and Hauntological Relations," 247.

¹³⁶ Nina Lykke, Feminist Studies: A Guide to Intersectional Theory, Methodology and Writing (New York: Routledge, 2010), 146.

¹³⁷ Karen Barad, What is the Measure of Nothingness? Infinity, Virtuality, Justice/Was ist das Maß des Nichts? Unendlichkeit, Virtualität, Gerechtigkeit, (Kassel: dOCUMENTA (13): 100 Notes – 100 Thoughts / 100 Notizen – 100 Gedanken | Book N°099; English & German edition, 2012), 10.

can be a point of departure at another time; that is, the re-workings of the phenomena as well as a diffraction of differential patterns, thus allowing political interventions. In the case of the classroom, indeterminacy refers to everything happening outside of the classroom, and by that, I am referring not only to what is physically outside of the walls, but also contents that have been not included in the theoretical dance, demonstrations happening outside, and so on. Thus, causality is the intra-action between past, present, and future, and causes and effects are part of a momentary resolution within phenomena, an agential cutting,¹³⁸ which is precisely that which remains indeterminate. Agency is here framed as the possibility of the openness of the unfolding of the world; that is, those indeterminacies that determine past, present, and future. Politics are certain specificities of the world that affect individuals in an oppressive way at a particular moment. As Barad explains, change is theorized (and theorizing, in a political sense) as an unstable property of every intra-action (through constitutive exclusions enacted via agential cuttings).¹³⁹ That is, these momentary exclusions are, at the same time, potential sites for oppressions and spaces for social contestation. Spacetimemattering, then, is the entanglement of differing intra-actions that materialize during a situated context (in this case, the classroom), enabling agency and acts of resistance. This concept of agency, consequently, promotes the agential space needed in order to disrupt hierarchies of power. Thus, the classroom becomes a political agent in its engagement with what is presumably "left outside," which is at once inside with a future re-working of the apparatus.

All in all, the seminar has itself been a differentiation in the ways gender and sex are framed as human conditions, opening up political capacities for these terms. Engaging with differing practices every day implies yet another re-working of the phenomena itself, which, in the seminar, was the politics of feminist theory. By resisting thinking of such terms as only human conditions, an "ethicsto-come" was founded, based on moving beyond and together with the terms of sex and gender. Even though intra-actions were everywhere and nowhere in the classroom, the differing relations were constantly opening up new spaces to reconfigure oppressive terms, provisionally. Therefore, in our development within the relation produced between teaching-learning, the participants there found

¹³⁸ See Schmitz in this volume for a more detailed explanation of the agential cut as it relates to practices of knowledge production.

¹³⁹ Barad, "Quantum Entanglements and Hauntological Relations."

moments in which thinking of gender and sex produced acts of resistance in everyday life beyond the anthropocentric scene; for instance, insects working distribution as methodological possibilities that engage actively with the environment, or the limits/relations between violent others/ones, as we might find in exploring NGOs. The classroom turned itself into an act of resistance that considered subjectivity beyond specifically *human* subjectivity.

Class/ing the Space: Intra-Acting Knowledge Sharing and the Creation of Knowledge

Teachers and students are always already embedded in knowledge practices; and these knowledge practices are, at the same time, always under a permanent re-working.¹⁴⁰ Certain knowledges matter, while some others remain invisible in neoliberal and hegemonic practices. How certain practices become visible while others remain marginal is also an issue that can be re-worked in the classroom. Therefore, connecting this chapter with the central concerns of the book, I have also focused on the possibility of enhancing differing knowledge practices.¹⁴¹ Taking into account that the main subjects involved in this circulation of knowledge are teachers and students, we can also ask how central the role of the teacher can be when the subject is never the sole origin of those re-workings. If the teacher's positionality is entangled with/in a Baradian apparatus of knowledge production,¹⁴² it is not possible for her/him to be the origin of *all* knowledge.

Teaching feminist materialisms is already a political option that implies, as Haraway might say, *taking the risk to know something instead of trying to know everything*;¹⁴³ that is, locating knowledge instead of globalizing it. We continue to make pedagogical decisions that infer changes in the ways we engage with the world, while at the same time, this decision-making is always already entangled with/in the phenomena itself and the requirements (determinations) that a particular classroom has. However, de-centering the figure of the teacher also implies de-centering teaching. How do we think about the syllabus of a class without involving one, specific subject? What is the role of the different elements

¹⁴⁰ Braidotti, "Posthuman, All Too Human," 197–208.

¹⁴¹ As Nitis discusses in her contribution to this volume.

¹⁴² Barad, *Meeting the Universe Halfway*.

¹⁴³ Donna Haraway, When Species Meet (Minneapolis: University of Minnesota Press, 2008).

entangled in this specific act of resistance? Teaching feminist materialisms entails rethinking the processes of differentiation in which this act is involved and, because of that, it also entails working through the notion of the classroom as a permanent process of making and unmaking the classroom itself. If we are to learn not only from human subjects, the teacher/classroom needs to be dis/located, while at the same time a pedagogical process of teaching-learning is always entangled within and without this dis/location.¹⁴⁴

Making and unmaking the classroom itself entails producing a permanent reflection upon what material processes are made visible and invisible while engaging with the creation of knowledge. De-centering the teacher in this process is nothing new for feminist pedagogies. Nevertheless, attending to the nature of the intra-actions involved in this process allows the political transformation of the teaching/learning process and a deeper understanding of it. To include intra-action in the analytical scope becomes absolutely necessary, and observation becomes one key method. Nevertheless, this "observation" becomes a collective process in which conventional meanings embodied in methodological processes become altered. That is, observing attends to what is visible as much as what is invisible, as well as considering that the possibility of critically reflecting upon different objects is necessarily an intra-action, produced (and productive) within the dis/location of the classroom. Observing visible and invisible relations attends to the limits of the researcher in the research (the *im*possibility of knowing everything, or the possibility of excluding certain things even inasmuch as one is bound into these exclusions); while it also pays special attention to how relations are iteratively re-working themselves, and whatever seems invisible at first sight becomes visible when observed at a different angle. Therefore, the phenomenon in question, that is, the intra-active classroom, becomes an always already process, orientated to promote acts of resistance. This is why emphasizing differing observations is necessary in order to facilitate this change. Coming back to our pedagogical options, de-centering the teacher in favor of intra-actions is always already a political act.

However, how can we make this fit institutionally? Is feminist materialism necessarily a radical other to the academy itself? It is a question of which bodies matter and how knowledge produces/reproduces that division, how certain

¹⁴⁴ With this, and to revisit an earlier claim, we can clearly see how notions of what might reside "inside" and "outside" of the classroom are thrown into disarray.

bodies become intelligible, and what is an intelligible body inside a particular knowledge production/reproduction. We should pursue an ethics for the conditions of life (that is, thinking about different oppressions without aiming to reproduce hierarchies of different bodies) in the engagement between ontology, methodology, and epistemology.

The Im/Possibility of Teaching Material Feminisms?

In order to provisionally respond to these questions, I would like to come back, again, to how we started. That is, with Barad's reworking of agency and Coole's approach to thinking change. In this chapter, I have argued that the school, the university, and the classroom are places where "change could be targeted, and where and how power is insinuated to reproduce or advance structures that are inimical to social and planetary well-being."¹⁴⁵ Difficulties are presented at the institutional level, but agreements can be opened up between those humans involved in the process of teaching that can radically alter such a process. The conceptualization of a classroom as an agential space in the Baradian sense opens up potential acts of resistance where "change could be targeted," and precisely this is what it means to teach feminist materialisms.

Barad's notion of agency has allowed us to re(con)figure the very act of performing politics as a relation within and without elements beyond human conditions. Thinking with agential realism in the relation between teaching and learning as a process within and without a classroom has important consequences for teaching with feminist new materialisms. First, if we consider feminist materialisms as a radical other to the academy itself, it becomes always already a constitutive outside, the exteriority within the academy and, therefore, the very act of resistance; the possibility for agency. Perhaps, as I have attempted to indicate with this chapter, it is time to also blur the limits of what and how a classroom constitutes, and perhaps this is where we will find the re(con)figuration of what we understand to be teaching (new) feminist materialisms. Second, dis/locating the classroom always and already (necessarily) involves that the object of the class is dis/located too. It is this act that a feminist materialist classroom *is*; the intra-action that enhances the tension between the location and dis/location of

¹⁴⁵ Diana Coole, "Agentic Capacities and Capacious Historical Materialism," 14.

the classroom. For instance, if we are teaching outside the conventional definition of the classroom, we can focus on whatever is in our surroundings, like the weather,¹⁴⁶ and observe, collectively, intra-actions with it as well as the phenomenon's own conditions for surviving in a certain environment. Or, learning from a demonstration the micro-politics entailed in the relation between thousands of people to achieve a determined goal, for example, feminism. Many other examples can be pointed out. Following other renderings of critical feminist pedagogy, teaching with feminist new materialisms involves thinking of the classroom not as just a physical room (albeit, it can also be such a space), the same as the teacher does not need to be the origin of knowledge. It is necessary to permanently negotiate differing possibilities for what constitutes as pedagogy in order to "become with" teaching feminist materialisms. Doing this does not prevent us from thinking social change; rather, we engage with and as social change.

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¹⁴⁶ As Neimanis demonstrates in her contribution to this volume.

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COLLABORATIVE ENACTMENTS IN TEACHING WITH FEMINIST MATERIALISM

Sigrid Schmitz

Situating Myself within the Field

As I began writing this paper, I was somewhat uncertain of how to write on the topic of "teaching with feminist materialisms." Should I write about my experiences teaching *about* feminist materialism, teaching *with* feminist materialism, or something else? Then I realized that my teaching is always about and with feminist materialism. I thank the editors for this conceptualization and, as a result, in my following considerations, I write about teaching *with* feminist materialism as rich theoretical field, from which didactical implications emerge.

I start this chapter with some preliminary remarks to situate myself within this field and to outline the two particular principles of my teaching with feminist materialism that I aim to focus on for further discussion here. First, our entrepreneurial university in Vienna, Austria advises us to create synergetic value through "research-based teaching" by including students and early-stage researchers as early as possible in academic work. Albeit that I am certainly more than a little ambivalent to such demands to improve the academic entrepreneurial self in the era of accelerated neoliberalism, I also see certain possibilities within these demands. For me, teaching with feminist materialism is as much research-based teaching as it is teaching-based research. I develop my ideas and questions in debating feminist materialism with colleagues and perhaps even more so with students. Moreover, the combination of research and teaching not only allows for a discussion of epistemological questions, but also for an engagement with the implementation of conceptual perspectives and discourses in empirical work. In this chapter, I outline how the framework of feminist materialism offers a fruitful grounding to realize the entanglements of teaching and research, as well as of theory and practice.¹⁴⁷

¹⁴⁷ One might also refer here to the way the theory and practice relation is taken up in the diffractive sense, proposed by Thiele in her contribution to this volume.

Secondly, for about three decades I have been teaching in trans-disciplinary settings of gender studies, i.e. for students, graduates, and postgraduates from various disciplines such as social and cultural sciences, life sciences, and technical sciences. These *transdisciplinary feminist classrooms* require particular didactical approaches to reach a reflective engagement with topics of feminist materialism due to the different disciplinary backgrounds of the participants, concerning their prior theoretical concepts, empirical methodology, and learning techniques.¹⁴⁸ I deepen these approaches with examples of how I have integrated techniques of collaborative enactment into my transdisciplinary teaching.

Teaching with Feminist Materialism in Transdisciplinary Feminist Classrooms

As my first step, I need to clarify the relation between my two perspectives, and I will do this in the following, as well as offer my personal research-teaching herstory, which will include what can be referred to in the feminist materialist lexicon as some space-time enfoldings.¹⁴⁹

Resulting from my engagement with Donna Haraway's concept of situated knowledges,¹⁵⁰ which demands taking into account the politics of location and embodied conditions of knowledge production, I have developed m*y position and understanding of feminist materialism.* Feminist epistemologies, from different angles (feminist science studies, feminist science technology studies, constructionist sociology, poststructuralist positions, and queer discourses), have been questioning and deconstructing the binary opposition between nature and culture for many years. Haraway has introduced the term "naturecultures" in her *Companion Species Manifesto* to point to the inseparable entanglement of the material and the semiotic as "parts don't add up to wholes in this manifesto — or

¹⁴⁸ Sigrid Schmitz and Katrin Nikoleyczik, "Transdisciplinary and Gender-Sensitive Teaching: Didactical Concepts and Technical Support," *International Journal of Innovation in Education* 1.1 (2009): 81–95.

¹⁴⁹ Karen Barad, "Quantum Entanglements and Hauntological Relations of Inheritance: Dis/continuities, SpaceTime Enfoldings, and Justice-to-Come," *Derrida Today* 3.2 (2010): 240–268. With the term "space-time enfoldings," Karen Barad tries to deconstruct the notion of linear trajectories of development, both concerning phenomena and concepts of knowledge. Experience and history do not enfold as a progress from past to present to future, but enact iteratively by referencing back and forth into knowledge production.

¹⁵⁰ Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14.3 (1988): 575–599.

in life in naturecultures."¹⁵¹ Poststructuralist theories are of particular importance in criticizing the naturalization of gender and other normalization processes, as these scholars question simple categorizations by also including their intersections with different forms of racism, classism, ageism, dis/ablism, and bodyism.¹⁵²

Materialist discourses have recently taken up poststructuralist feminist and queer discourses and integrated a renewed consideration of corporealities into the analysis of socio-cultural developments, as well as in processes of knowledge production.¹⁵³ With her onto-epistemological framework, Karen Barad highlights the multiple relations between matter (as an agential component), research practices, concepts, meaning making, and representations of knowledge in constituting phenomena. Differing from Haraway's material-semiotic actors,¹⁵⁴ phenomena — according to Barad — do not represent separate entities with intrinsic features and boundaries that may interact with each other.¹⁵⁵ Phenomena constitute within and throughout the *intra-actions* of components, i.e. their dynamic relationalities form and constantly reshape phenomenal conceptions. It is only through the ongoing *dynamics* of processes and changes within phenomena that the contours, specificities, and characteristics of entities materialize at a particular point of time; and Barad phrases this boundary making processes as "agential cuts."156 Researchers are part of the phenomenal becomings as they also enact particular agential cuts according to their research foci and empirical practices. This is what Barad calls "material-discursive practices."¹⁵⁷ In consequence, both Haraway and Barad address the inseparable entanglements of epistemology and empirical research in knowledge production.¹⁵⁸ I use both frameworks in my teaching with feminist materialism in transdisciplinary feminist classrooms (see following sections) to support students from different disciplinary backgrounds.

¹⁵¹ Donna Haraway, *The Companion Species Manifesto: Dogs, People, and Significant Otherness* (Chicago: Prickly Paradigm Press, 2003), 25.

¹⁵² Gabriele Winker and Nina Degele, "Intersektionalität als Beitrag zu einer gesellschaftstheoretisch informierten Ungleichheitsforschung," *Berliner Journal für Soziologie* 21 (2011): 69–90.

¹⁵³ Karen Barad, *Meeting the Universe Halfway* (London: Duke University Press, 2007).

¹⁵⁴ Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991), 149–181.

¹⁵⁵ Karen Barad, "Posthumanist Perfomativity: Toward an Understanding of How Matter Comes to Matter," Signs: Journal of Women in Culture and Society 28.3 (2003): 801–831.

¹⁵⁶ Barad, *Meeting the Universe Halfway*.

¹⁵⁷ Ibid.

¹⁵⁸ Elsewhere in this volume, Thiele has referred to this, in Barad's terms, as "onto-epistemology."

For students from the life and technical sciences, the engagement with these entanglements can sensitize them towards the discursive and methodological enactments in the knowledge production of real-world phenomena. The recognition of the dynamic agency of matter confronts students of the social and cultural sciences to rethink a purely discursive formation of knowledge and phenomena.

I could say that I started to teach with feminist materialism in the second half of the 2000s, in various courses concerning current debates about "new" feminist materialism, for example, titled "How Matter Matters: Bringing Feminist Theories to the Point" (Feministische Theorien auf den Punkt gebracht) in the summer term of 2008, or "Feminist Materialism - On the Re-Integration of Bodies in Feminist Epistemologies" (Zur Reintegration des Körpers in feministischen Epistemologien) in the winter term of 2010. The texts and anthologies I have used under these headings elaborate upon concepts, but do not offer so much of an empirical application¹⁵⁹ — a problem that my students were faced with in trying to understand and apply the concepts to their own work. Following the aim to dissolve the separation between theory and practice and to focus more on inherent theoretical-empirical entanglements, nevertheless, I point out the need to concretize and evaluate feminist materialist concepts through case studies. This approach can enable discussion regarding the potentials and limits of connecting theoretical and empirical work, and concerning its demands and critical outcomes; and conversely, the empirical work in which we are engaged also inspires and gives form to our epistemological debates.¹⁶⁰

In my opinion, the second key question of feminist materialism is: how can we address nature and matter as dynamic components and processes within material-semiotic networks or material-discursive becomings of phenomena, without reaffirming and legitimizing naturalizing power dynamics?¹⁶¹ This key question is of particular importance when teaching with feminist materialism in transdisciplinary settings that involve students of different learning and disciplinary cultures, such as life/technical sciences and social/cultural sciences. In

¹⁵⁹ E.g. Stacy Alaimo and Susan Hekman, "Introduction: Emerging Models of Materiality in Feminist Theory," in *Material Feminisms*, ed. Stacy Alaimo and Susan Hekman (Bloomington: Indiana University Press, 2008), 1–23; Barad, *Meeting the Universe Halfway*; Barad, "Posthumanist Perfomativity," 801–831; Myra J. Hird, "Feminist Engagement with Matter," *Feminist Studies* 35.2 (2009): 329–346.

¹⁶⁰ I thank Iris van der Tuin for this "vice-versa view," expressed during a discussion we had in Vienna in April 2014.

¹⁶¹ Cf. Sigrid Schmitz, "Feminist Approaches to Neurocultures," in *Brain Theory: Essays in Critical Neurophilosophy*, ed. Charles Wolfe (New York: Palgrave Macmillan, 2014), 195–216.

order to explain my setup of a transdisciplinary feminist classroom, I have to trace back to my work in the late 1980s. Instead of setting the starting point in the 2000s, I would prefer to say that I started research-teaching with feminist materialism from my background in feminist science studies and in feminist science and technology studies.

Having participated in a reading group with female biology students, it took us weeks upon weeks to understand the "first" books and papers of feminist science studies published in the mid-1980s.¹⁶² Coming from a culture based on the disciplinary and disciplining, argumentative logics of the life sciences, it was indeed a challenge because we simply did not "understand" these forms of feminist writing and argumentation. However, after years of struggling, we were proud to have come to some sort of sense of the entanglements and mutual impacts between what we had thought to be pure and neutral science and the social and cultural world. What a new scope of knowledge! The first seminar I gave for biology students, at the University of Marburg, Germany, in 1991, was enthusiastically titled "New Perspectives in Feminist Science Studies." What a disaster that was! Hardly any of the students understood the discourses and theoretical perspectives I presented. With this anecdote, I aim to stress the challenge of teaching feminist issues in transdisciplinary teaching contexts, due to the different "cultures" of learning and knowledge production. Referring to a learning setting of similar encounters, Robin Bauer calls for developing forms of "transcultural dialogue."163 Having worked as a teacher in gender studies, gender and science studies, and feminist science technology studies for about 25 years now, I have learned a little more about didactics; about how to meet students at their level of experience, about how to create transdisciplinary teaching environments, and about how to elaborate on topics at the interface of science, technology, society, and culture. But both my engagement in a female students' group, empowered by peer-to-peer discussions, and this early seminar have been crucial in the formation of my teaching principles and philosophy, which is: we are always taking part in a transcultural dialogue, and developing critical understandings always requires discussion and group work.

¹⁶² E.g. Evelyn Fox Keller, *Liebe, Macht und Erkenntnis. Männliche oder weibliche Wissenschaft?* (München: Hanser, 1986); Carolin Merchant, *Der Tod der Natur. Ökologie, Frauen und neuzeitliche Naturwissenschaften* (München: Beck, 1987). I cite these books with their German references because we studied them in German.

¹⁶³ Robin Bauer, "Hochschuldidaktische Realisierung von Lehre an der Schnittstelle der Wissenschaftskulturen," in Gender in Naturwissenschaften — Ein Curriculum an der Schnittstelle der Wissenschaftskulturen, ed. Robin Bauer and Helene Götschel (Talheim: Talheimer Verlag, 2006), 7–14.

In the following sections I present some of my experiences in applying different formats (seminars, lecture series, workshops, and theoretical-empirical projects), didactics, and tools (including the use of e-learning concepts and tools) to teach with feminist materialism. I will discuss how didactical concepts can meet the challenges of accounting for the theoretical-empirical entanglements of teaching *with* feminist materialism and create access to a form of reflective, interdisciplinary knowledge production guided by a respectful, transcultural dialogue.

Collaborative Enactments

Let me start with the two main guiding principles of my teaching: *group work* and *group discussion*. Based on my research and teaching experience, I am convinced that working and teaching with feminist materialism cannot be experienced as an individualized enterprise. We have to discuss, negotiate, and reflect on the cuts we make and on our enactments in the dynamics of phenomenal becomings,¹⁶⁴ and on the components we extract and include into our research vision.¹⁶⁵ The tasks of the "teacher," in my view, is to present and allocate tools for supporting and structuring group discussions, which are already didactical challenges themselves.

Student groups in my courses, for example, are asked to elaborate on "phenomena" understood in the Baradian sense (as outlined above). This includes an engagement with the linking of conceptual frameworks and empirical topics, and a reflection on the impacts and outcomes of these real-world phenomena in their discursive formations. My course setups start with a discussion of feminist materialist concepts, followed by elaborations on case studies by the students, reflecting on the "results," as well as their own engagement within the empirical work in relation to the theoretical concepts (see next section for details). For that reason, I am convinced of the need for the exchange of perspectives in developing a critical examination . This urge is grounded in feminist discourses on how to "come to adequate knowledge," as there has been a tremendous effort to search for, discuss, and promote new forms of knowledge production and knowledge negotiation. Here I only mention a few approaches, from standpoint

¹⁶⁴ Cf. Barad, "Posthumanist Perfomativity," 801–831; and Barad, *Meeting the Universe Halfway*.

¹⁶⁵ Cf. Haraway, "Situated Knowledges," 575–599.

theory¹⁶⁶ to "critical contextual empiricism"¹⁶⁷; conceptions for gaining "strong objectivity" and "strong reflexivity"¹⁶⁸; and "situated knowledges."¹⁶⁹

At the core of these "early" epistemological approaches is not only the assessment of criteria for "more objective" knowledge production. It is also the strong emphasis placed on the reflection of the impacts of scientific knowledge production in framing and legitimizing social power relations (including gender hierarchies), and the aim for politicized feminist scholarship to influence these outcomes. For teaching with feminist materialism, in consequence, I also include Haraway's network approach, i.e. creating coalitions between researchers, activists, and other human and non-human actors based on an "affinity" for certain, important topics and goals at a certain point in time, instead of proposing stable identities.¹⁷⁰ I take this into account when addressing the enactments of researchers, students, and research topics in my courses, a point that I will elaborate upon in what follows.

Course Structures

The principles and didactics on which my courses are based are adaptations of what has been called the *concept of "progressive inquiry*," developed by Minna Lakkala and co-workers at the University of Helsinki, Finland.¹⁷¹ This approach focuses on collaborative work in higher education by consistently, and from the start of a course, including the participants and students in creating the context of the course, setting up research questions, constructing working theories — then iteratively evaluating these theories critically, searching for information in complex knowledge domains, generating new questions, and developing new working theories, with the occasional combination of the steps mentioned. The

¹⁶⁶ Nancy Hartsock, "The Feminist Standpoint: Developing the Ground for a Specifically Feminist Historical Materialism," in *Discovering Reality. Feminist Perspectives on Epistemology, Metaphysics, Methodology, and Philosophy* of Science, ed. Sandra Harding and Merill B. Hintikka (Dordrecht: Kluwer, 1983), 283–310; Hilary Rose, "Hand, Brain, and Heart: A Feminist Epistemology for the Natural Sciences," Signs 9 (1983): 73–90.

¹⁶⁷ Helen Longino, *Science as Social Knowledge* (Princeton: Princeton University Press, 1990).

¹⁶⁸ Sandra Harding, Whose Science? Whose Knowledge? Thinking from Women's Lives (Cornell: Cornell University Press, 1991).

¹⁶⁹ Haraway, "Situated Knowledges," 575–599.

¹⁷⁰ Haraway, "A Cyborg Manifesto," 156.

¹⁷¹ Hanni Muukkonen, Minna Lakkala, and Kai Hakkarainen, "Technology-Enhanced Progressive Inquiry in Higher Education," in *Encyclopedia of Information Science and Technology*, ed. Mehdi Khorow-Pourm (Hershey: IGI Global, 2009), 3714–3720.

aim of this approach is to bring together teachers and students as a community of distributed expertise, to discuss knowledge from different perspectives and to share work and responsibilities concerning mostly all course tasks, from developing research questions to literature searches to feedback cultures. With its aim to support students' "academic literacy, scientific thinking, and epistemic agency, particularly when integrated with the use of appropriate collaborative technology,"¹⁷² the concept of progressive inquiry corresponds with my two principles of teaching with feminist materialism. The iterative re-questioning of the entanglement of phenomena under examination — developed by the students themselves — with concepts and epistemological perspectives, and the repeated discussion of the expertise and perspectives of students from different disciplinary backgrounds can deepen the understanding of the material-discursive framing of each topic of interest.

However, working with the epistemological concepts of feminist materialism and further applying and questioning these theoretical frameworks with empirical phenomena is not an easy task for students and teachers. As outlined above, back in 2008 and by first reading articles and books on the framework of the "new" feminist materialism, we repeatedly arrived at a point in the discussion where we found that "each paper emphasizes bringing matter and discourse together, but how? And how can we 'hear' matter speak?"¹⁷³ I highlight at least two important challenges in grounding case studies iteratively within the demands of this feminist materialist framework. The first is how to structure the great deal of components, i.e. the material-discursive terms and aspects, and their intra-actions for analyzing a given phenomenon and how to negotiate making the agential cuts and extractions that enact the students' standpoints and perspectives into the phenomena. The second challenge refers to the demand of how to come to an at least preliminary presentation of the results of a collaborative analysis. Reaching a preliminary "end point" is a problem in nearly every critical and interdisciplinary research project, and this challenge applies as well for gender studies students. We, as teachers of gender studies, have worked on and discussed the principles of conveying techniques for questioning all the influencing categories

¹⁷² Ibid., 3718.

¹⁷³ E.g. students' claims, taken from Sigrid Schmitz, "How Matter Matters: Bringing Feminist Theories to the Point," *Personal Course Notes* (unpublished, 2008).

in our own research.¹⁷⁴ Most of our students gain this capacity on a professional level, resulting in an ongoing process of questioning themselves throughout their academic work (e.g. never-ending Master's and PhD thesis projects). What we have not been teaching in equal measure are the skills that are necessary for concretizing and extracting a standpoint at some point in time; a standpoint that will surely change in the future (and that lack in feminist pedagogies is maybe due to the same problems in our work and publications). In my view, strategies that allow for developing and maintaining a specific standpoint at a particular point in time, including our acceptance that it may change in the future, need to be strengthened in feminist pedagogics. The framework of feminist materialism accounts for the dynamic perspective of phenomenal becomings and of knowledge production, both mutually constituting each other and constantly changing. It can contribute to an understanding of agential cuts as timely, situated, changeable, and always negotiable, with consequences on and for the materialization of phenomenon.

It would be necessary to devote another paper to elaborate on this pedagogical challenge; here I can only offer one clue as to how one may approach it. I suggest that my students visualize a "landscape" (for example, by creating a map or using another format) of all the interrelated factors and perspectives of their topic and — as in their course work — draw a red line through this landscape: a route to follow for their group research. This is also to "visualize" the cuts, foci, and also exclusions, which have to be negotiated and explained by the students at that point of time based on their particular standpoint and the aim of their case study — and I try to stress that I face the same challenges each time I do research on a topic or publish a paper. For these questions and tasks, in the following section, I elaborate on some of the tools I have used.

Supporting Tools

Besides other tools for collaborative work, for example wikis or collaborative text annotation systems, I use concept-mapping technologies to support

¹⁷⁴ Robbin D. Crabtree, David A. Sapp, and Adela C. Licona, "Introduction: The Passion and the Praxis of Feminist Pedagogy," in *Feminist Pedagogy: Looking Back to Move Forward*, ed. Robbin D. Crabtree, David A. Sapp, and Adela C. Licona (Baltimore: The Johns Hopkins University Press, 2009), 1–22.

these approaches within the context of constructivist learning theory.¹⁷⁵ Characteristics of constructivist learning scenarios, as opposed to the more instructional or directive, cognitivist approaches, are that learners can decide individually where to start the learning process, that different learning paths are being opened up, that the self-reliance of learners is stressed, and that a general goal is to achieve a cooperative rather than competitive learning atmosphere.¹⁷⁶ Concept-mapping technologies offer tools to structure knowledge from multiple perspectives and to integrate initially unfamiliar terms (or concepts from other scientific and non-scientific cultures) into one's own knowledge frame. Terms (named concepts) and their correlations are depicted in two- or multi-dimensional forms as maps with a non-hierarchical structure.¹⁷⁷ By encouraging students to create concept maps collaboratively, I try to foster an active construction of knowledge during the map-creation process, as we participants have to clarify our definitions and interpretations of terms, and we have to try to externalize our knowledge.

In comparison to the creative possibilities that paper-based concept mappings offer, there are some advantages to electronic concept mapping tools: maps of related terms can be stored, distributed, and edited individually or collaboratively outside of the course. The majority of concept-mapping tools also offer links to miscellaneous data along with website links to terms and relations. We have tested various concept mapping tools¹⁷⁸ in our courses and found that these tools have potentials but also limitations. As our students have evaluated: these tools support the modification of terms more easily than paper versions and allow a non-formalized, yet completely definable naming of relations. However, electronically generating and positioning terms is more cumbersome and time-consuming, and may disrupt the discussion processes.¹⁷⁹ Concept-mapping

¹⁷⁵ For a broader elaboration on the use of e-learning facilities for reflective group work, see Gill Kirkup et al., "Towards a Feminist Manifesto for E-Learning: Principles to Inform Practices," in *Gender Issues in Learning and Working with Information Technology: Social Constructs and Cultural Contexts*, ed. Shirley Booth, Sara Goodman, and Gill Kirkup (Hershey: IGI Global, 2012), 255–274; Sigrid Schmitz and Ruth Meßmer, "Working in Groups: Gender Impacts in E-Learning," in *The Gender Politics of ICT*, ed. Jacqueline Achibald, et al. (Middlesex: Middlesex University Press, 2005), 265–280.

¹⁷⁶ Sigmar-Olaf Tergan, "Digital Concept Maps for Managing Knowledge and Information," in *Knowledge and Information Visualization*, ed. Sigmar-Olaf Tergan and Tanja Keller (Heidelberg: Springer, 2005), 185–204.

¹⁷⁷ Sigrid Schmitz and Elisabeth Grunau, "*Concept Mapping from a Perspective of Gendered Diversity*" (paper presented at the 5th European Symposium on Gender & ICT, Bremen, Germany, 2009).

¹⁷⁸ The Open Source System CmapTool (IHCM, n.d.) is free of charge and comparatively easy to install and to operate; see Schmitz and Nikoleyczik, "Transdisciplinary and Gender-Sensitive Teaching," 81–95.

¹⁷⁹ For details, see, Schmitz and Nikoleyczik, "Transdisciplinary and Gender-Sensitive Teaching," 90-91.

is just one tool to structure components, cuts, or research questions, and their relations. I do not use these tools for any and all terms, and sometimes they only serve as a backdrop for me to structure my teaching concepts.

There is another challenge in such collaborative work: how to present the results of the group work as having emerged through an ongoing process. In my experience, it has been beneficial to support students in presenting in the following manner: (a) you should give something to the plenum and integrate the plenum, and you can use the plenum to further develop your work and concepts; and (b) in your presentation, you have to briefly walk the plenum through the path that took you to your current discussion of the topic. Do not start at your end point! (See the description of my own experiences with teaching my first course on feminist science studies above).

My task as a teacher is to provide guidance and to propose techniques that can be used to integrate the plenum into the presentation sessions, e.g. brainstorming, solving tasks in small student groups, and "walks and talks" (i.e. wandering around and discussing). In consequence, the exam for my students is not a formal seminar paper, but instead each group is asked to decide on the best "way" of extracting and summarizing the preliminary end point of their research. Their final exam can take on different forms, such as collective papers, Prezis, audio recordings, drawings, and so on.

Concerning the course format of a lecture series with a broad frame of perspectives and talks from invited experts, these sessions are prepared by the students by discussing the experts' suggested readings. These readings are helpful in giving the students an understanding of basic terms and concepts, and allow for a more grounded and differentiated discussion with the experts afterwards. When I use the lecture series format, I often give a particular assignment for the exam; specifically, writing a position paper. Position papers depict an individual, controversial debate on a topic. They enable the student to elaborate on their own argumentation regarding that topic. The position itself is not the criterion for grading; it is the capacity to refer and extract one's own arguments in relation to the discussions and presentations during the series. The quality of the position paper reflects just as much the skills gained by the student as it does the teacher's and expert's capacities to convey "knowledge" about often dissenting perspectives.¹⁸⁰

¹⁸⁰ Here we might find an example in practice of Nitis' suggestions, discussed in this volume, regarding the need to complicate a pedagogical model of "mastery."

Responsibility and Accountability: Generating Transcultural, Respectful Dialogues

As I have indicated in the introduction to this chapter, my transdisciplinary courses are centered around the question of how to relate theory and practice in teaching and researching with feminist materialism, and to interrogate the potentials and limits of this framework when students aim to address ethical and socio-political aspects and consequences that such a renewed investigation into the connection between culture, matter, and nature could have for gender debates.

As discussed above, Barad has developed her ethico-onto-epistemological reflections by pointing out the responsibility and accountability of researchers, who engage in making agential cuts and, in such, impact the outcomes of the constituting phenomena they are elaborating on.¹⁸¹ The students in my courses often articulate one major problem in dealing with feminist materialist concepts: in the course of a lecture series on feminist materialist approaches, they repeatedly have stated that intra-acting everything challenges the call for responsibility and accountability in their own research and positioning. The students, furthermore, have asked in the discussion sessions: "what components and what intra-actions count more?"; "Which are t o be considered in the agential cuts we make and what are the impacts and outcomes of our work?" And furthermore: "particularly if phenomenal becomings are in a constant dynamic movement, how can we [the students] take responsibility or foresee the outcomes of our enactments that result from the cuts we set in our research?"

In a recent seminar on feminist materialism, a student and I attempted to present Barad's more current discussions on quantum loops.¹⁸² Quantum loops express the discontinuity of quantum materializations and the dislocation of the probabilities of quantum states in time. Quantum physics takes these phenomena to debate on the possibility of time crossings between past, present, and future. Barad discusses "space time enfoldings" in relation to the question of how to account for the responsibilities linked to one's own work in the past, present, and future.¹⁸³ The

¹⁸¹ Karen Barad, "Nature's Queer Performativity," Kvinder, Køn og forskning/Women, Gender and Research 1–2 (2012a): 25–53.

¹⁸² See Barad, "Nature's Queer Performativity," 25–53; and Karen Barad, "On Touching — The Inhuman that Therefore I Am," differences: A Journal of Feminist Cultural Studies 23.3 (2012b): 206–223.

¹⁸³ See also Barad, "Quantum Entanglements and Hauntological Relations of Inheritance," 240–268.

student explained this quantum world and our plenum tried to figure out something close to a more or less common understanding of time-space-enfoldings-responsibility-accountability-unforeseenness for the future. I shared a story I once read in a popular scientific journal, using it to explain the "grandfather paradox." It went like this: imagine time is a worm, enfolding and knotting at some points (where you could only move in between time). If you jumped into the past, met your grandfather, fell in love with him, and he with you, then he would not have met your grandmother and, consequently, you would not have been born. This paradox, together with the quantum loop discussion, brought us to some sense of what Barad could mean when she accounts for responsibility by stating:

The past and the present and the future are always being reworked. And so that says that the phenomena are diffracted and temporally and spatially distributed across multiple times and spaces, and that our responsibility to questions of social justice have to be thought about in terms of a different kind of causality. It seems very important to me to be bringing physics to feminism as well as feminism to physics.¹⁸⁴

Referring to the last sentence in this quote, I try to transfer this perspective to a responsible, transdisciplinary dialogue between students from life/technical sciences and social/cultural sciences when teaching with feminist materialism. It is necessary to create and maintain a respectful atmosphere for "transcultural" dialogue (as outlined in the beginning of this chapter) that takes different forms of communication and learning culture into account, that discusses discipline-based term definitions and meanings (e.g. in the case of the term of "objectivity," with its long-standing and ongoing debate on the use of strong yet tarnished terms, or regarding the introduction of different terms),¹⁸⁵ and that acknowledges the experiences and standpoints of all participating students. Together with Ruth Meßmer, I have elaborated elsewhere the demands and features of such a dialogue within interdisciplinary courses for students from gender studies and computer science.¹⁸⁶ To briefly summarize:

¹⁸⁴ Karen Barad cited in Rick Dolphijn and Iris Van der Tuin, New Materialism: Interviews & Cartographies (Ann Arbor: Open Humanities Press, 2012), 68.

¹⁸⁵ Harding, Whose Science? Whose Knowledge?; and Haraway, "Situated Knowledges," 575–599.

¹⁸⁶ Ruth Meßmer and Sigrid Schmitz, "Bridging Disciplines: Gender Studies and Computer Science in an E-learning Course," in *Gender Designs IT: Construction and Deconstruction of Information Society Technology*, ed. Isabel Zorn et al. (Wiesbaden: VS-Verlag, 2007), 142ff.

The high degree of collaboration between science/technology "experts" and gender "experts" has opened the possibility to reflect not only on discipline-specific imprints, but also on the challenges of knowledge production for social discourse and power relations. At the same time, the discussions have been based on the students' professional standards and thus permitted an interaction predicated on respect. We considered this approach quite successful. Much more than a theoretical preoccupation with diversity, the practical experience with "respected difference" has seemed to be important in supporting the goal of applying strategies of transcultural dialogue within these teaching contexts.¹⁸⁷

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¹⁸⁷ Ibid.

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RETOOLING MEMORY WORK AS RE-ENACTMENT

Dagmar Lorenz-Meyer

As soon as she changed into a swimsuit and entered the swimming area, she felt the stares. She was ashamed of how she looked. She felt her skin on the body undulating and showing the flaws. She tried to pull in her belly but the cellulite on her body did not pull in. In a bikini that covered only a few parts of her body, she felt the perceived shortcomings of her skin: it wasn't tanned, but light, with grooved cellulite on thighs and buttocks with thousands of tiny scars stretch marks from when a teenager has grown up so fast. No, she did not feel good in her skin, if it had all to see... ("Skin")¹⁸⁸

Women's accounts of not feeling well in their skin can appear uncannily familiar. In this narrative, the skin's waviness, paleness, and scarring are felt through the eyes of others. A body emerges, bounded by skin that retains some marks of its material becoming and remains porous to the impressions of others. It is through sensing with the gaze of another that the body-subject feels "ill at ease" and isolated, finds her skin "repulsive" and covers it up.¹⁸⁹ As a method in which participants recall and put into writing, collectively analyze, and rewrite autobiographical memories of particular encounters in their "fleshy particularities,"¹⁹⁰ I have incorporated memory work in the course so that students could trace the matterings of bodies¹⁹¹ in situations that are relevant to them, experiment with being both subjects and objects of research, and collectively engage in situated

¹⁸⁸ Drawing on the method of memory work (Frigga Haug, *Female Sexualisation: A Collaborative Work of Memory*, trans. Erica Carter (London: Verso, 1999 [1983]); Frigga Haug, "Memory Work," *Australian Feminist Studies* 23.5 (2008): 537–541), this episode is written by a student in her early twenties as part of the Master course *Gender & the Body*, within the Gender Studies program at the Faculty of Humanities at Charles University in Prague.

¹⁸⁹ Ibid.

¹⁹⁰ Annemarie Mol, "Language Trails: 'Lekker' and its Pleasures," Theory, Culture & Society 31.2–3 (2014): 93.

¹⁹¹ Judith Butler, Bodies that Matter (London: Routledge, 1993).

theorizing.¹⁹² But I have also noticed that students find it much easier to analyze and theorize their experiences, for example, in relation to the "beauty myth" rather than to imagine other feelings and courses of action they could have taken in the encounters they describe. Experientially, bodily norms often seem impossible to dislodge.

In this essay, I want to return to the method of memory work and my ongoing experimentation with retooling this method in light of insights by new feminist materialisms. A central tenet of new materialisms and of related traditions of material semiotics¹⁹³ is that knowing and being are inseparably intertwined. Critical research, readings, and interpretations are material-semiotic interventions that do not merely describe reality in alternative ways, but also performatively enact different worlds and world-making practices (or "situated, relentlessly relational worldings," in Haraway's suggestive wording).¹⁹⁴ Is it possible to change students' embodied memories and attendant feelings of past events in the classroom? If affects, for example, tend to "stick" to particular "objects,"¹⁹⁵ such as skin color or stretch marks, how might they be re-routed and how might new imaginaries and "mattering practices"¹⁹⁶ take root? And if agency is not the property of pre-existing human actors, but emerges in the confluence of relations, how can a more symmetrical perspective on the relational co-constitution of human and more-than-human actors assist in these endeavors?

¹⁹² Situated theorizing is informed by the feminist materialist insights that all knowledge making is situated and partial, and that knowledge subjects and objects are relationally constituted in knowledge making practices (Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14.3 (1988a): 575–599). Karen Barad, in *Meeting the Universe Halfway: Quantum Physics and the Entanglements of Matter and Meaning* (Durham: Duke University Press, 2007), has suggested the notion of intra-action to highlight that this relation precedes the boundary makings of entities and that the apparatuses of observation remain inextricably entangled with what is observed (also Sauzet, this volume). In memory work, these transformative interrelations of "the researcher in the flesh" and the "researcher in the text" constitute a primary focus of attention (Michael Christie and Helen Verran, "The Ethnographer in the Text: Stories of Disconcertment in the Changing Worlds of North Australian Social Research," *Learning Communities: International Journal of Learning in Social Contexts* 12 (2013): 1–3).

¹⁹³ John Law, "Actor-Network Theory and Material Semiotics," in *The New Blackwell Companion to Social Theory*, ed. Bryan S. Turner (Oxford: Blackwell, 2009), 141–158.

¹⁹⁴ Nickolas Gane, "When We Have Never Been Human, What Is to Be Done? Interview with Donna Haraway," *Theory, Culture & Society* 23 (2006): 143.

¹⁹⁵ Sara Ahmed. *The Cultural Politics of Emotion* (New York: Routledge, 2004), 15.

¹⁹⁶ John Law, "Matter-ing, or How Might STS Contribute?" Centre for Science Studies, Lancaster University, June 30, 2004, http://www.lancaster.ac.uk/sociology/research/publications/papers/law-matter-ing.pdf (accessed on April 13, 2015).

Taught in English, the course Gender & the Body is attended by Czech and international students who do not necessarily have a background in gender studies, but in the humanities, arts, and (more rarely) sciences.¹⁹⁷ Here, I focus on the stories enacted in the winter semester of 2013–14, in which the students in this course chose to explore the subject of skin. Autobiographical stories describe how their skin was touched, cracked and burst open, emitted fluids of blood and sweat, blistered, bruised, and healed. The agency of skin is prominent in these narratives on how skin materializes in a field of affective interrelations that Manning calls "body-worlding,"198 where sensing bodies attend to the world that at the same time tends towards the body. Since these fleshy materializations of skin (such as flushes, scarring, or sweat) cannot be controlled, the human subjects in the text often feel vulnerable and powerless. Memory work has been conducted alongside lectures and discussions about feminist writings on the interrelations of bodies and environments, soma and psyche, and discourse and materiality. In contrast to a common sense understanding of human bodies as bounded, unitary, and fixed, the course emphasizes new materialist renderings of bodies as relationally co-constituted with, and affected by, myriad other subjects/objects. A central concern of the skin project has been to consider skin not only as boundary but also as a connector, and to examine what new availabilities and forms of connectivity "skin" might bring into being.¹⁹⁹

Re-envisioning the method of memory work, and the temporalities and materialities it implies, I suggested, at the time, that in final group presentations students should "re-enact" or re-stage their autobiographical memories, paying

¹⁹⁷ This interdisciplinary and international diversity is facilitated by the European Union student exchange program Erasmus and a unified European higher education accreditation system. The Faculty of Humanities currently has bilateral agreements for student mobility with 54 higher education institutions in 20 European countries. In 2013–14 about half of the course participants were Erasmus students.

¹⁹⁸ Erin Manning, "What if it Didn't All Begin and End with Containment? Toward a Leaky Sense of Self," Body & Society 15.3 (2009): 35.

¹⁹⁹ The notion of availability or "the prepared openness for an event" has been introduced by Gomart and Hennion in their work with drug users and musicians ("A Sociology of Attachment: Music Amateurs, Drug Users," in *Actor Network Theory and After*, ed. John Law and John Hassard (Oxford: Blackwell), 220–247). Here, it describes a sense of welcoming "external" forces, "a bracketing away of control and will in order to be rendered 'beside oneself'" (221) that troubles oppositions of subject/object and active/passive. Taking the example of human-animal relations, Despret has highlighted the role of belief and concern that can make humans and animals "available" to an event: "Both are active and both are transformed by the availability of the other. Both are articulated by what the other 'makes him/her make'" (Vinciane Despret, "The Body We Care for: Figures of Anthropo-zoo- genesis," *Body & Society* 10.2–3 (2004): 111–134). In class, I have suggested that the materiality of skin, "a border that feels" (Sara Ahmed and Jackie Stacey, "Introduction: Dermographies," in *Thinking Through Skin*, ed. Sara Ahmed and Jackie Stacey (London: Routledge, 2001), 6), similarly makes subjects and worlds available to each other in particular ways.

close attention to the materialities in and of their narratives (the physicality of skin and what "surrounds" it — temperature, smells, clothes, the built environment, and more, as well as the ways in which they register corporeally). They were to experiment with recombining particular components or relations to try out other courses of action.²⁰⁰ By necessity, this experimenting was to take place in the temporally truncated format in which this course is taught. To meet the needs of a growing body of distance learning students at the department who typically work full-time and/or may have family responsibilities, classes meet only four times for three hours each over the semester — evidence of conditions of academic capitalism that promote an organization of teaching as a transmission of positive knowledge and skills at the expense of possibilities of collective knowledge making, action, and response.²⁰¹ Moreover, for all the emphasis on the importance of engaging students affectively in the gender studies classroom,²⁰² generating emotional "displacements"²⁰³ or "affective dissonance,"²⁰⁴ it is less clear how to instigate such transformational enactments.

"Enabling a Different Past to Emerge": Haug's Method of Memory Work

Venturing to transform knowing and being and to expand capacities for action, feminist pedagogy has long emphasized the mutual imbrication of theory and practice,²⁰⁵ knowledge and power, and affective investments and epistemic pur-

²⁰⁰ This focus on materiality is not meant to re-instate a problematic opposition between matter and ideality. More heuristically, it is an encouragement for students to attend to more-than-human actors that are relationally entangled in a course of action, but typically remain invisible and taken for granted; e.g. Daniel Miller, "Introduction: Materiality," in *Materiality*, ed. Daniel Miller (Durham and London: Duke University Press, 2005), 1–50.

²⁰¹ See also Meißner in this volume. While this move has opened up gender studies to mature, working students from regionally diverse places, it has also been imposed by university administrations to access (more) state funding. Present and distant (or "combined") learning degrees are considered equivalent. In contrast, Haug's memory work projects, which I attended briefly in the late 1980s in Germany, typically span multiple semesters and include extensive readings.

²⁰² Elspeth Probyn, "Teaching Bodies," Body & Society 10.4 (2004): 29.

²⁰³ Teresa De Lauretis, "Displacing Hegemonic Discourses: Reflections on Feminist Theory in the 1980s," *Inscriptions* 3–4 (1988): 138.

²⁰⁴ Clare Hemmings, "Affective Solidarity: Feminist Reflexivity and Political Transformation," *Feminist Theory* 13.2 (2012): 150.

²⁰⁵ See Hinton and Treusch (this volume) on how theory constitutes as embodied and political practice.

suits.²⁰⁶ Crucially, as a project to "recast and remake the world,"²⁰⁷ create "new worlds/new words,"²⁰⁸ and "imagine that which is unimaginable,"²⁰⁹ feminist practitioners have stressed that reading and writing practices are *material* and remain rooted in what *is* (emerging).²¹⁰ They have also remained wary of resolving contradictory, ambivalent, or uncertain moments in feminist analysis and imaginings.²¹¹ Unlearning particular ways of seeing and feeling, and working through one's own history have become integral to learning and imagining alternative worldings.²¹² A pedagogy inspired by new feminist materialisms draws on this diverse tradition. More radically perhaps, it challenges theory/practice divides by relocating the political and ethical *in* everyday (classroom) practices, rather than considering them as something that precedes or follows from pedagogical intervention. Particular attention is paid to interferences of different worlding-practices, and to what might make a difference in what counts as natural or real, as well as to the more-than-human actants that participate in these mattering practices and transformations.

Derived from a socialist feminist tradition, the method of memory work is committed to these kinds of collective transformations. According to Haug and co-workers, it is geared to produce, theorize, and transform autobiographical memories on affectively charged everyday events as a means to "expand our potential for intervention into and transformation of the world around us."²¹³ In their project

²⁰⁶ Kathie Sarachild, "A Program for Feminist 'Consciousness Raising'," in *Notes from the Second Year: Women's Liberation*, ed. Shulamith Firestone and Anne Koedt (New York: Radical Feminists, 1970), 78-80; Marie- Louise Pratt, "Arts of the Contact Zone," *Profession* 186 (1991): 39–40.

²⁰⁷ Bernice Fisher, "What is Feminist Pedagogy?" Radical Teacher 18 (1981): 21.

²⁰⁸ bell hooks, *Teaching to Transgress* (New York: Routledge, 1994), 167.

²⁰⁹ Judith McDaniel, Julia Stanley, Mary Daly, Audre Lorde, and Adrienne Rich, "The Transformation of Silence into Language and Action," *Sinister Wisdom* 6 (1978): 17.

²¹⁰ Gloria Anzaldúa, "Speaking in Tongues: A Letter to 3rd World Women Writers," in *This Bridge Called My Back*, ed. Cherrie Moraga and Gloria Anzaldúa (New York: Kitchen Table, 1981), 172; Donna Haraway, "Reading Buchi Emecheta: Contests for 'Women's Experience' in Women's Studies," *Inscriptions* 3–4 (1988b): 107.

²¹¹ Diana Fuss, Essentially Speaking: Feminism, Nature and Difference (New York: Routledge, 1988), 118; Rosi Braidotti, Patterns of Dissonance, (Oxford: Polity Press, 1991), 147–153.

²¹² Teresa De Lauretis, "Displacing Hegemonic Discourses," 138; Gaytari C. Spivak, "Can the Subaltern Speak?," in *Marxism and the Interpretation of Culture*, ed. Cary Nelson and Lawrence Grossberg (Urbana: University of Illinois Press, 1988), 296.

²¹³ Haug, *Female Sexualisation*, 41. Haug has long considered memory work as an ongoing project, open to transformation and adaptation. For a recent overview of how the method has been expanded to foreground oral storytelling, collective film viewing, and curating photo albums, see Claudia Mitchell and Kathleen Pithouse-Morgan, "Expanding the Memory Catalogue: Southern African Women's Contributions to Memory-Work Writing as a Feminist Research Methodology," *Agenda* 28.1 (2014): 92–103.

on *Sexualisierung der Körper* (translated as *Female Sexualisation*), memory work is carried out in an all-women collective and developed to examine how women's bodies get situationally sexualized with the aim "to collectively develop new modes of existence"²¹⁴ that "make the world a more habitable place."²¹⁵ Practically, memory writing starts from a particular situation, its smells, sounds, emotions, and thoughts that are written with "loving attention to detail."²¹⁶ In order to ameliorate the potentially destabilizing effects of interrogating one's past, narratives are written and examined "as though in the life of a third person."²¹⁷

The collective analytical process of examining "individual modes of appropriation"²¹⁸ and the conditions under which events become possible proceeds through exploring that which has been omitted, cast as cliché, or passed over — "deposits... both of awakening and resistance... that are articulated... as inappropriate words, nonsensical passages, unexplained silences"²¹⁹ — as well as through comparisons between different memory texts.²²⁰ Memory writers are encouraged to create language, identify agencies, and discern linkages: "forgotten traces, abandoned intentions, lost desires..., points at which change is possible,"²²¹ and "other meanings, paths, and possibilities become visible."²²² For Haug and colleagues, the past is never closed and behind us, as memory work "enable[s] a different past to emerge in order to make possible a different present and different courses of actions in the future."²²³

Rewriting the memory work episode entails putting into language what the researchers in the flesh identify as the unnamed, silent, and absent. This process of rewriting is understood not only as generating new knowledge but

²¹⁴ Ibid., 45, my translation.

²¹⁵ Ibid., 51.

²¹⁶ Ibid., 49.

²¹⁷ Ibid., 45. I typically ask students to give their memory work a numerical code that is used throughout the analytical process so that participants may not know who the stories refer to. In gender diverse groupings, all participants have to decide which pronoun to use.

²¹⁸ Ibid., 44.

²¹⁹ Frigga Haug, "Memory Work: The Key to Women's Anxiety," in *Memory and Methodology*, ed. Susannah Radstone (Oxford: Berg, 2000), 174.

²²⁰ As some of this analytical work had to be done at home, I have distributed a spread sheet in which students identify an issue, relevant passages from the narratives, their affective responses, as well as ideas and theoretical connections.

²²¹ Ibid., 41.

²²² Haug, "Memory Work: The Key to Women's Anxiety,", 157.

²²³ Ibid.

also as "an important learning experience for the writer,"²²⁴ who has to revise and re-member her earlier memory — a process that often (re)actualizes a desire for expanded agency. Yet, while the published output of the collective as an assemblage of stories and theoretical considerations attests to the detailed reconstruction of particular "architectures" of the sexualization of women's bodies, it remains less clear how exactly past memories are reconstructed "to make collective changes possible"²²⁵ and enable a different present and future, and who or what can be enrolled in these processes. Are there limits for rerouting intense memories, e.g. for shame and vulnerability?

Significantly, Haug casts memory work as a "form of *cultural* labour,"²²⁶ "a refusal to accept ourselves as 'pieces of nature', given and unquestioned."²²⁷ This focus on cultural inscriptions underplays the sense that reworking memory is also a *rematerializing* process: memory traces or patterns of neural circuitry and structural and/or chemical changes at synapses are (re)created in acts of remembering. They also "cannot readily be altered."²²⁸ Time, energy, and practice have to be invested in creating novel pathways and transforming memory. Moreover, while Haug emphasizes the processual character of writing further stories and "provid[ing] detailed descriptions of other protagonists, to represent their actions from the point of view of their own interests and motives,"²²⁹ these protagonists have remained resoundingly human.

Re-Imagining What Might Have Been

A retooling of memory work in a new materialist vein takes seriously Haug's advice to engage "a good deal of imagination"²³⁰ and "collective experiments with

²²⁴ Ibid., 175.

²²⁵ Haug, "Memory Work" (2008), 540.

²²⁶ Haug, Female Sexualisation, 71; emphasis added.

²²⁷ Ibid., 50ff.

²²⁸ Stephen P. Rose, "How Brains Make Memories," in *Memory*, ed. Patricia Fara and Karalyn Patterson (Cambridge: Cambridge University Press, 1998), 160. In his early sketch of the psychic apparatus, Freud introduces the term "*Bahnung*" (creating a pathway). In moving from one neuron to another, enervation has to overcome a certain resistance. If such movements entail a permanent decrease in resistance, *Bahnung* is generated. Enervation prefers such a "cut" or facilitated path (Sigmund Freud, "Entwurf einer Psychologie 1887–1902," in *Aus den Anfängen der Psychologie* (Frankfurt/Main: Fischer Verlag, 1975), 297–384).

²²⁹ Haug, Female Sexualisation, 70.

²³⁰ Ibid., 51.

the many different attitudes that surfaced in our work...; transposing them into different areas, seeing how they looked in different contexts, reversing them, trying to invert them.²³¹ As suggested above, such experiments pay close attention to "the material" as a strategy for "taking account of the distinctive kinds of effectivity that material objects and processes exert as a consequence of the positions they occupy within specifically configured networks of relations.²³² Agency in a new materialist frame is always a matter of intra-action:²³³ "what [matter] is able to *do*, inevitably depends on adjacent matter that it may do something *with*."²³⁴



Figure 1: Undulating Skin in the Swimming Pool

In the narrative cited at the beginning of the essay, this could mean not only asking after the intra-actions of bodily skin with the human gaze but also with the rays of sun that "exhibit"²³⁵ bodies. Conjuring the intra-actions of undulating bodies, light, water (an ele-

ment completely erased in the swimming pool scene), and human vision render quite different materializations (Figure 1) — body-worldings that disrupt what the writer experiences as the singularity and totality of a normative gaze. Such a performative reworking of immanent differences is a new feminist materialist move that questions the possibilities of simply turning away from, repudiating, or transcending hegemonic formations. Rather, the focus is on bringing out differences and "corruptions" they include.²³⁶ As a playful recombination of active

²³¹ Ibid., 61.

²³² Patrick Joyce and Tony Bennett, "Material Powers: Introduction," in *Material Powers: Cultural Studies, History and the Material Turn*, ed. Tony Bennett and Patrick Joyce (Milton Park: Routledge, 2010), 5.

²³³ Karen Barad, Meeting the Universe Halfway.

²³⁴ Annemarie Mol, "Mind Your Plate! The Ontonorms of Dutch Dieting," Social Studies of Science 43.3 (2012): 380.

^{235 &}quot;Skin," student narrative from Gender & The Body.

²³⁶ See also Meißner's (this volume) argument on the necessity of "working through historical conditions of possibility" of Enlightenment modes of teaching and learning. Thanks to Peta Hinton for suggesting these resonances.

forces in the data — "making use of what you have on hand and seeing what you can put together with it"²³⁷ — re-enactment enrolls other matterings to create "more habitable worlds."²³⁸ Importantly, this is not a detached creation of a future utopia, but a careful nurturing of what Lugones has called an "incomplete vision-ary non-utopian construction of life";²³⁹ a mundane exercise in "speculative feminism" that tells "real stories that are also speculative fabulation."²⁴⁰ Highlighting the materiality of speculative fabulation, Diprose evokes a "writing in blood" that is not *about* bodies but "always *of* a body," where the author is "animated flesh, fluids, forces and affects, opened by and to the other's palpable difference."²⁴¹ Like Lugones, she maintains that such body-worldings are "real-ised ambiguously and unfinished."²⁴² Playfulness and humor that sometimes spontaneously emerge in the analytic process can be drawn on too, given their transgressive and energizing potentials. In re-enacting their memories, can students unlearn embarrassment by "relearning to laugh" if "the laughter of someone supposed to be impressed always complicates the life of power?"²⁴³

Re-Enactment in Class

The memory re-enactment was scheduled for the last class as part of three group presentations in which students were to present the analyses they had conducted along with their responses. In an email I explained that this "part [of the project] focuses on the re-enactment of specific narratives (or a narrative), by which I mean a different performance of a situation in which cracked/smelly/cellulite/touched skins are 'exposed' with confidence, joy, humour, and the like. Here is room for

²³⁷ Katie King, Networked Reenactments (Durham: Duke University Press, 2011), 300.

²³⁸ Haug, Female Sexualisation.

²³⁹ Maria Lugones, "Playfulness, 'World'-Travelling and Loving Perception," *Hypatia* 2.2 (1988): 10.

²⁴⁰ Donna Haraway, "SF: String Figures, Multispecies Muddles, Staying with the Trouble," (paper presented at the University of Alberta, Alberta, Canada, March 24, 2014), http://people.ucsc.edu/~haraway/Alberta_2014.html.

²⁴¹ Rosalyn Diprose, "Writing in Blood: Response to Helen Keane and Marsha Rosengarten, 'On the Biology of Sexed Subjects," Australian Feminist Studies 17.39 (2002): 279.

²⁴² Ibid., 280.

²⁴³ Isabelle Stengers, "Another Look: Relearning to Laugh," *Hypatia* 15.4 (2000): 44. Note that relearning to laugh is not an attempt to deny shame or to "replace" it with pride. Rather, it is an exercise with which to practically intervene in the mechanisms that produce, circulate, and intensify it. See also Margaret Werry and Roisin O'Gorman on the importance of finding "ways to think about, perform about, feel about shame in the classroom... to hold open the processes of affective experience, to dwell in and *on* them in the state of flux, discontinuity, and vulnerability that they engender" ("Shamefaced: Performing Pedagogy, Outing Affect," *Text and Performance Quarterly* 27.3 (2007): 228).

both drawing on the positives in the narratives and for speculating, fantasizing, imagining, experimenting with different paths of skin's intra-action." By "positives" I refer to the affordances of skin that we had talked about but that were the explicit subjects of memory in only three narratives, in which other human bodies remained absent. Throughout the course, I attempted to draw attention to heat, flustering, and other visceral responses of my skin in the classroom. What would be lost, I pushed them, if my skin were to stop blushing, sweating, or emitting other fleshy signs of excitement or discomfort? Would a more disembodied teacher be desirable?

In hindsight, it seems that the presentation requirement of group analysis and demonstrating theoretical connections might, in some cases, have impeded rather than opened up alternative enactments. The memory writer cited at the beginning of this essay makes connections to Judith Butler's theory of performativity, venturing to say that skin is not a given but something that is recurrently enacted "in accordance with the current discourse on 'right' skin.... If cellulite became fashionable, it wouldn't arouse feelings of shame. On the contrary, it would be something beautiful, something we can be proud of."²⁴⁴ The embodied experience of skin's agency to produce a phenomenon identified in the 1960s as cellulite that cannot be changed at will, here, led to assigning agency one-sidedly to "discourse" or "culture," which renders the body as static and unified. Without tangible input from other presenters, it seems impossible to locate material agencies that can be recombined to bring forth a different mattering of undulated skin — the body-subject and its past/present/future are kept in place by a seemingly omnipotent cultural discourse.

The presentation group "Cracking Skin" went on to revisit another skin story that likewise had materialized corporeal vulnerability:

He was putting the Band-Aids on like he did every morning before heading out, a recurring attempt to patch up his cracked skin with bits of gauze and adhesive, over and over whenever it was necessary. In cold weather, that necessity was always — *don't go outside exposing the cracks in your hands everywhere*, he'd remind himself while getting on with the task. If the barrier between him and the outside was compromised, what would keep the germs out? Bandage, bandage, bandage. While it was possible to keep hands covered by gloves while outside, doing so indoors was out of the question: wearing gloves would be even more noticeable than letting everyone see the Band-Aids all over his fingers... Once

²⁴⁴ Group presentation "Sweating Skin."

all the cracks were hidden, his hands felt as if cushioned from the world... now, at least for a while, it would be safe to go outside and touch things there. Even dirty things like doorknobs couldn't harm him, couldn't get his broken skin infected now.²⁴⁵

Is it possible, I wondered, to embrace corporeal vulnerability (or "skin-mending routines") and the porosity of skin? To re-enact broken skin and germs as something that extends bodies to worlds, provides specific contact zones of mutual worlding, in which the weather or the germs seep through skin?

In the presentation, the re-enactment story was written by another group member and focused not on the agency of skin, but on the gloves that cushioned it. It was preceded by the display of a painting by Titian (Figure 2). The



Figure 2: Man with a Glove (Titian, c. 1520)

writer recalled the first day in class, when she sat alone and a student came in late, took a seat beside her, and unpacked his belongings:

Something catches my attention: he is still wearing his gloves. Black & thin gloves. Maybe he is still cold from the outside fresh air. Maybe he just forgot to take them off. No, he certainly is aware of it since he is writing on his piece of paper... I feel kind of attracted by this young man wearing gloves. I'm looking at him out of the corner of my eye, analysing his whole behavior, what he wears, how he looks like. All of a sudden, I'm reminded of where I saw it before: last summer visiting the Louvre I saw a great picture, in front of which I stood for hours. It was *Man with a Glove* from the famous painter Titian... What grabbed me was... the posture of those hands. I was wondering why a man inside a house would wear gloves. Now, taking the example from my neighbour, I could understand. Gloves do not hide something under them, for instance hands we could be ashamed of, but on the contrary they express something: gloves inspire something both elegant and mysterious... I started to imagine what my neighbour's life was like....²⁴⁶

²⁴⁵ "Broken Skin," student narrative from *Gender & the Body*.

²⁴⁶ Group presentation "Cracking Skin."

In this story, skin boundaries make new and unexpected connections that reconstitute students' bodies, and tangibly transform the entangled time of past/ present/future. More precisely, it is the gloves that cushioned the skin of the first writer that become a material-semiotic actor:²⁴⁷ triggering disconcertment in another student, they actualize and transform an earlier memory of a man with gloves in a painting. It is the conjunction of the gloves inexplicably covering the hands of a student in the classroom and the arresting image of gloves in an old painting that renders new insights and corporeal orientations. The posture of gloved hands is found significant not because it is a surface that hides a true core but because it evokes responses: interest, questions, memories, and imaginations. Gloves have become, in Despret's terms, "a subject of questions, a subject producing questions."248 In the presentation, the students partly adopt a dominant realist position of a single object, viewed from different perspectives when confronting their memories: "gloves have no single universal meaning in reality; both narratives assume ... viewpoints on gloves, making suggestions about what people might think or who the man wearing gloves could be; both are different from the other person's thoughts."249 But beyond signaling the irreducibility of different perspectives, material-semiotic gloves become a performative "device that induce[s] new articulations";²⁵⁰ they transform the isolation of the bandaged writer and the new student who both "gain a body that does more things, that feels other events."251 That the students had become (co)responsive and available to one another is made present in the very act of sharing these memories with one another and with the class. Gloves and the impetus of re-enacting memory create a new, shared past/present/future; knowledge practices become tangible not as activities of a disembodied mind, but as a contribution to the differential mattering of the world.²⁵² In their closing remarks, the students proposed, "wearing gloves (or engaging in some other activity)... makes us feel intrigued about others, which is often the first step in a relationship — there is no relation without interest, without questions."

²⁴⁷ Haraway, "Situated Knowledges," 575–599.

²⁴⁸ Despret, "The Body We Care for," 131.

²⁴⁹ Presentation slide "Cracking skin".

²⁵⁰ Despret, "The Body We Care for," 114.

²⁵¹ Ibid., 120.

²⁵² Barad, Meeting the Universe Halfway, 178.

There are three things that I would like to highlight from this experiment of retooling memory work as re-enactment through a recombination of active forces of mattering. First, it becomes evident that "one" cannot singlehandedly re-enact one's memory; re-enactments are not only collective human enterprises, as feminist consciousness-raising and memory work have taught us, they also require enlisting the relational agencies of more-than-human actors: bandages, temperature, clothing, paintings, and more. Second, re-enactments both take time and make time. Only the last presentation group had been able to meet in person. While re-enactments do not necessarily require sustained co-presence, establishing contact zones for new body-worldings and becoming available to an event do, as the students have emphasized, require interest, playfulness, and classroom time. Third, if all research and teaching practices participate in particular worldings and are therefore political and ethical — albeit in different ways — a discussion of re-enactments might also attend to the question of how to build more intentional, ethical, and political commitments, actions, and transformations.²⁵³ How to extend such practical and imaginative training zones in and outside of the classroom, in settings that progressively curtail time for contemplating, revisiting, re-membering, speculating, and experimenting remains a profound challenge that teaching with new feminist materialisms asks us to address.

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²⁵³ See also Meißner's (this volume) plea for learning to unlearn confining conceptual and political certainties without foregoing an analysis of structural conditions.

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THEORIZING IS *WORLDING* — TEACHING NEW FEMINIST MATERIALISMS IN CONTEMPORARY FEMINIST THEORY COURSES

Kathrin Thiele

Thinking is an action. For all aspiring intellectuals, thoughts are the laboratory where one goes to pose questions and find answers, and the place where visions of theory and praxis come together.²⁵⁴

What makes the phenomenon of *diffraction* so meaningful in new feminist materialist scholarship? One key suggestion is that, with it, it can be explained how the two realms that are still so often said to be utterly distant from each other — theory and praxis — are never categorically separated entities or realms.²⁵⁵ The concept-phenomenon of diffraction helps us to articulate how theorizing *is* worlding in as much as how worlding *is* theorizing. Carrying on earlier work on standpoint epistemologies and situated knowledges,²⁵⁶ and understanding diffraction as a

²⁵⁴ bell hooks, *Teaching Critical Thinking: Practical Wisdom* (London and New York: Routledge, 2010), 7.

²⁵⁵ One of the foundational texts for what has become known in the last years as New (Feminist) Materialism is Karen Barad's Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning (Durham and London: Duke University Press, 2007). In this work, Barad centers the development of the onto-epistemological framework of "agential realism" on the discussion of the quantum physical two-slit diffraction experiment (see especially 97–185). This experiment has been used to determine if light is particle (as classically held by Newton) or wave (as experimentally shown by Young in 1803), and the experiment resulted in the recognition of the entangled nature of the matters at stake, because "the nature of the observed phenomenon changes with corresponding changes in the apparatus" (106). The term diffraction has surfaced also already earlier in the feminist context with Donna Haraway's discussion of diffraction as a critical tool to envision difference(s) differently: not as binary opposition but as a productive interference pattern; cf. Donna Haraway, Modest_Witness@Second_Millennium.FemaleMan@_ Meets_ OncoMouse[™] (London and New York: Routledge, 1997). For detailed work with the diffraction apparatus, see Sauzet's contribution to this volume.

²⁵⁶ See Patricia Hill Collins, Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment (London and New York: Routledge, 1991); Sandra Harding, Whose Science? Whose Knowledge? (Ithaca: Cornell University Press, 1991); Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," Feminist Studies 14.3 (1988).

methodology for a critical practice "committed to making a difference,"257 Karen Barad's "new materialism" stresses arduously that by following diffraction in the quantum-mode, "knowing, thinking, measuring, theorizing, and observing are material practices of intra-acting within and as part of the world."258 With Barad, then, it is essential to stress that "the point is not simply to put the observer or knower back in the world (as if the world were a container and we needed merely to acknowledge our situatedness in it) but to understand and take account of the fact that we too are part of the world's differential becoming."259 Accounting for Niels Bohr's Gedankenexperiment on diffraction from the early twentieth century, Barad's specifically posthuman(ist) discussion brings to the fore that "being part of" is no longer to be thought of in atomistic terms - as, for instance, a smaller unit placed within a larger unit, or, we, humans, being also part of the (natural) world.²⁶⁰ Rather, by rigorously understanding diffraction as entanglement in onto-epistemological terms, "we" (and this "we" needs to be put in quotation marks because it has lost its seemingly natural delimitation) are always/already entangled with-in the "world" as differential becoming (or "worlding").²⁶¹

Now, bringing this conceptual-phenomenal insight of entanglement to the very persistent theory/praxis divide that tends to dominate many academic discussions, any hierarchical split between the supposedly separate realms of theory and practice can no longer be made from such diffracted/-ing beginnings. Instead

²⁵⁷ Donna Haraway, Modest_Witness@Second_Millennium.FemaleMan©_Meets_ OncoMouse™ (London and New York: Routledge, 1997), 16.

²⁵⁸ Barad, *Meeting the Universe Halfway*, 90 (emphasis added).

²⁵⁹ Barad, Meeting the Universe Halfway, 91.

²⁶⁰ See Karen Barad, "Posthumanist Performativity: Toward and Understanding How Matter Comes to Matter," Signs: Journal of Women in Culture and Society 28.3 (2003): 801–831.

²⁶¹ The significance of the quantum level is, to me, very close to the more chemically instructed Deleuze-Guattarian emphasis on "molecular" thinking; e.g. Deleuze and Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia II*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, [1980] 2000). In respect to both the (physical) "quantum" and the (chemical) "molecule," it is not adequate to assume that these realities would only be valid for what we usually call the realm of the "invisible," i.e. the micro-processes, and that on the macro-level, or what we so often presuppose as the properly *human* level, we must (or we can) continue working with separable units such as "individual" and "world." "It matters what matters we use to think other matters with," Donna Haraway says poignantly in a public address at the Pilgrim Award in 2011 ("SF: Science Fiction, Speculative Fabulation, String Figures, So Far," California via Lublin, Poland, July 7, 2011, http://people.ucsc.edu/-haraway/PilgrimAward.html (accessed April 13, 2015)), and if we start with quantum entanglement, what once was a categorical difference between micro-and macro-processes becomes, at most, an immanent "threshold" or a question of "degree" (of density, for example) within the (singular-plural) dis/continuous processes of becoming that is also very relevant in this context, see Peta Hinton, "Situated Knowledges' and New Materialism(s): Rethinking a Politics of Location," Women: A Cultural Review 25.1 (2014): 99–113.

of assuming that theory is a process of *reflection on* specific practices — where practices are seen as part of the world while theory is seen as abstraction from the world — in a new materialist framework, theory itself is (always/already) a praxis, which, rather than "reflecting on," diffracts (with) other practices in a thinking, measuring, and accounting manner. The emphasis on the "new" in new feminist materialisms, therefore, appears appropriate in one specific sense. It is not, as some discussions would suggest, that this "new" should imply a turn away from supposedly outworn questions (call them cultural or historical, language-oriented, or even very generally as coming from within the "old humanities") towards the inclusion of more material and thus supposedly more scientific matters (such as physics or chemistry).²⁶² And I also do not want to understand the "new" in new feminist materialisms as an implication that such "new" scholarship is no longer interested in critical investigations, thereby losing its political force, just because proper critique can either only be done from an ideological-critical perspective (Marxist materialism) or because critique as such has "run out of steam."263 Instead, what can be marked with the addition of "new" in contemporary feminist thinking is our capacity to imagine and work with different beginnings, with different "initial conditions,"²⁶⁴ with which we then can also ask why we "admittedly... do not tend to think of signs as *substantively* or ontologically material."²⁶⁵ What if — this is what I would like to suggest in discussing teaching with new feminist materialisms — we could make again a "new" feminist claim to take up the challenge of engaging all kinds of practices as material engagements? What if we will not stop short on the theoretical side simply because in today's

²⁶² Barad begins one of her recent articles by stating that "[d]iffraction owes as much to a thick legacy of feminist theorizing about differences as it does to physics" ("Diffracting Diffraction: Cutting Together-Apart," *Parallax* 20.3.72 (2014): 168). I also join Vicki Kirby in her argument that "if we look closely at the work of physicist Karen Barad, the tantalizing provocation in her argument is that she is not challenging us to learn physics so that we can understand complexity. Instead, what informs her reworking of interaction as 'intra-action' is the suggestion that we are already practicing physics" ("Initial Conditions," *Differences: A Journal of Feminist Studies* 23.3 (2012): 204). For a similar focus on the specific significance of diffraction for methodological and pedagogical discussions, see also Christina Hughes and Celia Lury, "Re-Turning Feminist Methodologies: From a Social to an Ecological Epistemology," *Gender and Education* 25.6 (2013): 786–799.

²⁶³ See, Bruno Latour, "Why Has Critique Run Out of Steam?," *Critical Inquiry* 30.2 (2004): 225–248. Two recent special issue publications take up these concerns for critique and politics in respect to new (feminist) materialist scholarship, see Peta Hinton and Iris van der Tuin, Special Issue "Feminist Matters: The Politics of New Materialism," *Women: A Cultural Review* 25.1 (2014), and Birgit M. Kaiser and Kathrin Thiele, Special Issue "Diffracted Worlds — Diffractive Readings: Onto-Epistemologies and the Critical Humanities," *Parallax* 20.3.72 (2014).

²⁶⁴ Kirby, "Initial Conditions."

²⁶⁵ Vicki Kirby, *Quantum Anthropology: Life at Large* (Durham: Duke University Press, 2011), 73.

discursive climate (academic, public, and political) we too often assume that theories (as "ethico-onto-epistemological"²⁶⁶ frameworks) are needed only in order to be applied, rather than practiced with-in and amongst other practices?

Re-Turning (to) the Matter of Thinking

Before I continue my discussion on contemporary feminist theory and the practices of teaching it in today's academic milieu, I want to draw upon what may appear to be an unrelated reference in the context of new feminist materialisms: the philosophical work of Hannah Arendt. In her investigations into the relation of thought and practice more than half a century ago, Arendt made a very similar claim in respect to the matter(ing) of thinking as practice. When reading her Vita activa oder vom tätigen Leben (in English, titled simply The Human Condi*tion*)²⁶⁷ with these questions of theory as practice and thought as action in mind, Arendt's specific point in respect to "thinking" in this historico-philosophical analysis is very illuminating (even if clearly written from within the Western/ European philosophical tradition). In the final part of her analysis, she argues that the major transformation (Umstülpung) occurring with the Modern Age (Neuzeit) might not be seen as the actual dethronement of the (pre-modern) vita contemplativa — a life guided by contemplation and reflection and oriented towards immortality - by the (modern) vita activa - a life determined most of all by what we do, work, and labor for within the clear delimitations of our finite existences. Rather, the true "reversal" that, at this moment, is occurring is that thinking itself is fully subjugated to the *economical* logic of production and manufacture (Herstellen).

Actually, the change that took place in the seventeenth century was more radical than what a simple reversal of the established traditional order between contemplation and doing is apt to indicate. The reversal, strictly speaking, concerned only the relationship between thinking and doing, whereas contemplation in the original sense of beholding a truth, was altogether eliminated.²⁶⁸

²⁶⁶ In *Meeting the Universe Halfway*, Barad specifies this terminology in a list that explores important aspects of diffraction by stating: "ethico-onto-epistem-ology — ethics, ontology, epistemology not separable" (90).

²⁶⁷ See Hannah Arendt, *The Human Condition* (London and Chicago: The University of Chicago Press, 1958); and *Vita activa oder vom tätigen Leben* (München: Piper Verlag, [1967] 2007).

²⁶⁸ Arendt, *The Human Condition*, 291.

If, as (new) feminist materialists, we are now merely irritated by Arendt's strong emphasis on "contemplation" and "beholding of truth" when it comes to describing thinking, we might miss the most interesting aspect of her argument. We might forget that Arendt's point here is not to complain (in an idealist, humanist manner) about the change occurring in socio-political hierarchies, i.e. that vita activa (doing) actually becomes the dominant practice and thereby replaces the privilege of a vita contemplativa (contemplation) in modern times. Instead, what I see as far more significant and telling in relation to that question of "what it means to think," is Arendt's contention that this modern threshold is accompanied by an inherent process in which certain activities become marked as significant, while others - because they are seemingly useless and therefore of no value, just like contemplation — are falling out of sight completely. The antique (and much more than merely Western) understanding that *thinking is contemplation but as a doing*, an action, a practice, becomes thereby unthinkable as such and is substituted by the far too simple opposition of *vita contemplativa* and *vita activa*, now both obeying the demands of use value and production. In her striving to rehabilitate thinking as practice, Arendt ends The Human Condition with an ancient dictum on the guestion of thinking and, as her readers know, she stays preoccupied with this aspect of acting and/as thinking in her work to come.²⁶⁹ So much so that in her *Report* of Eichmann in Jerusalem, written in 1963, she most provocatively argues that it is precisely the incapacity and unwillingness "to think" (taken as an inevitably *a*/ effective doing) that becomes the shocking truth of "the banality of evil."270

After this historical digression, let me now come back to the present moment. In what follows, I further elaborate that my interest in working with-in the

²⁶⁹ The final paragraph of *The Human Condition* reads: "For if no other test but the experience of being active, no other measure but the extent of sheer activity were to be applied to the various activities within the *vita activa*, it might well be that thinking as such would surpass them all. Whoever has any experience in this matter will know how right Cato was when he said: "*Numquam se plus agere quam nihil, numquam minus solum esse quam cum solus esset* — Never is he more active than when he does nothing, never is he less alone than when he is by himself" (Arendt, 325).

²⁷⁰ See Hannah Arendt, *Eichmann in Jerusalem: A Report on the Banality of Evil* (New York: Penguin Press [1963] 2006). After the disturbing public reception of this claim, Arendt continued to work on this ethically (and therefore politically) significant question of what it means to think. See for example her lecture "Some Questions of Moral Philosophy" in *Social Research* 61.4 (1994): 739–764, which can also be read as a response to her critics from the Eichmann trial book, *The Life of the Mind*, that devotes the first volume to "thinking" (*Das Denken*); see Hannah Arendt, *The Life of the Mind* (New York: Harcourt Inc., [1971] 1978). For the use of "a/effective" — i.e. folding together "affect" and "effect" in a Spinozian manner in which an effect is produced via the capacity to affect and be affected, see my discussion of an "ethics of becoming" in Kathrin Thiele, *The Thought of Becoming: Gilles Deleuze's Poetics of Life* (Berlin and Zürich: Diaphanes 2008).

thought horizon of new feminist materialisms in contemporary feminist theory courses, and also the challenge of doing so, is a twofold endeavor. On the one hand, I see in new feminist materialisms another promising *conceptual practice* for different initial conditions and, therefore, for different stories to be told — a possibility that I, as a feminist, still regard as urgently needed in our contemporary world. And on the other hand, to expose students to such theoretically challenging possibilities and to encourage them to learn about how nature/culture, subject/object, and theory/practice are "cut-together-apart,"²⁷¹ for me continues the *transformative potential* that feminist theories stand for, as such. As a genre — and I join here in Elizabeth Grosz's evaluation — feminist theory always aims to bring about change:

In addressing the question, 'What is feminist theory?', we are primarily addressing the question what it is to think differently, innovatively, in terms that have never been developed before, about the most forceful and impressive impacts that impinge upon us and that thinking, concepts, and theories address if not resolve or answer.²⁷²

From-with-in feminist new materialisms, we are able to not only a/effectively acknowledge that subject-object-relations are entangled — understood in Barad's terminology as "intra-action," that is, not assuming existing entities before the entanglement itself²⁷³ — but we can also create a toolbox with which the ordering framework of theory and praxis, still too often hierarchically split, is attuned in our (feminist) (research) practices.²⁷⁴ The misleading presupposition that the concepts, ideas, or knowledges we use are "above" the analyses and objects we investigate at (and as) a concrete moment, i.e. the assumption that they are abstractions from, or transcendental reflections on, the world we live in, can there-

²⁷¹ Karen Barad, "Quantum Entanglements and Hauntological Relations of Inheritance: Dis/continuities, SpaceTime Enfoldings, and Justice-to-Come," *Derrida Today* 3.2 (2010): 240–268.

²⁷² Elizabeth Grosz, Becoming Undone: Darwinian Reflections on Life, Politics, and Art (Durham and London: Duke University Press, 2011), 77.

²⁷³ See again Barad, *Meeting the Universe Halfway*.

²⁷⁴ That theory and practice are not separated is, of course, one of the most original feminist claims as such, and thus in no way unique to new feminist materialist works. Yet, it is apt to argue, and certainly not coincidental, that it is again contemporary *feminist theory* that reminds us of this necessarily *political* dimension in every scientific endeavors, in a time when a return of scientific positivism (be it in respect to quantitative data analysis or a hyperattention to what is called "empirical realities") cannot be disputed. Unfortunately, I also see parts of feminist studies in danger of what I want to call "the empirical trap," when more and more academic discussions, journals, and/or events are hastily responding to the demand to be *applicable* rather than allowing themselves to continue asking new question and telling new stories.

by be transformed into a constellation that is always/already *theoretico-practical*. To think — to learn to analyze and practice an argument — *is* a doing that needs to be accounted for. Looking back to Arendt's considerations and connecting them to Grosz's "Dream for New Knowledges," feminist theory might even be a most a/effective practice, able to impinge on the (deadlocked) systemic forces of today's socio-political realities, which, very similar to Arendt's times, are still (if not even more so) driven by the logics of use and consumption, i.e. by purely economical concerns.²⁷⁵

Think-Practicing New Feminist Materialisms in the Classroom

In working with and teaching new feminist materialisms in feminist theory classes, the somewhat difficult theoretical corpus that most authors expose us to in this tradition, therefore, fulfills a very necessary function. It forces us to (again) learn *how to practice theory* — an always difficult and necessarily time-consuming (i.e. contemplative) task, yet one that, in its praxis, becomes transformative.²⁷⁶ By learning to practice theory as action, a learning that also encompasses *un*learning the habits of merely using concepts and theoretical categories on a representational level, contemporary feminist theory becomes again a place where to also find effective strategies and tools (as "weapons"²⁷⁷) to counteract the dominant discursive climate that "there is no alternative." These claims are too often employed as rhetorical strategy to discredit foundational research whose "practical impact" cannot easily be measured.²⁷⁸

And yet, there is more to be said when such an affirmative gesture toward a specific "academic label" or "theory" is made as both thinking and teaching horizon. For the above could still too easily be misunderstood as a claim that

²⁷⁵ For a resonating analysis of the problems of privatization, capitalization, and growing competitiveness in the "new" university, and, more generally, the whole academic milieu today, see Hanna Meißner's contribution to this volume.

²⁷⁶ See, for an example, the chapter of 'van der Tuin and Dolphijn in this volume, where concept testing in the classroom becomes also transformative praxis.

²⁷⁷ Grosz, Becoming Undone, 76.

²⁷⁸ Being employed at a Dutch research university, I cannot overstate the changes that the Netherlands' research profiling has undergone in this regard during the last years. To provide one specific example: going back only a few years, academic grant applications still explicitly have asked for theoretical embedding of research. Today, not only has "methodology" replaced this theoretical and/or conceptual corpus in such applications, but also dimensions such as knowledge utilization and knowledge valorization (quantifiable and applicable "to the broader public") have grown immensely in respect to the evaluation of academic research projects. That this is not Dutch practice alone can also be seen in the new research profiling of the European Union Horizon 2020.

new feminist materialist scholarship surpasses other (feminist) approaches in the endeavor "to think differently," and that teaching feminist theories today means to correct those other endeavors from a new feminist materialist perspective. It could be interpreted as an assumption that in teaching I aim at yet another ("new") conceptual framework, one that provides us again with a solid theoretical toolbox that then can lead us safely into practical applications, only this time from a new feminist materialist point of view. In order not to be misunderstood in these ways, and before I conclude my contribution - which indeed can be read as a rehabilitation of theory and thinking as practices that matter substantially with-in-for this world and that therefore need sufficient time and specific curricular spaces in which thinking can be taught and learned as such a practice — I want to address some aspects that should be kept in mind in order to counter the above suspicions. As Kirby has formulated it in her article on "Initial Conditions," from which I have quoted earlier, the "tantalizing provocation"²⁷⁹ of new feminist materialisms (in Barad's, but also in other scholars' work) might not lie in a mere move toward new areas for our (feminist) studies, for example now involving physics, chemistry, or biology as (theoretical) tools to work with (i.e. enhancing our interdisciplinarity). Rather, it is a specific methodological claim that is made here; a *diffractive* methodology that new materialist approaches suggest, in which what subject matters we engage with is (immanently) entangled with how we account for them. This is the provocation of "intra-action," or the claim that "we are already practicing physics," as Kirby writes. What seems crucial in this argument in respect to contemporary academia is that even if current quests for interdisciplinarity are so virulent, they will remain unsatisfactory if they merely mean engagements that comprise questions from "beyond" the limits of one's own field of study. For example, a mere turn to the natural sciences from a humanities point of view will not do (and never has done) the work that is needed in order to transform and transgress limited mono-disciplinarity. Rather, it is the questions themselves, it is the ethico-onto-epistemological approaching of the issues at stake that are (to be) transformed within such inter-, or better even, intra-disciplinary engagements in order for them "to matter." It is precisely in such processes of diffractive transformation that I see the capacity to practice thinking differently to be of such great significance.

²⁷⁹ Kirby, "Initial Conditions, 204.

To concretize this still a little further: if, for instance, the issue of ecology for many good reasons currently enters a lot of contemporary feminist work, such engagements should not confine themselves to the task of only asking questions *about* climate change, the anthropocene, or environmental pollution.²⁸⁰ What is asked in *diffractive* engagements is, instead, the transformation of how and what we even understand "ecology," "climate change," or "weather" to be. It means re-working established (theoretical) frameworks, splits, and categorical orderings that have so far determined research into these questions.²⁸¹ Such an emphasis on what can also be called "thick" engagements is explicit in UCSC's Women's Studies collaboration, co-initiated by Karen Barad, with the Division of Social Sciences, Engineering School, and the Division of Physical and Biological Sciences in The Science & Jus- tice Research Center (Collaboration Group). Their Science & Justice Training Program (SJTP), established across these academic disciplines, is not merely about mixing faculty, research themes, and approaches in graduate studies education at one Californian State University campus. Rather, as can be read in their presentation, "SJTP graduate fellows are provided with fellowship funding and faculty mentorship that supports them to explore questions of ethics and justice as they arise in their research."282 The students, and this is one of the project's explicit teaching goals, are to learn that "ethical and social justice issues cannot be known in advance but must be explored in each project individually; students learn by doing... try things out that might not work, labor through frustrations, and feel the freedom to do uncertain and experimental work."283 The consequences from such intra-disciplinary engagements are foundational. They both contribute to a "slow science" and they promise more complex results in which time to think — to wonder, question, and run up against a wall — is one practice amongst others, and needs to be given time to be practiced.

²⁸⁰ The emergence of the usage of the (geological) terminology of "anthropocene" in academic scholarship is very recent, and it functions currently as an umbrella term to bring together scholarship from diverse disciplines that investigate into "our" (post)human(ist) conditions.

²⁸¹ See e.g. Astrid Neimanis and Rachel Loewen Walker, "Weathering: Climate Change and the 'Thick Time' of Transcorporality," *Hypatia: A Journal for Feminist Philosophy* 29.3 (2014). This article builds on a number of new feminist materialist authors such as Alaimo, Barad, Colebrook, Grosz, and Tuana, whose transversal theoreticopractical engagements should be seen as implied in this reference. For an engagement with "weathering" as a theoretico-practical (teaching) tool, see also Neimanis' chapter in this book.

²⁸² Science & Justice Research Center (Collaboration Group), "Experiments in Collaboration: Interdisciplinary Graduate Education in Science and Justice," *PLOS Biology* 11.7 (2013): 1.

²⁸³ Science & Justice Research Center (Collaboration Group), "Experiments in Collaboration," 2.

To have the time to practice thinking as action again within the university from undergraduate to graduate level and beyond, this might be my dream for new knowledges. A strong alliance between the traditions of (feminist) critical thinking, which as "practical wisdom" — to use the terms of bell hooks — "calls for initiative from everyone, actively inviting all students to think passionately and to share ideas in a passionate, open manner,"²⁸⁴ and contemporary new feminist materialisms, which provide new answers for *how* to teach, think, and do differently *what* we have "in front of us," makes me hopeful that we will not lose this specific capacity — thinking — to (en)act (in) this world.

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²⁸⁴ bell hooks, *Teaching Critical Thinking: Practical Wisdom* (London and New York: Routledge, 2010), 11.

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FEMINIST MATERAILISMS IN CLASS: LEARNING WITHOUT MASTERS

Maya Nitis

The Ignorant (School)Master

The same intelligence is at work in all the acts of the human mind. But this is the most difficult leap. This method is practiced of necessity by everyone, but no one wants to recognize it, no one wants to cope with the intellectual revolution it signifies.²⁸⁵

Several articles have recently appeared addressing French philosopher Jacques Rancière's contribution to critical pedagogy — the area of studies inspired by Paulo Freire's seminal *Pedagogy of the Oppressed (Pedagogio do Oprimido*), which specifically takes up educational anti-oppression praxis.²⁸⁶ A "pedagogue" or "pedagog" is a formal or humorous word for a teacher, especially a strict or pedantic one, that stems from the words for boy and guide, and derives from the slave who accompanied a child to school in ancient Greece. We could thus wonder about Freire's taking up this notion to propose "liberation pedagogy," as commentators have also called it.²⁸⁷

There are irreducible differences between education in overdeveloped nations and exploited ones, as Freire might say. However, taking social position into account, trans-national connections are at least as strong as the differences. In *The Ignorant Schoolmaster*, Rancière retells the story of a teacher briefly renowned during the French Revolution for what became widely known at the time as "universal method," developed to pass on literacy without being literate

²⁸⁵ Jacques Rancière, The Ignorant Schoolmaster (Stanford: Stanford University Press, 1991), 16.

²⁸⁶ See, for instance, Cath Lambert, "Redistributing the Sensory," Critical Studies in Education 53.12 (2012).

²⁸⁷ Herbert Kohl, "Paulo Freire: Liberation Pedagogy," *The Nation, May 26*, 1997, 7. Although Freire himself does not use the conjunction "liberation pedagogy," pedagogy's role in liberation is the main concern of *Pedagogy of the Oppressed.*

oneself. The starting point of this method is equality: thus, all that is required of the ignorant master/educator is to "announce," that is, convince people that they are able to learn on the strength of their own intelligence without any explicator, which only stultifies by teaching dependence. Thus, everyone's intelligence is able to extract not only information from texts and situations, but also to generate knowledge.²⁸⁸

Jacotot, the teacher of "universal method," had discovered that he could teach better what he did not know than what he knew. This discovery occurred accidentally to a pedagogue, exiled after the return of royalists following the French Revolution. His classes attracted students with whom he shared no language. To his astonishment, Jacotot discovered that, contrary to creating an obstacle, careful study made these students better learners: they were learning how to think for themselves, and, what concerns us here, doing so without an expert. In terms of critical pedagogy, the absence of a master or expert induces students to cull their own method for learning. According to Freire, the "father" of what is known as critical pedagogy, the fact that standard pedagogy imposes its method of learning stultifies students, debilitating their belief in themselves. Such citizens - dependent on external authority - are certainly useful in their docilities. This intellectual and emotional dependency is one element of mainstream education that makes it crucial for the perpetuation of the status quo, as, for instance, award-winning New York public school teacher and critic John Taylor Gatto passionately argues in *Dumbing Us Down*.²⁸⁹ Although published a decade earlier, Rancière's The Ignorant Schoolmaster: Five Lessons in Intellectual Emancipation can be read as a response to the seven lessons Gatto identifies as "the hidden curriculum" of schooling designed to inculcate students with emotional and intellectual dependency on external authority, thereby debilitating self-reliance.²⁹⁰

Freire's *Pedagogy* is poignantly dated in at least one aspect, which the translator's telling insertion of feminine pronouns betrays. Freire relies on multiple dichotomies, between the oppressed and the oppressors, for instance, as if no thesis can be clearly stated without an antithesis. I argue, however, that although such practices should not be ignored, Freire's pedagogy is not automatically guilty of

²⁸⁸ Rancière, *The Ignorant Schoolmaster*, 1–18.

²⁸⁹ John T. Gatto, Dumbing Us Down: The Hidden Curriculum of Compulsory Schooling (Gabriola Island: New Society Publishers, 1991).

²⁹⁰ Ibid.

reproducing sexism due to employment of a masculine voice. Indeed, the way he offers to unseat student/teacher dichotomies resonates not only with Rancière's undermining of experts, but also with feminist pedagogies.²⁹¹ I do not have time to deal with the role of dichotomization in Freire's essentially dialectic analysis here. Hasty attempts to decontextualize liberation pedagogy risk co-opting it; hence, my fragmentary juxtaposition aims at creating space for dialogue among critical/liberation and feminist pedagogies without blurring their edges.²⁹²

Although critical liberation pedagogy unseats the expert-master, the pedantic pedagog, from the hierarchical position and thus links up with DIY (Do it Yourself) learning profferred in punk and feminist circles, Rancière poses a need for an "ignorant master" to motivate the process of learning.²⁹³ This need is present when other situational constraints do not provide motivation for learning and is not endemic to it. I intend to juxtapose this transformative unseating of the expert with a critique of mastery itself through a chiastic movement, which I will take up in the second part of this essay. Following this juxtaposition, I will ask how a critique of mastery *and* masters can work in the classroom, turning to contributions by "new feminist materialists."²⁹⁴ Situating the inquiry in relation to feminist materialist concerns, in what contemporary critic (and master-deconstructionist/educator) Avital Ronell has called "the traumatic precincts of learning" should contribute to the radical potential of feminist pedagogy, as I intend to show.²⁹⁵

²⁹¹ For a recent account of feminist pedagogy, see the introduction to Robbin D. Crabtree, David Alan Sapp, and Adela C. Licona, ed. *Feminist Pedagogy* (Baltimore: The John Hopkins University Press, 2009): 3.

²⁹² In his poignant introduction to the 30th anniversary edition of *Pedagogy of the Oppressed*, Donaldo Macedo argues that Freire's dichotomies are necessary to the political dialectic of the work (trans. Myra Bergman Ramos (New York and London: Continuum, 2005), 11–28). While I see the risks of obscuring positions of oppression in simply eliding dialectics, it seems nevertheless important to question some, if not all, the dichotomies here from a feminist perspective. The significance of dialectics for Freire offers an interesting contrast to Karen Barad's non-dialectical intra-action, which I take up in the third section of this chapter.

²⁹³ For an example of work at the intersection of queer/feminist/punk, anti-hierarchical praxis, see http://www. ladiyfest.net/about/.

²⁹⁴ Iris van der Tuin discusses this nomination and the feminist debate on "new materialisms" in her review essay, "New Feminist Materialisms," *Women's Studies International Forum* 34 (2011): 271–277.

²⁹⁵ Avital Ronell, *Loser Sons* (Chicago: University of Illinois Press, 2013), ix. Stunningly miming mastery while questioning it as a goal of learning, Ronell has claimed in recent presentations at NYU, such as on April 9th, 2015 lecture: "Hitting Rock Bottom: Poetics of the Rant," that her current work is concerned with masochist education and politics.

A Chiastic Critique of Mastery

If violence is the act by which a subject seeks to reinstall its mastery and unity, then nonviolence may well follow from living the persistent challenge to egoic mastery that our obligations to others induce and require.²⁹⁶

The unsaddling of experts can be understood chiastically in relation to a critique of mastery, which has pedagogical as well as broader social implications. A chiasmus is an ancient rhetorical figure that appears at various points of contemporary theory, as I explore at length elsewhere.²⁹⁷ As a literary device, a chiasmus reverses the order of elements in a sentence. For example: mastery withers without masters. A chiastic relation points to a crosswise arrangement indicating spatiotemporal and conceptual complexity, where the reversal of terms indicates a shift that is not reducible to mirror opposition. I evoke this figure to highlight the ways in which a critique of mastery can contribute to a mutual development in critical and feminist pedagogy through a convergence with the unseating of experts. The lingering instability, if not opacity, of chiastic critique signals irreducible, relational complexity, particularly when it comes to undermining the very goal of oppressive education. Thus radicalizing pedagogy involves digging deeper than changing the identity of the masters or occupying their places (differently). Getting beneath this surface requires subverting mastery itself, which imposes insidious, hierarchical relationships, rooted in material relations.

My thesis is that the chiastic critique of mastery at the crossroads of learning without experts elaborates a feminist pedagogical methodology by addressing the method of learning as well as its presumed goal. Freire's poignant point that education is either liberatory *or* stultifying contains an insight not reducible to the apparent dichotomy in which it is couched. In other words, even if dichotomies constitute oversimplifications as such, which they surely do, the salient truth of the insight is not elided through its problematic form. A duality such as oppressed/oppressors risks reifying two sides in a struggle that has irreducibly more elements; and while form and content are intertwined and, therefore, insight cannot be cleanly extracted from its context, it nevertheless expresses a

²⁹⁶ Judith Butler, *Giving an Account of Oneself* (New York: Fordham University Press, 2005), 64.

²⁹⁷ Maya Nitis, "Teaching Without Masters," diacritics 42.4 (2013): 82–109.

point that still needs to be taken up today.²⁹⁸ If we follow through the radical claim that education inevitably stultifies or liberates, we see the significance of educational methods for both transformation and conservatism. The reversal of a given structure in chiastic critique destabilizes dichotomies with their dualist logic without completely abandoning dialectics; thus, enabling us to make distinctions irreducible to empty mirroring or synthesis. The length of this chapter prevents me from delving into a discussion of what could be described as (Judith Butler's) non-synthetic dialectics and (Karen Barad's) non-dialectics, but I hope that this evocation indicates the relevance of these theoretical debates for pedagogical and textual praxis.

Mastery, in one shape or another, continues to reign over the precincts of learning throughout disciplines and institutions. It isn't enough that everyone wants to be good, especially at what they do; there is also mounting pressure to be the so-called best in order to get paid, situated in what I call a "limited economy of lack."299 This striving for mastery of discourses and practices organizes learning through a largely unchallenged norm, structuring classroom experience via dramas of success and tragic failure with its induced traumas.³⁰⁰ Aptly, the pernicious norm of mastery is instituted primarily through learning. From childhood, we are pushed not simply to play with or explore the world, but to master it — apparent most in formal education structures, where such mastery is graded and usually sanctioned by a (school) master. Mastery can be found as a mostly unquestioned goal throughout the structure of so-called Western civilization, where knowledge is conceived as a matter of expertise; a critique of mastery thus goes hand in hand with undermining masters. Freire's pedagogical unseating of masters is inspired by Marxist tradition, while anarchist and nihilist histories articulate modes of living against the aim of mastery. A chiastic approach might allow us to apprehend the tension of their intersection without reduction.

²⁹⁸ Although it is surely worthwhile to trace the specifically feminist trajectory of breaking down dichotomies, I am interested in the convergence of feminist pedagogy with other critical, minoritized traditions of knowledge.

²⁹⁹ This nomination stems from my current research for forthcoming projects about the logic of lack in neoliberal economies of sacrifice.

³⁰⁰ I use the word trauma broadly here, yet it seems to me rather apt, given the number of students I have met with severe learning difficulties in particular areas due to various, previous traumatic experiences in classrooms. Whether learning requires a certain trauma as breakage, as Ronell argues in recent NYU lectures, is unfortunately beyond the scope of this paper.

In a specifically queer feminist vein, Judith Butler delves into a psychoanalytic critique of mastery in *Giving an Account of Oneself*. Butler's and Ronell's relationship to psychoanalysis in general may be described as critical — calling into question certain presumptions while intervening in this master-discourse. Butler's insight into the problems of the desire for mastery are related to unseating the Subject at the center of multiple discourses, with its egotistical drive for hyper-mastery. This drive can be linked to the desire-turned-need amidst today's mounting precarity.

The rhetorical Subject responsible for their³⁰¹ actions has been posed in central humanistic disciplines, from law to literature as the unquestionable doer, implying the possibility of self-mastery. Hence Butler's critique of this sovereign Subject involves an examination of self-mastery. Self-mastery turns out to be impossible because, as Butler shows following psychoanalyst Melanie Klein, we are given over to others from the start. In other words, from infancy, we are dependent on others. This dependency does not cease with adulthood. On the contrary, we continue to be constitutively dependent on others, with traces of early exposure operating in our being and actions in ways that we cannot entirely control. Such inter/dependency poses an irreducible challenge to self-mastery that furthermore threatens the Subject with death: "the death of a subject who cannot, who can never, fully recuperate the conditions of its own emergence. But this death, if it is a death, is only the death of a certain kind of subject, one that was never possible to begin with, the death of a fantasy of impossible mastery, and so a loss of what one never had. In other words, it is a necessary grief."302 This apprehension of the impossibility of mastery and the death of the sovereign Subject contributes to the opacity of our conditions of emergence, to which Butler's work speaks.

Can we move from these conditions to a critique of mastery in the classroom, in which teachers are compelled by external and internal pressures, evidenced by standardized grading schemes, to goad students to "do their best," not simply to do well, establishing relations of competition? In such environments, learning is associated with mastery, not only of oneself, but also of the subject matter and mastery over others. The pedagogical relationship may be

³⁰¹ This grammatical pluralization is political in so far as gendered pronouns are thus avoided.

³⁰² Butler, Giving an Account of Oneself, 65.

paradigmatic of a demand for mastery. As Butler says, "self-mastery takes place in an address to an other or in an exposition before the other, contextualized and facilitated by a pedagogical relationship."³⁰³ What would a classroom not only without masters and experts, but also without mastery look like?

Many pedagogues and aspiring professionals must be terrified by such a chaotic and disorienting vision, and for good reason. (But this reason is not the same Reason.) Freire advocates for dialogue to replace the hierarchy of the teacher who has the knowledge and the students who do not. Would this dialogue require a blank slate, ignorant of the differences of experience present throughout any group and class? Or, can an anti-hierarchical classroom dynamic also take these differences into account, which are never neatly distributed with the teacher's privilege and students' lack, but are rather to be found throughout any learning precinct? Freire has developed a learning methodology where student-teachers and teacher-students pick topics and work through questions dialogically. Yet can this approach work in the face of looming standardized tests and thoroughly in-corporated times?³⁰⁴

A refusal of mastery on the part of teachers who spend a significant amount of their time pretending to know more than they do (as, for instance, it takes more time to keep up with developments in any field than most teachers have) can position students and teachers on the same side in the struggle of learning.³⁰⁵ Teachers know well the pressures of having to teach, present, facilitate, and mediate. Such centralized, if not hierarchical positions carry heavy responsibilities. In many classrooms, these responsibilities can be more distributed with effects that would contribute to everyone's learning potential. While some ostensibly greater chaos is surely part of such redistribution, so may be greater involvement in the process of learning and less pressure on all sides. Feminist materialist notions such as intra-action and the forms of relation they suggest might be helpful in envisioning such a process, as I explore in the following section.

³⁰³ Butler, Giving an Account of Oneself, 128–9.

³⁰⁴ In my own work in Berlin from 2009 — 2014, for instance, examination topics were dictated by a centralized department of education. Although these topics were contemporary and socially relevant, which I at first hoped might allow significant room for choosing material, in fact, we were forced to select material in relation to how the topics would be addressed on the exam in order to prepare for it. I will return to my teaching experience below. For more on the way corporatization influences students' views of education in Germany, see Meißner's paper in this volume. On a US context, see this recent article about NYC public schools: George Joseph and John Tarleton, "The Corporate Classroom," *The Independent*, Issue 204, March 2015, 6–7. The same issue contains an article about Chile: "Education as a Commodity," 14.

³⁰⁵ For expediency, I retain the oversimplification of students and teachers, although I agree with Freire that to overturn hierarchies, teachers must also be students and *vice versa*.

(New) Feminist Materialisms in the "Precincts of Learning"306

Whoever teaches without emancipating stultifies.³⁰⁷

The nomination and the "founding gestures" of "new feminist materialisms" (NFMs) have unleashed some debates in feminist theory regarding the status of the "new," as well as what it means to "found" a theoretical tradition.³⁰⁸ While such debates are necessary, some of these have been rather contentious due to the ways in which certain interlocutors have appeared to institute the "newness" of NFMs by rejecting prior feminist work at the borders of language and materiality. In response to this problematic, in her article "Imaginary Prohibitions," Sara Ahmed asks whether such moves seeming to institute potentially phantasmatic boundaries, which mark previous feminist work as not new and deficient, are part of a corporate-academic economy that demands dividing gestures. Although I do not have time to delve into these disagreements here, the issue must be flagged to differentiate learning without masters from learning *ex-nihilo* or establishing a supposedly new economy by dismissal of all prior work.

In her review article of several key volumes dealing with NFMs, Iris van der Tuin lays out concerns characteristic of authors working in this direction of scholarship.³⁰⁹ She addresses anti-representationalism, "non-linear take[s] on political economy," anti-linguisticism, "de-hierarchizing the so-called object and the so-called subject of knowledge (or art)," and posthumanist, ontological intra-action of nature and culture, not exclusively in relation to race, sex, and gender, but also cities, forests, and so on.³¹⁰ Space limitation permits me to take into account the latter two: de-hierarchizing the object/subject dichotomy of knowledge and intra-action, which I will situate in a classroom setting in terms of unlearning the demands of mastery. Although according to (academic) master-standards I should justify this choice by alleging these elements to be "the

³⁰⁶ "I look at my colleagues and see brilliant scholars ground down by the institutional praxeology, turned over to the bureaucracy of teaching, its unending evaluations and businesslike downgrades, as if 'results' could be yielded in the traumatic precincts of leaning. This type of consistent demotion to a result-oriented quotient belongs to the subject (and hell) I would want to raise here" (Ronell, *Loser Sons*, ix).

³⁰⁷ Rancière, The Ignorant Schoolmaster, 18.

³⁰⁸ See van der Tuin, "New Feminist Materialisms," 271–277.

³⁰⁹ Ibid.

³¹⁰ Ibid., 275.

most relevant," I refuse this hierarchical approach. Instead, I discuss these aspects of NFMs because they are the ones I am most familiar with — in the classroom.

Relations of subject and object are not one-dimensional. Yet teachers are expected to master the object/s they present, to have a comprehensive expertise of topics, which are thus positioned as objects before subjects of knowledge. It is this mastery that teachers are supposed to transmit to students in mainstream education of all levels. A question arising from this expectation, then, is whether it is indeed possible to set aside such aspirations in class, considering also that processes of normalization, expectation, job performance, and so on make entering the classroom without an object (of mastery) difficult and possibly threatening. The first section of this chapter has explored the challenges posed by critical pedagogy to the presumed need for experts in classrooms. In the second section, I have evoked the figure of the chiasmus in order to radicalize that critique through a convergence with questioning mastery itself. This final section inquires into feminist materialist practices that link up with a convergent critique of masters and mastery.

During the last five years, I have taught in two collective schools in Berlin (i.e. work collectives or cooperatives that aim to function democratically): one, a language school for adults, and the other, a school that prepares young people for the Abitur. Briefly, the Abitur is the absurdly stressful, months-long, German university entrance exam, for which the US system has no equivalent. Before that, I served as a philosophy adjunct outside of Chicago. These experiences inform my practical-theoretical exploration of teaching methodologies and have allowed me to explore some nontraditional approaches. First, I have found that addressing the material without a claim to mastery may, at least at first, take more preparation.³¹¹ Entering a class with a text, film, etc. without objectifying or instrumentalizing the material on hand rewrites the presumed relations of humans as subject-doers and material as passive object/s. The difference between an object (of knowledge) and intra-active material can be apprehended in terms of (non)mastery. In other words, do we presume to know precisely what (material) is in our hands, with all its qualities and agency? This relationship to material/ text may be as important in teaching students about what kind of relations are possible (in the widest sense) as the teacher-students relation.

³¹¹ The open interpretation and significance of "material" is felicitous for this exploration, thus evoking broad implications for pedagogies but also other material involved in classrooms.

By transforming the collective relationship with the material of knowledge, we find ourselves in the midst of posthumanist intra-action, which appears to extend prior forays into materialism before this nomination.³¹² Barad, whose work has been controversial precisely in relation to assertions regarding the "new" of NFMs,³¹³ coins the term "intra-action" to radicalize interaction: rather than a sovereign subject acting unilaterally on a passive object, intra-action underscores a non-subject centered view of agency where the action/relation alters the agents.³¹⁴ I would like to lastly turn to how intra-action can help us distribute some of the responsibilities of learning. My thesis is that such re-distribution can contribute to the ease *and* depth of learning on the part of students and teachers.

In its etymological derivation, intra-action does not presuppose given and completed entities, but rather describes a mutual relation of the parties, which change with the relation itself; this is poignant for learning. If the teacher's experience and knowledge is not reducible in terms of mastery to be emulated, and the teachers themselves remain sufficiently open to input from students as well as outsiders, the surroundings, and other sources that influence classes (remaining largely unacknowledged), the intra-action of multiple agents in the classroom can be accounted for in the experience of learning. Understanding the classroom dynamic in such a way may take some pressure off teachers/professors, allowing them to devote more energy to the very experience of learning, which may have been drained by maintaining the appearance of the single leader/master/expert. Thus, the (extra) initial preparation that focuses on the multiple and open signification of material and how it might be taken up by students and teacher/s, in turn, allows the pressure of leadership to be more broadly distributed. This approach might not only open up dialogue among students and teachers, but also put them on the same side, as *collaborators* rather than conquerors of knowledge. Echoing indigenous practices of knowing,³¹⁵ such opening up of connections and pathways within and beyond classrooms also works against the age, class, de

³¹² I would agree with Ahmed that Butler's work, as well as Walter Benjamin's, can and should be read as materialist. See, especially, Benjamin, *The Arcades Project* (New York: Harvard University Press, 1999); and Butler, *Bodies that Matter* (New York: Routledge, 1993).

³¹³ Van der Tuin discusses the controversy in "New Feminist Materialisms," 2.

³¹⁴ Karen Barad, "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter," Signs: Journal of Women in Culture and Society 28.3 (2003): 814.

³¹⁵ This was thematized, for instance, in a training workshop conducted by the Coalition of Immokalee Workers in Immokalee, Florida in 2001. For more on their ongoing campaigns, see www.ciw-online.org.

facto race, and certain gender segregation imposed by mainstream education — to begin with, by undermining the one-directionality of hierarchical learning.

Some issues around adopting NFM strategies remain unaddressed in this inquiry. One crucial problem is whether thinking of these dynamics intra-actively, without taking heed of Freire's claim that education is either liberatory *or* reproduces the *status quo*, constitutes an oversimplified appropriation of critical pedagogy.³¹⁶ While central questions must be explored in this direction of scholarship, I have touched on how intra-action, as an approach that undermines the subject-object hierarchy, can chiastically radicalize classroom dynamics by also questioning mastery itself as the goal of learning.

A chiastic critique can enable us to move from unseating expert masters, implemented through both liberation and feminist pedagogy, to undermining mastery. By taking into account material agency, which would look irreducibly different in science and language classrooms, for instance, feminist materialist strategies can contribute to the conversion and elaboration of these goals.³¹⁷ I am hesitant to give examples because of the need to evaluate the status of exemplarity itself, which is beyond the scope of this paper. For the sake of concretization, I can offer only a glimpse of my own practice, such as taking seriously the effects of material and human intra-action (which in my case has included allowing interruption as a result of unforeseen effects of a film or a text on student/s, etc.). While tackling learning cooperatively can be read as a specifically feminist project, what may be most subversive about such productive praxis are the points of intersection with other minoritized approaches and indigenous practices within and beyond the academy.

³¹⁶ Furthermore, does Barad's causal conception of intra-action risk over determining group dynamics in the classroom setting? For Barad's causal conception of intra-action, see, for instance, "Posthumanist Performativity," 325. I do not have time to delve into causality here, but my suspicion is that this notion remains overburdened and problematic in itself, as well as in Barad's work.

³¹⁷ I thank Corinna Bath for an inspiring seminar on "new feminist materialisms" at the TU, Berlin.

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OPENING SPACES: THE POLITICS OF FEMINIST MATERIALISMS AS CHALLENGE TO THE ENTREPRENEURIAL UNIVERSITY

Hanna Meißner

The changes in German higher education in the early 21st century can be described as a process in which universities are (re)configured in terms of organizations providing skills and services geared towards employability and competitiveness.³¹⁸ It is against this backdrop that I propose an intervention (re)claiming critical traditions, re-articulating education as a practice of freedom.³¹⁹ I start from a sense of loss, indicating what I consider to be serious problems for feminist pedagogy. As I will argue, with reference to critics who analyze recent developments in academia as "a strong tendency to turn it into a 'private affair,'"³²⁰ political issues and emancipatory visions are increasingly disavowed as entries to academic perspectives. This perception of having lost spaces and opportunities for political reflection and agency within academia should not, however, be interpreted as a nostalgic longing for something that could be recuperated, a better past to which we could return. Rather, I confront my somewhat mournful outlook with a certain spirit of optimism that seems to run through many

³¹⁸ Maarten Simons and Jan Masschelein, "The Public and Its University: Beyond Learning for Civic Employability?," *European Educational Research Journal* 8.2 (2009): 211; Sabine Hark, "Widerstreitende Bewegungen: Geschlechterforschung in Zeiten hochschulischer Transformationsprozess," in *Die unternehmerische Hochschule aus der Perspektive der Geschlechterforschung: Zwischen Aufbruch und Beharrung*, ed. Kristina Binner et al. (Münster: Wesfälisches Dampfboot, 2013), 194–208.

³¹⁹ Paolo Freire, *Pedagogy of the Oppressed* (New York and London: Continuum, 2005); bell hooks, *Teaching to Transgress: Education as the Practice of Freedom* (London and New York: Routledge, 1994).

³²⁰ Simons and Masschelein, "The Public and its University," 211.

debates convening under the label of new material feminism.³²¹ These debates offer exciting promises of radical epistemic shifts, opening new perspectives for reconceptualizing and reconfiguring notions of the political.³²² This brings new perspectives to some perennial feminist questions, such as the critique of the discursive economy of hierarchical binaries, and of deprecating, denigrating, or even hostile responses to alterity — problematic configurations that are part and parcel of the patriarchal and colonial configuration of modern universities.

Nevertheless, I am reluctant to let myself be swept away by the excitement of this new materialist body of work in challenging boundaries and dualisms. I am wary of inadvertent resonances that certain aspects of these new materialist debates may have with neoliberal ideologies that refute politics and history in favor of quasi-evolutionary flows and processes. My reluctance serves as incentive to turn to the methodology and concepts of (historical) materialism to question who "we" are at this moment in history. Teaching with feminist materialisms, as I understand it here, is a political practice that operates within the very conditions it aims to criticize and transform. What I am interested in then is a notion of *feminist materialisms* as a political and ethical project of (diverse) knowledges committed to understanding the material conditions that configure and confine our possibilities of being in the world, our relations to ourselves and to others. The political and ethical hope is that this understanding may help us to fashion less violent, more inclusive relations. The reference to a collective "we" is fraught with tensions; it is necessary as a political acknowledgment of situatedness and interdependence, yet it is impossible to ever ascertain as a stable demarcation

³²¹ "Something is stirring. Calls for attention are heard from within. Visceral movements resonate from within the belly of the beast of academia. They beckon us from inside the humanities and the natural sciences.... Stirrings are felt more widely as well, from the world within and around us" (Cecilia Åsberg, Redi Koobak, and Ericka Johnson, "Beyond the Humanist Imagination," *NORA* 19.4 (2011): 218) The lyrical tone of this opening passage of position paper "Beyond the Humanist Imagination" expresses a sense of excitement often encountered in these debates. The authors see fundamental epistemic shifts under way, an implosion of analytical categories and, in particular, of dualisms such as nature/culture and human/non-human promising to open up new possibilities of responding to the more-than human, of a perception of agency not bound to human subjectivity. While it is still to be established whether and to what extent it is justified to speak of new materialism as a new perspective (Iris van der Tuin, "New Feminist Materialisms — Review Essay," *Women's Studies International Forum* 34.4 (2011): 271–277; Diana Coole, "Agentic Capacities and Capacious Historical Materialism: Thinking with New Materialisms in the Political Sciences," *Millennium — Journal of International Studies* (2013): 451–469, http://mil.sagepub.com/content/41/3/451.full.pdf+html), common ground for these rather heterogeneous debates can be found in their attention to the agentive dynamism of matter, and the critical reflection that the becoming of the world is not exclusively an effect of cultural inscriptions or human activity.

³²² Hanna Meissner, "Politics as Encounter and Response-Ability: Learning to Converse with Enigmatic Others," Artnodes 14 (2014): 35–41, http://journals.uoc.edu/index.php/artnodes/article/view/n14-meissner/n14-meissner-en.

of belonging; the collective pronoun should thus always be seen as necessarily situated and open. The conditions, which are constitutive for who "we" are and what "we" can hope to achieve, are not only a subject matter of feminist pedagogy (subject of knowledge, critique, and transformation), but a fundamental (constitutive) aspect of our pedagogical practice. As I will argue, we, who engage in feminism as an ethical and political project, need knowledge that accounts for these conditions as well as knowledge that opens up spaces for the imagination of other possibilities, and thus works towards an expanded ability to be attentive to human and nonhuman others.³²³

My understanding of teaching with feminist materialisms draws on a tradition of feminist pedagogy that explicitly acknowledges its politics focused on "the possibilities of making a better world, a livable world, a world based on values of co-flourishing and mutuality."324 Based on the assumptions that practices of knowing are inherently political and that ethics is thus an integral part of knowledge production, feminist pedagogy understands practices of knowing as constitutively involved in the material becoming of the world. This is a materialist concept of knowing, not as contemplation, but as praxis. Knowledge, thus, cannot be something we can "have" or "acquire" to "take home" and "apply." "Knowing" becomes a praxis of relationality, of conceptualizing and maintaining of relationships with others — which/who can then no longer be approached as *objects* of knowledge.325 This means that teaching cannot simply be understood as a process of *transmission*, of passing on packages of knowledge as facts. Also, the very opposition of teacher and student is up for questioning and reconceptualization in terms of relationality, making both "simultaneously teachers and students."326 As Paolo Freire writes, "education as the practice of freedom - as opposed to education as the practice of domination — denies that man is abstract, isolated, independent, and unattached to the world; it also denies that the world exists as a

³²³ Lorenz-Meyer also takes up the vocabulary of producing alternative feminist imaginings in critical and pedagogical practice, and as these relate through a process of unlearning, in her contribution to this volume.

³²⁴ Karen Barad, "Erasers and Erasures: Pinch's Unfortunate 'Uncertainty Principle," Social Studies of Science (2011): 443–454, http://humweb.ucsc.edu/feministstudies/faculty/barad/barad-social-studies.pdf.

³²⁵ Andrea Doucet and Natasha Mauthner, "Knowing Responsibly: Ethics, Feminist Epistemologies and Methodologies," in *Ethics in Qualitative Research*, ed. Melanie Mauthner et al. (London: Sage, 2002), 123–145.

³²⁶ Freire, *Pedagogy of the Oppressed*; Maya Nitis, in this volume, also draws on Freire's pedagogy, pointing out that his arguments often rely on dualisms (oppressors and oppressed, and, in particular, education as liberatory or stultifying). She proposes a feminist reworking of these claims, adding more elements, which complicate these issues in order to seize on Freire's insights without reifying a two-sided struggle.

reality apart from people. Authentic reflection considers neither abstract man nor the world without people, but people in their relations with the world."³²⁷

Drawing on this tradition of (humanist) critical pedagogy as "both a way of understanding education as well as a way of highlighting the performative nature of agency as an act of participating in shaping the world in which we live,"328 I attempt to intervene in its humanist legacies by taking into account radical critique of anthropocentric notions of subjectivity and agency, emerging from new materialist feminisms. In terms of understanding knowing as praxis, my proposition is to read the notion of praxis as a specifically *human* capacity with emancipatory promise (as it is expressed in Marx's historical materialism) together with and through the radical critique of anthropocentrism expressed in new materialist debates. It is important to me, however, to stage this intervention in terms of re(claiming) and working through the traditions of historical materialism, not as "turning" away from them.³²⁹ My general argument is that it is precisely the problematization of our relations with the world that is at stake in our historical situation. This involves asking questions, such as: How are we continuously constituted in and through our relations to the world? How can we draw on humanist traditions of a sense of responsibility in and for these relations while at the same time reworking these traditions in order to allow for critical questioning of the implied notion of human subjectivity and its constitutive exclusions?

A challenge for feminist pedagogy is to re-articulate this problematization and to open up new/other possibilities of fashioning these relations in order to achieve greater responsiveness to others and to open spaces for a radical questioning of hierarchical, exclusionary, and violent relations. These challenges are not new as such, they have, for instance, been present in interventions of women of color and postcolonial theorists criticizing hegemonic feminist assumptions and their attendant effects of othering. A new angle is brought to this debate by the critique of specific processes of othering constitutive of the distinction of human and nonhuman. In regards to the pedagogical context of the university, the role of the teacher is to work together with students on understanding the conditions

³²⁷ Freire, Pedagogy of the Oppressed.

³²⁸ Henry A. Giroux, "The Necessity of Critical Pedagogy in Dark Times," int. Jose Maria Barroso Trisatan (truth-out. org posted on 2013), http://truth-out.org/news/item/14331-a-critical-interview-with-henry-giroux.

³²⁹ Christina Hughes and Celia Lury, "Re-Turning Feminist Methodologies: From a Social to an Ecological Epistemology," Gender and Education 25.6 (2013): 786–799.

that interpellate us as specific subjects by interlocking processes of belonging and othering, while at the same time exploring possibilities of seeing differently and of becoming "answerable for what we learn how to see."³³⁰ This strong political impetus of this pedagogical practice is its commitment to teaching "us" to see our relations with the world as transformable through collective practices.³³¹

Loss of Politicization

Taking my sense of loss of politicization of academic culture and perspectives as a point of departure, my claim is that current changes in academia constitute conditions that are actually adverse to practices of (feminist) critical pedagogy. Pointing out some significant shifts in the public role of the university,³³² I argue that it is useful to perceive these changes in terms of their *disavowal of politics*. The perceived loss of politics in academic culture is thus qualified in terms of the loss of *specific forms* of politics as possibilities of *collective* actions.³³³

European universities are summoned to innovate and modernize their structures and practices in order to meet the challenges of global competition in knowledge-driven economies and societies at the beginning of the 21st century. A key concept and major driving force in this particular agenda of modernization is *global competition*; universities have to mobilize limited resources in the most efficient way in order to stay at (or to potentially reach) top rankings.³³⁴ With this "birth of the so-called 'entrepreneurial' or 'enterprise' university in the current context of competition, marketization and global knowledge cap-

³³⁰ Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14.3 (1988): 583. My use of the metaphor of "seeing" is a reference to feminist reworkings of representationalist traditions, in particular, Donna Haraway's rearticulation of the metaphor of vision.

³³¹ One can also see Schmitz's contribution to this volume, which elaborates on the importance of collective practice as inimical to feminist pedagogy, and provides examples for how this can be undertaken in the feminist classroom.

³³² Simons and Masschelein, "The Public and its University."

³³³ It would be interesting to take a closer look at this sense of loss. On an immediate level, I am referring to the transformation of an understanding of academic culture as based on a community of academics (including the students) who engage in practices of self-administration to an entrepreneurial understanding of practices between individuals as service providers and customers. I perceive this transformation as a loss of a political understanding of academic culture and practices. As I will point out further along, I am aware of the dangers of romanticizing; my mournfulness may well show traces of a melancholic yearning for an imagined loss. It is important to pay attention to these details; this is one of the reasons I find it helpful to engage in the challenges of new materialism.

³³⁴ Gert Biesta et al., "What is the Public Role of the University? A Proposal for a Public Research Agenda," *European Educational Research Journal* 8.2 (2009): 251.

italism,"335 the public role of the university is fundamentally transformed: the modern university, which, in the tradition of enlightenment, has regarded "itself as an institution that orients society and culture towards progress... and emancipation,"336 becomes an organization seeking to improve its performance in terms of given functions of a competitive environment. This implies a rearrangement of the understanding of knowledge and the perceived relation to the world — from the perception of being situated in an *historical* moment that should be considered and understood in order to orient the development of society in the right direction,³³⁷ to an understanding "that frames space as *environment* and time as opportunities here and now."338 The idea that we need to understand the historical specificity of our time in order to orient society in the right direction clearly begs the question of what the right direction may be, and who decides this. These are important issues to be considered in the context of hegemonies, power relations, and processes of normalization. But, in contrast to the notion of existing in a competitive environment with a given set of opportunities and risks, the understanding of existing in *history* constitutes a situatedness of knowledge that opens up the possibility of contesting hegemonies, power relations, and normalization as historical phenomena, thus opening a space of political agency.³³⁹

This is a significant shift with important consequences in terms of political perspectives, coupled with a particular mode of subjectivation, with specific interpellations as teaching and learning subjects. In the entrepreneurial university, the scholar is someone who responds to needs constituted in the space of the environment. Their challenge is to combine efficiently the available (limited) resources in order to meet these needs. As a teacher they have the task of shaping a learning environment (providing information, incentives, and control) encouraging the student to acquire *competences* corresponding to the needs of the environment.³⁴⁰ Students are interpellated as customers/consumers of educa-

³³⁵ Simons and Masschelein, "The Public and its University," 208.

³³⁶ Ibid., 206.

³³⁷ Ibid., 206.

³³⁸ Ibid., 208.

³³⁹ "To regard oneself as being part of an environment (instead of 'a history', for instance) leads to a particular experience of finitude: the experience of being permanently in a condition with limited resources (Deleuze, 1986)" (Simons and Masschelein, "The Public and its University, 208).

³⁴⁰ Gert Biesta, "Giving Teaching Back to Education: Responding to the Disappearance of the Teacher," *Phenomenology & Practice* 6.2 (2012): 35–49.

tion, striving to make the best possible investment in their human capital, documented in portfolio examinations, in hope of future income return — always, of course, with the individual risk of the market invalidating these investments as wrong or insufficient.

According to Maarten Simons and Jan Masschelein, this mode of subjectivation implies a new formation of scholarly detachment as *immunization*. Individuals are "addressed in the first place as separated and isolated from each other";³⁴¹ relations are perceived as interactions between separate entities, and the "constitutive dependency of others is obfuscated."³⁴² This constitutes and delimits a specific discursive horizon of possible problematizations of our relations to the world as relations of independent entities, and thus also of adequate solutions to problems in these relations. It also constitutes a specific interpellation subjectivating stakeholders whose final stake is survival³⁴³ as individuals equipped with limited resources in a competitive environment. This "results in the creation of a collective of individuals/organizations sharing nothing except for their permanent attempt to face the needs of the outside environment. In such a radically privatized community of entrepreneurs, there is no longer a common concern — except for the sum of private interests and properties."³⁴⁴

For a feminist pedagogy, which takes much of its momentum from a particular awareness of constitutive dependency and obligation to alterity in its politicization of knowledge production, these transformations in academia generate a specific dimension of serious problems by constituting a discursive field that actually prevents us "from being exposed or attached to issues in their complicated entanglements, and hence limit[s] the possibilities for students to become a public in view of actual concerns."³⁴⁵ In my experience, students express delight in being challenged to think in terms of complex entanglements of rationality and dependency, to question the specific detachment that is presented as a properly scholarly attitude. At the same time, they grapple with this hegemonic discourse as it sets the conditions that are constituting them as competent scholarly

³⁴¹ Jan Masschelein and Maarten Simons, "An Adequate Education in a Globalised World? An Note on Immunisation Against Being-Together," *Journal of Philosophy of Education* 36.4 (2002): 602.

³⁴² Ibid., 602. "What is obfuscated is the fact that our individuality can truly be conceived only in terms of alterity, that it necessarily entails our being captured in relations of dependency and obligation" (ibid.).

³⁴³ Ibid., 600.

³⁴⁴ Simons and Masschelein, "The Public and Its University," 13.

³⁴⁵ Ibid., 13.

subjects (effectively as well as affectively). Appreciating the feminist acknowledgment of the politics of knowledge production, they are faced with the powerful momentum of academic common sense, which disqualifies a political stance as mere (and individual, in the sense of *private*) *opinion* with no rightful place in academic knowledge production. In light of this situation, feminist pedagogy is faced with the (rather daunting) challenge to establish and defend emancipatory envisionings of other possible social orders beyond patriarchal and neo-colonial capitalism as legitimate purposes of inquiry and to insist that the questions of who we are and how we want to live constitute admissible framings for academic problematizations. This means that feminists engaging with critical pedagogy cannot shy away from "getting their hands dirty" by making truth claims that challenge hegemonic epistemic certainties and social relations of domination.

Exciting Prospects — New Feminist Materialisms

While it is important to take the changes in higher education into account as obstacles for (feminist) critical pedagogy, it is equally important not to stage this as a narrative of nostalgia: academia never was a paradise of critical pedagogy but, rather, an institution shaped by and mired in exclusionary practices and epistemic traditions founded on limiting dichotomies. A nostalgic yearning for the good old days, a conventional defense of academia in the traditions of Humboldt and of Enlightenment modes of critique and progressive orientation,³⁴⁶ is thus not an option. My second argument, therefore, turns to recent debates that specifically focus on overcoming epistemic traditions and limitations, promising a "leap into the future" by staging their adherence to a commitment of making a better world through radical "paradigm shifts or shifts in epistemic formations."³⁴⁷

My mournful account of the current (im)possibilities of (feminist) critical pedagogy in the on-going transformation towards the entrepreneurial university is thus somewhat counteracted by a certain sense of excitement encountered in texts situated in debates of (new) material feminisms. The editorial of a special issue of *Gender and Education* dedicated to new material feminisms claims that

³⁴⁶ According to the Humboldtian ideal, universities are responsible for generating knowledge in the sense of fundamental truths that are not inflected by specific interests. In order to do so, universities should be independent of political or economic influences.

³⁴⁷ Van der Tuin, "New Feminist Materialisms," 276.

"radical shifts across the social sciences make this an exciting time for educational research."348 The shifts in question appear as effects generated in different "strands" such as "new material feminisms, post-humanism, actor network theory, complexity theory, science and technology studies, material culture studies and Deleuzian philosophy."349 The critical reflection that the becoming of the world is not exclusively an effect of cultural inscriptions or human activity, but instead also includes non-human activity and material agentiveness, challenges the notions of emancipation, agency, and education, by making "us realise not just how necessary it is to revise what we understand as causality, motivation, agency and subjectivity, all of which are central terms in educational theory and pedagogy, but also to devise new, practical and ethical acts of engagement which motivate and enact change in the material continuum that constitutes educational practice."350 Working with the "resources made available"351 by these debates is conceptualized as an inter- or post-disciplinary endeavor, which seems to enable resistance against current tendencies in entrepreneurial universities. As Talyor and Ivinson suggest, "as a counter-movement to the increasingly neo-positivist outcomes-based, ever-intensifying (it seems) neo-liberal political and economic climate of education, such a post-disciplinary approach can, perhaps, offer some potentially ethical and political, as well as intellectual, resources."352 Their easy and uncomplicated use of the notions of "resources made available" has caused me to stumble a little in my reading. This makes it clear to me once again that the valuable impulses that new material feminisms have to offer for critical pedagogy are not self-evident. They are yet to be elaborated; post-disciplinarity in and of itself does not sufficiently mark out what is at stake. One very important issue in this respect is to pay attention to possible unwanted and unintentional resonances with the neo-liberal discarding of "history" in favor of "environment."353 In light of this, it is crucial to take on board the analytical instruments made available by historical materialism, with their focus on social conditions of knowledge

³⁴⁸ Carol Taylor and Gabrielle A. Ivinson, "Editorial — Material Feminisms: New Directions for Education," *Gender and Education* 25.6 (2013): 665.

³⁴⁹ Ibid., 665.

³⁵⁰ Ibid., 667.

³⁵¹ Ibid., 665.

³⁵² Ibid., 665.

³⁵³ Philip Mirowski, Never Let a Serious Crisis Go to Waste: How Neoliberalism Survived the Financial Meltdown (London and New York: Verso, 2010).

production. The "leap into the future" promised by new materialisms should not be understood in a linear sense of jumping forward in time. New materialisms sensitize for the aspect of the unknowable, for a leap in the sense of becoming other without being able to anticipate any result or even direction of this becoming. The sense of existing in specific ways in history, as it is expressed by historical materialism, focuses on the constraints of the materializations in the here and now. Both, in their apparently contradictory approaches, are equally necessary for a feminist politics that sees as its project attempts to fashion these leaps in order to achieve a less violent and more livable world.

So, on the one hand, I am thrilled by the enthusiasm and excitement speaking through Taylor and Ivinson's text, which, in this sense, is representative of many others currently published as contributions to the debates of new (feminist) materialisms. I emphatically agree with the issues raised, in particular the importance of radically questioning anthropocentrism and finding ways of being open to alterity. Attentiveness to alterity, finding non-violent ways of responding and engaging, are crucial elements of the political and ethical project of feminism. New materialisms have important contributions to make in this respect, especially through drawing attention to nonhuman alterity as constitutive of our very humanity. On the other hand, however, I am somewhat overwhelmed by the sheer momentum of the "turns" often encountered in these debates: "turning" away from tendencies of social determinism seen as inherent to constructionist perspectives, "turning" away from the human as principle ground for knowledge, away from any focus on social structures, discourse, culture, and human agency as explanatory factors for the specific formation of our historical reality. I am impelled to wonder if the exuberance in the sense of necessity of overcoming modern truths and dichotomies does not somehow override a grim necessity of accounting for historical configurations of possibility. My heritage as a social theorist with a history of engagement with Marx's historical materialism provokes my attention to how social conditions configure and confine our possibilities of relating to ourselves and to others. In our historical situation, social explanations offer politically essential insights that help us to understand specific material-discursive configurations that form many of our relations to (human and more-than-human) others in terms of *competition*, that constitute an environment that configures needs in terms of subjects/owners/users and resources/ objects/commodities. Thus, they also provide us with critical tools for understanding an institutional situation in which we are interpellated as immunized individual

stakeholders working with resources as an *historical situation* — which can be subject to collective efforts of transformation, and thus to politics.

In my experience, students are indeed receptive to critique of dualisms and anthropocentrism, they are eager to discuss possibilities of thinking and being differently. For instance, students from the Science, Technology, Engineering, and Mathematics (STEM) fields engage in critical discussions of the nature/culture binary, they are convinced of the social dimensions of supposedly objective scientific knowledge and linear causalities, and, in principle, they often have no problems imagining that "we" humans are not clearly distinguishable from a nonhuman environment. They often express dissatisfaction with the way they learn to produce knowledge in their fields of study, which they experience as one-dimensional and devoid of social implications and epistemological reflection. At the same time, however, they struggle with what they often read as intransigent gestures of *overcoming* dualisms and notions of linear causality; either they emphatically embrace these gestures in euphoric ways, they reject them as unrealistic, or they treat them as interesting discussions with hardly any relevance to their "real" life and practices in their respective fields.³⁵⁴ "Back there" they are confronted with "business as usual" with the assumption — backed by experience — that facts are usually true and that causal explanations often do the work. They have to cope with academic requirements in a setting in which they are made accountable as rational individuals who are responsible for their educational choices, their success (i.e. to a large extent, their chances of future income) being measured in terms of their individual learning outcome (i.e. acquired competences). In light of this, I want to consider that students might actually be deprived of potential for resistance through a too radical abstinence from social explanations and causalities. Insofar as they understand the critique of human subjectivity as a repudiation of conceptualizations of historical or social dimensions of reality, they find themselves in an untenable position.³⁵⁵ They feel addressed by ethical demands implied in the critique of anthropocentrism; at the same time they need analytical

³⁵⁴ I am not suggesting that students from the humanities or the social sciences do not face these problems; there are, however, differences in epistemic traditions and academic cultures that would require more detailed discussions.

³⁵⁵ The experience that students actually often read new materialist texts in this sense is, in my view, indicative of questions that need further attention. The rhetoric of new materialist debates does indeed often imply gestures of overcoming errors, turning away from wrong assumptions (Sara Ahmed, "Imaginary Prohibitions: Some Preliminary Remarks on the Founding Gestures of the New Materialism," *European Journal of Women's Studies* (2008): 23–39). The challenge would be to work on practices of critique that sustain tensions and account for necessary limitations by being attentive to the specific situatedness of any knowledge.

instruments to understand who they are in a specific historical social situation in order to navigate ways of responding to this interpellation. Instead of "turning away" from the human subject, the pedagogical challenge would be to insist on a specific transformational and emancipatory potential of human subjectivity while at the same time acknowledging that this subject is not a foundational grounding of agency but, rather, an irresolvable process of becoming. Feminist materialisms should not inadvertently echo the neoliberal disavowal of politics, but engage in a refashioning of the notion of the political in order to make it more expansive, less confined to specific forms of (human) subjectivity.

Feminist pedagogy is faced with the challenge of engaging with the historical dispositive constituting our practices of education: Isn't the term education itself rendered senseless if we (who?) assume that we should not think of human agency as a specific force in the becoming of the world? Now, it is by no means necessarily a bad thing if the concept of education is rendered senseless. And it is not generally objectionable to question the anthropocentric concept of human agency. My argument, however, is to point out the necessity of working on practices of critique that are attentive to the dangers of inadvertently short-circuiting this radical questioning of human agency (with all the attendant concepts such as culture and education) in simple assertions proclaiming a necessity of going beyond limiting dichotomies, such as the distinction of human/non-human, nature/ culture, or meaning/matter. In our historical conditions, it is politically adequate to work with and from notions of education and pedagogy - with all their humanist entanglements. For a feminist materialist perspective in pedagogy, the challenge is to sustain the tension of working with and from humanist legacies in our very critique of these legacies. We (as subjects defined and constituted by excluded others) cannot *decide* to be open to alterity and to other possibilities — but, given the shortcomings and violence of such clear demarcations, we should be politically committed to finding and fashioning new ways of relating to others.

In regard to a feminist pedagogy of teaching with materialisms, this political commitment implies processes of mutual and collective questioning: What are the conditions that constitute "us" as knowing subjects? What are the specific possibilities opened up by the "Enlightenment modes of knowledge"³⁵⁶ if we ac-

³⁵⁶ Donna Haraway, "Cyborgs at Large: Interview with Donna Haraway," in *Technoculture*, ed. Constance Penley and Andrew Ross (Minneapolis and Oxford: University of Minnesota Press, 1991), 2.

knowledge them as constitutive forces of the material-discursive field of academic knowledge production? In which sense could we maintain that these modes of knowledge have been "radically liberating; that they give accounts of the world that can check arbitrary power; that these accounts of the world ought to be in the service of checking the arbitrary?"³⁵⁷ Assuming that these modes of knowledge are the very conditions of possibility for our political commitments — and thus "a space that [we] cannot not want to inhabit and yet must criticize"³⁵⁸ — we cannot escape these conditions. However, we who engage with these challenges from feminist perspectives in the material-discursive space of academia in the early 21st century can hope to work through them in order to change them. In this sense, feminist materialisms are not simply an epistemology or a methodology, but are, at the same time, a political practice.

Who are We in this Moment — and What can We Hope to do?

Situating my argument in the traditions of critical pedagogy means (re)claiming the idea that education "is always directive in its attempts to teach students to inhabit a particular mode of agency; enable them to understand the larger world and one's role in it in a specific way, define their relationship, if not responsibility, to diverse others.... Pedagogy is by definition directive."³⁵⁹ This means acknowledging that concepts of education and pedagogy comprise specific, situated, politically committed practices configured by historical-material conditions; they are crucial aspects of the "modes by which, in our culture, human beings are made subjects."³⁶⁰ Feminist pedagogy, embracing traditions of critical pedagogy, works in and with these modes of subjectivation, but it is specifically attentive to tacit assumptions and untold stories of dependency imbedded in categories and methodologies — a critical stance rooted in the opposition to the historical othering of women as bearers of corporeality and dependency. In this sense,

³⁵⁷ Ibid., 2.

³⁵⁸ Gayatri Chakravorty Spivak, *Outside in the Teaching Machine* (New York and London: Routledge, 1993), 70.

³⁵⁹ Henry A. Giroux, "Rethinking Education as the Practice of Freedom: Paulo Freire and the Promise of Critical Pedagogy" (truth-out.org posted on 2010), http://www.truth-out.org/archive/item/87456:rethinking-educationas-the-practice-of-freedom-paulo-freire-and-the-promise-of-critical-pedagogy.

³⁶⁰ Michel Foucault, "The Subject and Power," in *Michel Foucault: Beyond Structuralism and Hermeneutics*, ed. Hubert L. Dreyfus and Paul Rabinow (Chicago: The University of Chicago Press), 208.

feminist pedagogy as a practice of freedom does not aim for the autonomy of individualized subjects, and it holds no certainties in respect to definite goals of becoming. Instead, the directive impulse of feminist pedagogy aims for the creation of more expansive ways of co-operatively co-producing other relations of being that acknowledge our mutual, material dependencies with human and nonhuman others. In doing so, feminist pedagogy is "hold[ing] on to impossible heritages"³⁶¹ insofar as they constitute our very means of reworking these heritages in a political understanding of pedagogy as practice of freedom. The directive momentum of this work is not geared towards "forming" individuals according to an idealized necessity; on the contrary, it is geared towards expanding our possibilities by searching for ways of experiencing and shaping our mutual entanglement with one another and with the "world."

The possibilities of such reworking rely on the assumption that our world can, to a certain extent, be actively arranged and transformed. Feminist teaching can be conceived as a praxis striving to "promote new forms of subjectivity through the refusal of this kind of individuality which has been imposed on us."³⁶² And this is, in fact, a powerful heritage of modern Enlightenment thought, which can be reworked into a critical force against entrepreneurial immunization. In light of its imbrication with all the problematic aspects of modernist thought, however, any engagement with this heritage has to be critical — but critique cannot simply do away with its problematic conditions of possibility, it has to work through them.

Education as practice of freedom in a feminist materialist sense (re)configures the notion of freedom by rejecting any notion of pre-existing individuality and by acknowledging the material conditions that constitute us in interdependent relationalities. It is a practice of freedom insofar as it frees us from the seeming intractability of given conditions, by making them conceivable as socially constituted, and thus transformable. Freedom in this sense is not freedom of individual choice, freedom to consume and to engage in economic activities, to choose a field of study, specific classes given as options (on the supply side), and taken or not by the customers/consumers; it is thus, finally, not freedom to

³⁶¹ Nicholas Gane and Donna Haraway, "When We Have Never Been Human, What Is to Be Done? Interview with Donna Haraway," *Theory Culture and Society* 23.7–8 (2006): 139.

³⁶² Foucault, "The Subject and Power," 216.

opt out. Instead, freedom is reworked as freedom to talk back 363 to confining interpellations, to engage in collective practices attempting to change the field of options, to transform the material conditions. Pedagogy as practice of freedom works to open up spaces in which to engage in political practices of questioning given conditions and asserting different (but always partial and temporary) truths. bell hooks' notion of talking back strikes me as particularly apt in this context as it points to the danger of placing oneself outside of the realm of hegemonic common sense in attempts to challenge ostensible necessities, of taking the risk of not being heard or understood — or even being silenced. This puts an emphasis on the importance of establishing a sense of community — a specific "we" — that enables us to take the risk of talking back to structures of domination and to hegemonic truths. Furthermore, in the context of new materialisms and its questioning of the humanist heritage of political projects of transformation, voices like hooks' are an important reminder that processes of othering traverse the category of the human itself, silencing, excluding, and annihilating human others.³⁶⁴ The alterity we are striving to find ways of opening up to thus is not confined to the realm of the nonhuman.

Freire's claim that education as the practice of freedom requires being simultaneously teachers and learners can be taken up and reworked through a notion of *learning to un-learn*. This phrase is borrowed from Gayatri Spivak, who suggests that we need to start "un-learning our privilege as our loss";³⁶⁵ it points to the affective dimension of being situated and materially constituted as subjects in and through the very conditions that need to be critically reflected and transformed.³⁶⁶ We can hope to learn to un-learn confining certainties by

³⁶³ bell hooks, "Talking Back," *Discourse* 8 (1986): 123–128.

³⁶⁴ Feminist voices from the "margins" — feminists of color, lesbian feminists, third world feminists — need to be more strongly considered in contemporary debates on (new) feminist materialisms. As Deboleena Roy has pointed out at the conference "MATTERING: Feminism, Science and Materialism" in New York in 2013, this critique of generic notions such as "women" or "patriarchy" should be extended to notions such as "matter" or "bodies." As Roy argues, presenting results of her collaboration with Banu Subramaniam, bodies and matter are always contextualized — and in our historical present these contexts are shaped by capitalism, racism, and (neo)colonialism.

³⁶⁵ Gayatri Chakravorty Spivak, "Criticism, Feminism and the Institution: An Interview with Gayatri Chakravorty Spivak," *Thesis Eleven* 10–11 (1985): 9.

³⁶⁶ Spivak's "materialist approach to reading" (Stephen Morton, *Gayatri Chakravorty Spivak* (2003), 76) challenges the unmarked normality of hegemonic theoretical concepts and categories, which "we" as academic subjects need to learn to un-learn because they not only obliterate the lived experience of marginalized people but also conceal crucial material conditions of "our" privileged status as subjects constituted in the hierarchical global division of labor. Spivak's is another voice pointing to an important aspect of materialist critique in our historical present: the (neo)colonial capitalist economy and global labor chains.

visualizing³⁶⁷ entangled structures, teaching ourselves to see specific transformable dimensions of the conditions that shape our experiences and practices. This is an inherently political notion of knowledge production, since this "visualization" is committed to making these conditions available to transformational practices.³⁶⁸ Teaching would then be conceptualized as a process of learning about structural conditions, of learning to acknowledge them in their enabling as well as necessarily constraining and marginalizing effects. At the same time, and in this respect, I see important issues raised by new material feminism; it would be a process of inventing new practices of knowing that could let us experience and respond to others without reifying them as objects, or resources, or inaccessible elements of our environment. The challenge of new materialisms is to open spaces of fantasy that allow us "to disrupt what has become settled knowledge and knowable reality,"³⁷⁰

A critical promise of these spaces of fantasy lies in the widening of our capacities of *talking back* to the demands of cultural assumptions, economic structures, and institutional settings insofar as they systematically impede openness towards others and structure our interdependency in violently hierarchical forms. The processes of learning to un-learn and talking back are necessarily *collective* practices requiring a cooperative fashioning of spaces in which we find time and security — particularly in the adverse conditions of entrepreneurial universities — to engage in risky practices of questioning how we want to teach and learn — and to what ends.

³⁶⁷ Referencing Donna Haraway's notion of theory as a "sighting device," Noel Castree suggests that Marx's analysis of the capitalist mode of production should be understood as a device that visualizes something that is otherwise not directly available to our perception. This is clearly a political understanding of knowledge production, since, as Castree argues, "[i]f working people across the globe are to recognize their common interest in transcending capitalist value relations, then an indispensable precondition is that they first be convinced of the reality of that common interest" ("Invisible Leviathan: Speculations on Marx, Spivak, and the Question of Value," *Rethinking Marxism: A Journal of Economics, Culture & Society* 9.2 (1996): 57).

³⁶⁸ See also Thiele (in this volume) regarding the practice of learning to un-learn; and van der Tuin and Dolphijn on pedagogy as transformational practice. Nitis' argument also takes up in some detail with Freire in this volume.

³⁶⁹ Judith Butler, *Undoing Gender* (New York and London: Routledge, 2004), 27.

³⁷⁰ Ibid., 28.

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WEATHER WRITING: A FEMINIST MATERIALIST PRACTICE FOR (GETTING OUTSIDE) THE CLASSROOM

Astrida Neimanis

Weather writing encourages a thick understanding of the reciprocal implication of human subjects and climatic natures. It invites an expanded meteorological imaginary, whereby the weather — and, by extension, phenomena related to climate change — are experienced in and through our human bodies, as "always the very substance of ourselves."³⁷¹ By cultivating a deep attunement to our human bodies' implication in the weather-world, we can better understand how humans and the weather are always collaborators, co-making a world in thick time and transcorporeal³⁷² space.

In this chapter, the practice of "weather writing" is presented as a means of bringing together practical pedagogies with feminist materialist theories of embodiment in the context of environmentally-oriented feminist concern with climate change. This chapter's purpose is three-fold. First, it illustrates to students, in the form of weather writing as a case study, how one's understanding of a pressing contemporary ethical, political, and epistemological concern — namely climate change — can be enriched through a feminist materialist orientation. Second, it provides guidance in exploring key concepts within feminist materialisms in a practical teaching context — that is, weather writing. Its third implicit objective is to further the development of feminist materialist methods and theories of embodiment in a more-than-human frame. Here, this framework emerges — perhaps unconventionally — in conversation with corporeal phenomenology. While phenomenology is sometimes perceived as being at odds with new materialist thinking, the work of Merleau-Ponty, as a specifically *embodied phenomenology*, is

³⁷¹ Stacy Alaimo, *Bodily Natures: Science, Environment, and the Material Self* (Bloomington: Indiana University Press, 2010).

³⁷² Astrida Neimanis and Rachel Loewen Walker, "Weathering: Transcorporeality and the 'Thick Time' of Climate Change," *Hypatia* 29.3 (2014): 558–575.

highlighted here as providing key resources for cultivating feminist materialist understandings of embodiment³⁷³ — i.e. those attuned to the inextricable entanglement of materiality and semiotics, or what Vicki Kirby has called "the productive unfolding of language with life."³⁷⁴ In addition to strengthening an understanding of feminist materialist theories in practice, skills honed by students who partake in weather writing include situated observation, thick new materialist description, and collaborative critical dialogue with other participants.

Theoretical & Methodological Apparatus

A broad range of feminist theory in the last forty years — from ecofeminism and the French *écriture féminine*, to black feminist thought and indigenous feminisms, to cyborg and posthuman feminisms — has been at the vanguard of questioning the parameters of the Enlightenment humanist view of embodiment. Drawing on this broad and diverse genealogy, feminist materialist theories provide a key platform for weather writing — a practice that extends these critiques of humanist embodiment into debates on climate change and anthropogenic human incursion into non-human environments. We can explore concepts such

³⁷³ For further discussion on a productive relation between phenomenology and new materialist or feminist materialist thinking, see, e.g. Sara Ahmed, *Queer Phenomenology* (Durham: Duke, 2006); Sara Ahmed, "Orientations Matter," in *New Materialisms: Ontology, Agency, and Politics*, ed. Diana Coole and Samantha Frost (Durham: Duke, 2010), 234–257; Diana Coole, "The Inertia of Matter and the Generativity of Flesh," in *New Materialisms: Ontology, Agency, and Politics*, ed. Diana Coole, and Samantha Frost (Durham: Duke, 2010), 92–115; Vicki Kirby, "Culpability and the Double Cross: Irigaray with Merleau-Ponty," in *Feminist Interpretations of Merleau-Ponty*, ed. Dorothea Olkowski and Gail Weiss (University Park: Pennsylvania State University Press, 2006) 127–146; and Astrida Neimanis "Posthuman Phenomenologies for Planetary Bodies of Water," in *A Feminist Companion to the Posthumanities*, ed. Cecilia Åsberg and Rosi Braidotti (Springer Verlag), forthcoming.

³⁷⁴ Vicki Kirby, "Culpability and the Double Cross: Irigaray with Merleau-Ponty," in Feminist Interpretations of Merleau-Ponty, ed. Dorothea Olkowski and Gail Weiss (University Park: Pennsylvania State University Press, 2006), 134. My personal scholarly genealogy traces a clear line between embodied phenomenology and posthumanism/new materialism (see Neimanis, "Becoming-Grizzly: Bodily Molecularity and the Animal that Becomes," PhaenEx: Journal of Existential and Phenomenological Theory and Culture 2.2 (2007): 279-308; and Neimanis, "Commuting Bodies Move, Creatively," PhaenEx: Journal of Existential and Phenomenological Theory and Culture 3.2 (2008): 115-148), so acknowledging that rather queer lineage here, in the development of "weather writing" is important in terms of my own politics of citation. At the same time, I acknowledge that establishing a relationship between phenomenology and new materialist theory requires a more sustained argument than I can engage here (but see Neimanis, "Posthuman Phenomenologies"), particularly as the emergence of posthuman and new materialist theories is sometimes associated with a disavowal of phenomenology (e.g. Alaimo 2009). I wish to stress that "weather writing" is nonetheless a worthy experiment, not only for feminist materialist teaching, but also for practically exploring the relationship between embodied phenomenology and new materialist concepts. In other words, actual engagement with "weather writing" will help generate insights that can further the philosophical debate between phenomenology and new materialisms. We should also note the renewed interest in phenomenology, and its relationship to posthumanisms and new materialisms (see, e.g., Connelly 2011, 2010).

as "transcorporeality" (Alaimo),³⁷⁵ "nature writing itself" (Kirby),³⁷⁶ "viscous porosity" (Tuana),³⁷⁷ material agency, "intra-action," and worlding (Barad),³⁷⁸ and "weathering" (Neimanis and Loewen Walker),³⁷⁹ in the context of practical writing experiments (see "Helpful Concepts" text box below)

Helpful concepts for Weather Writing

Transcorporeality (Alaimo 2008, 2010) names the material transits between human and nonhuman bodily natures, present, for example, in environmental toxins or other anthropogenic matters that affect all kinds of bodies and ecosystems — and hence also weather and climate patterns.

"Nature writes itself" (Kirby 2008, 2011) is a way of describing all matter (including humans, technologies, anthropogenic impact on the environment, etc.) as iterations of nature, writing itself in new ways. "Nature writes itself" refuses any ontological split between "nature" and "culture" in order to ask, instead, what if culture was nature all along?

Viscous Porosity (Tuana 2008), like transcorporeality, describes movements between humans and environments and "between social practices and natural phenomena" (Tuana 2008, 192). Tuana emphasizes viscosity (rather than fluidity) to stress that distinctions between bodies can and should be made, and to retain "an emphasis of resistance to changing form" (194).

Material Agency (Barad 2007) describes the "doing" of matter that enacts changes. It refuses a view of matter as passive or inert. Instead matters intra-act such that phenomena are constantly emerging from these **intra-actions**. These emergences are described by Barad as processes of **worlding:** the world isn't simply "there," but constantly coming into being through material agencies of all kinds. Donna Haraway (e.g. 1997) has also used the concept of worlding in similar ways.

Weathering (Neimanis and Loewen Walker 2014) explicitly references the Harawayan-Baradian concept of worlding to denote the human/nonhuman entanglements of climate and weather. This concept acknowledges the idea of anthropogenic impact on climate, but insists that this should not efface the material agency of non-human participants. Weathering argues against the idea of humans as omnipotent masters of the weather or climate.

³⁷⁵ Stacy Alaimo, "Trans-Corporeal Feminisms and the Ethical Space of Nature," in *Material Feminisms*, ed. Stacy Alaimo and Susan Hekman (Bloomington: Indiana University Press, 2008), 237–264.

³⁷⁶ Vicki Kirby, *Quantum Anthropologies* (Durham and London: Duke, 2011).

³⁷⁷ Nancy Tuana, "Viscous Porosity: Witnessing Katrina," in *Material Feminisms*, ed. Alaimo and Hekman, (Bloomington: Indiana University Press, 2008), 188–213.

³⁷⁸ Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham and London: Duke University Press, 2007).

³⁷⁹ Neimanis and Walker, "Weathering," 558–575.

Weather writing also invites practical exploration of feminist new materialist ecological ethics, as explored in the work of Stacy Alaimo, Cecilia Åsberg, Rosi Braidotti, Karen Barad, Donna Haraway, and Eva Simms, for example.³⁸⁰

Transcorporeal writing practices can be understood as exercises that specifically invite the participation of all kinds of bodies in collaboration with the human writer. Weather writing is one kind of transcorporeal writing that operationalizes feminist materialist concepts through corporeal phenomenological trajectories.³⁸¹ Drawing primarily on the work of phenomenologist Maurice Merleau-Ponty, and the development of his insights by Canadian phenomenologist Samuel Mallin — but pushing these in posthuman and new materialist directions weather writing instantiates a phenomenological practice of deep description and knowledge-creation through an amplification of multimodal, posthuman embodiment. In other words, this practice draws explicit embodied attention to the ways in which we live our bodies through various overlapping modes of worldly engagement: through cognition, affect, perception, motility, and viscerality, as well as through transcorporeal intension and extension. While phenomenology has sometimes been read as antithetical to (or at least a poor fit with) posthuman or new materialist understandings of matter,³⁸² the work of Merleau-Ponty provides an opening to rethinking this assumption. In William Connolly's reading, Merleau-Ponty already draws us toward "an image of nonhuman nature" that is more fully developed by later 20th century thinkers like Gilles Deleuze.³⁸³ As

³⁸⁰ Alaimo, "Trans-Corporeal Feminisms," 237–264; Cecilia Åsberg, "The Timely Ethics of Posthumanist Gender Studies," *Feministische Studien* 31.1 (2013): 7–12; Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013); Barad, *Meeting the Universe Halfway*; Donna Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press, 2008); and Eva Marie Simms, "Eating One's Mother: Female Embodiment in a Toxic World," *Environmental Ethics* 31 (2009): 263–277.

³⁸¹ Corporeal phenomenology designates theories and practices that draw specifically on existential and postexistential understandings of embodiment (e.g. Merleau-Ponty, Sartre, Beauvoir, Levinas, and their contemporary interlocutors), and as such needs to be distinguished from Husserl's founding theory of transcendental phenomenology or phenomenological idealism.

³⁸² E.g. Stacy Alaimo, "Insurgent Vulnerability: Masculinist Consumerism, Feminist Activism, and the Science of Global Climate Change," Women, Gender, and Research (Kvinder, Køn og Forskning, Denmark) 3 (2009): 22–35; see also Brian Massumi, Parables for the Virtual (Durham: Duke University Press, 2002); Eric Alliez, The Signature of the World: What is Deleuze and Guattari's Philosophy?, trans. Eliot Ross Albert and Alberto Toscano (New York: Continuum, 2004).

³⁸³ Deleuze, writing on his own and in conjunction with Guattari, was both appreciative and skeptical of Merleau-Ponty's work on his own trajectory of thinking. For example, in *What is Philosophy?*, Deleuze and Guattari critique both phenomenology in general, for failing to produce concepts (149), and Merleau-Ponty's notion of the flesh, specifically, as still too wedded to the solipsistic human subject (trans. Hugh Tomlinson and Graham Burchell (New York: Columbia University Press, 1994), 178–179).

Merleau-Ponty reminds us, "nature outside of us must be unveiled to us by the Nature that we are... We are part of some Nature, and reciprocally, it is from ourselves that living beings and even space speak to us."³⁸⁴ Connolly suggests that such insights invite us to disclose and investigate "preliminary affinities" between human and nonhuman natures, leading to the "organiz[ation of] experimental investigations to uncover dimensions of human and nonhuman nature previously outside the range of that experience."³⁸⁵

Weather writing is one such experimental investigation. Emerging at the intersection of Merleau-Pontian and feminist new materialist trajectories, it understands essence and meaning as emergent and always continually worlded, in collaboration or intra-action with/in other phenomena.³⁸⁶ Weather writing attempts to un-sediment or destabilize dominant, humanist imaginaries of weather and climate, and complement them with ones less anthropocentric — stretching across times, spaces, and species. In doing so, it might also cultivate a feminist materialist ethics that is "about responsibility and accountability for the lively relationalities of becoming of which we are a part."³⁸⁷

Practicing Weather-Writing; Planning a Workshop

Emerging research explains alienation of a general public from climate change concerns in terms of the phenomenon's scale:³⁸⁸ purportedly, climate change is too temporally and spatially abstracted from many Westerners' lives to be meaningful. How, then, might we experience climate change as an embodied phenomenon? And how might a feminist materialist understanding of embodiment assist this? Could experiencing/writing our bodies as sensitive interfaces with the weather-world shift our understanding of human entanglements in climate change phenomena?

³⁸⁴ Maurice Merleau-Ponty, Nature: Course Notes from the College de France, trans Robert Vallier (Evanston: Northwestern University Press, 2003), 206.

³⁸⁵ William Connolly, A World of Becoming (Durham and London: Duke University Press, 2011), 45.

³⁸⁶ See Sauzet, in this volume, for an explanation of intra-action.

³⁸⁷ Barad, Meeting the Universe Halfway, 393.

³⁸⁸ E.g. Lesley Duxbury, "A Change in the Climate: New Interpretations and Perceptions of Climate Change through Artistic Interventions and Representations," Weather, Climate and Society 2.4 (2010): 294–99.

While certain people (for example, farmers, Arctic land-based communities, those who sleep rough) may be particularly bodily attuned to the weather and changing climate patterns, others who are habitually sheltered from either the literal elements or from a dependence on those elements' predictability may require concerted effort to appreciate how weather and human embodiment are transcorporeally connected. By extension, a more attuned bodily engagement with the weather might cultivate an expanded meteorological imaginary, where we become more sensitive to how we (human and non-human natures) "weather" the world together.³⁸⁹ The exercise outlined below suggests one way of translating these theoretical concerns into an embodied classroom or workshop engagement. Using corporeal phenomenological methodologies developed initially by Samuel Mallin at York University (Toronto) as a starting point, weather writing materializes a posthuman phenomenological practice from a feminist, ecologically-oriented, materialist perspective.³⁹⁰

Weather writing can find a home in a variety of secondary, post-secondary, and community-based classrooms: a feminist classroom on writing methods; an environmental ethics classroom; a philosophy classroom exploring the work of Merleau-Ponty; a cultural theory classroom considering new or feminist materialism; or any and all combinations of these. It also makes for a lively workshop at symposia or events that are, again, interested in feminist theory, writing, environment, climate change, and/or new materialisms. While the guidelines below suggest a teacher/student relationship, weather writing can also be a collaborative exploration among a reading group, a community collective, or participants of a writing residency, where responsibility for organization and facilitation can be shared.

Allocating around 3–4 hours for a workshop is ideal in order to introduce students to the theory and practice of weather writing. It can also be implemented in multiple sessions over several days/meetings. A suggested format includes:

³⁸⁹ See Neimanis and Walker, "Weathering," for an extended version of this argument.

Organizing a workshop

Activity	Time requirement	Notes
Background readings	1–2 hours of reading; in advance	See Bibliography for suggested readings; choices can be tailored to level/interest/ focus of the group.
Seminar session: Feminist Materialist & Phenomenological Theories of Embod- iment and Environ- ment	20–60 min	A presentation/discussion of concepts and how these theories might ask us to re-imagine the relationship between climatic natures and human embodiment. Discussions of specific feminist materialist concepts and their relevance to/emergence within the writing exercises may resurface during debriefing sessions.
Seminar session: Ex- ploring the Method	20–60 min	Demonstrations and discussion of instruc- tions, bodily modalities, and tips.
Priming for the Field: Generating Ques- tions	10–20 min	 Participants brainstorm and note question: or issues that they find compelling in rela- tion to the overall thematic, e.g.: How does the primacy of the visual affect our understanding of weather? (How) Can my body experience the past or future lives of this weather world? Clothing as barrier/interface/conductor Human bodies as composed mostly of water Air pollution — visible or invisible? Inspiration can be generated by discussing in pairs or small groups.
Field Session (1)	30 min	Participants begin to "try out" the method They will need at least 30 minutes to shift and integrate their corporeal habitus into the weather-world — which to them will likely seem very long! Encourage them to be patient and let the method unfold.
Sharing Observations	15–30 min	This can be done in small groups of two or three, or in a larger "plenary." * Be sure to check-in regarding instruc- tions, tips, and bodily modalities. Are par- ticipants simply describing what they see,

Sharing Observations	15–30 min	or are they actively engaging all bodily modalities? Are they experimenting with ways of un-sedimenting their usual relation to the weather-world, or are they remain- ing habituated human observers? (see "Tips"). Sharing initial observations boosts confidence and inspires further questions and curiosity. * This may also be a good time to discuss issues around the "n atural attitude" and differently-abled bodies (see text box below). Such conversations should unfold as these questions arise, and are crucial to developing an understanding of transcorpo- real embodiment that aligns with feminist materialist commitments to difference as a positive mattering.
Field Session (2)	30-60 min	A second (preferably) longer session gives students a chance to follow through on and develop specific insights that they may have begun to notice in their initial session. (Note that it is generally difficult to continue gen- erating new insights for more than 60 min- utes without a break. Schedule permitting, additional sessions can be planned later in the day or over the course of a unit.)
Group Discussion of: (a) insights, break- throughs, observa- tions (b) similarities and tensions among participants' writings; identification of lines of inquiry for fol- low-up (individually or collaboratively) (c) feedback on the method	30-45 min	Engaged participants will be eager to share their observations and will likely delight in both similarities and differences in experiences of others. Allow ample time to debrief! You might also ask if the session shifted participants' understanding of weather and climate change at all, but the answer will just as likely be negative. New imaginaries require time to unfold and gel — but they can begin with small shifts. This discussion can also include how the weather sketches might be further expand- ed or taken up in other projects, writings, artworks, etc.

The following pages (i.e. Instructions; Bodily Modalities; Tips) can be reproduced as a handout for participants. Please include footnotes and proper attributions, as Weather Writing is the outcome of significant chains of collaboration that the author would like to acknowledge.

Instructions for Participants

Transcorporeal writing is a porous process of embodied experimentation. There is no right or wrong way to do it, but like any other experiment, its potential is best unfolded within specifically established parameters. These parameters include ample room for innovation, and as we become comfortable within this general structure, we can also push and pull it, negotiating its boundaries and making room for new modes of inquiry and experimentation.

1. Begin with open-ended questions. Like a camp stove, our bodies sometimes need to be "primed" for ignition. This is particularly because in weather writing we activate a heightened awareness of certain bodily modalities that are likely backgrounded in much of our day-to-day living. Before beginning the practical exercises, we will anticipate questions or issues we would like to explore through such amplified bodily awareness. Resonances of these preparations will subtly guide, without overdetermining, our practical exercises. Our experiments might ultimately go in entirely different directions, but this "priming" begins to orient our bodies in the direction of the weather-world.

2. Expose yourself to the weather world. We are seeking new ways of imagining the multivalent interfaces between our human bodies and the climatic environments that sustain us. In order to do this, we will put ourselves in *direct contact* with these environments without any attempts to choreograph these encounters (i.e. we will not seek perfect or comfortable conditions). We will thus try to minimize (without fully ever eliminating)³⁹¹ the distance between experience and mediation.

³⁹¹ As Donna Haraway teaches us in her canonical feminist materialist article "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," all vision (as a metaphor for all embodied experience) is mediated by the matter of our sensory apparatuses—human eyes (with better or worse sight capabilities), sensitive fingertips, comparatively poor sense of smell, knowledge of a language, and so on. This mediation is particularly noticeable when we employ eyeglasses, microscopes, telescopes, film cameras, Google Translate, etc., but all perception is mediated by the matters that enable us to perceive in the first place (*Feminist Studies* 14.3 (1988): 581–607).

3. Start writing. Think with a pen. In an attempt to capture what are often fleeting, ephemeral, and surprising affects, movements, and discoveries, we must write *in situ*.³⁹² The physical act of writing will prompt us when we are not sure where to begin. Writing is not a faithful, mechanical capture of descriptions or observations already fully formed in our minds, but an inalienable collaborator in the worlding of our discoveries.

Dis/ability, norm-al bodies, and "the natural attitude"

The phenomenological notion of the "natural attitude" needs to be critically approached by feminist scholars, as in the phenomenological lexicon it refers to a neutral, "ordinary" way of being in the world, in which lifeworld phenomena are experienced in a generally common way by human bodies. Clearly, this humanist view (with its attendant androcentricism, ablism, and racism) does not account for how intersectionality and material assemblages of power and belonging* shape our experience of the material world. "The" (falsely generalized) natural attitude thus renders invisible marginalized and queer orientations toward things in the world**.

At the same time, there is a generalized (in the weakest and non-normative sense) way in which human bodies exist in the world, even if these logics are always shot through by material experiences of sexuality, gender, ability, race, geography, and so on. It is crucial to emphasize that this generality is not a norm that actually exists as a specific body (i.e. presumed to be white, sighted, male, etc.). This human-bodied generality is like a Deleuzian virtuality — a generalized cloud of potentiality that is itself an achievement of material processes such as evolution, and out of which each specific iteration of human embodiment emerges. While it is ultimately open-ended over time ("we do not yet know what a body can do"), this virtuality is currently conditioned by generalized limits of human materiality: e.g. we are mammals, we have forward oriented faces, our anuses and mouths are necessarily distantly located from one another in our bodily schemas, etc. These general orientations are not rules, but rather a set of always shifting and contested human material potentialities. The important thing here is that at some level it still makes sense to talk about the loose generality of "humans" (as opposed to tree frogs, or glaciers, or thunderclouds) even if our writing experiments also seek to perforate that generality: weather writing wants to both expose the potential and limits of specific bodies, and articulate kinship with non-human bodies and natures. Neither of these objectives necessarily needs to reject a loose generality of human species-being.

* Jasbir Puar. "'I'd Rather be a Cyborg than a Goddess': Becoming Intersectional in Assemblage Theory" *philoSOPHIA* 2.1 (2012): 49–66.

** Sara Ahmed. Queer Phenomenology. (Durham: Duke, 2006).

³⁹² This reference to writing *in situ* can be understood as a specific example of situated practice, as discussed by Sauzet as well as Schmitz in this volume.

4. Activate all bodily modalities. While writing should be mostly free-associative, we will also make deliberate efforts to get out of what phenomenologists call "the natural attitude" — our commonplace engagement with the world (which may only be "natural" for one's own specific bodily configuration — see text box).

We explicitly seek to shake up and disturb this attitude in order to make room for new corporeal imaginaries. This means deliberately calling upon and writing from all of our six bodily modalities (see below), and not only our cognitive selves — which is but one of these modalities.

5. Linger. Repeat. A key to generativity is patience. Each writing session should last no less than 30 minutes (the first 10 minutes will likely be stilted and awkward; our bodies need time to loosen and adjust). Generating useful research data will also require repeated engagement over time.

6. Reflect. Discuss. Once field sessions are complete, these notes form the basis of a collaborative discussion. What surprised you? What kept recurring? What escaped your attention? In what ways were your habitual relations to the weather-world affected or disturbed, if at all? How might these observations impact climate change imaginaries? If these exercises form the basis of more extensive research, notes over a number of sessions should be sorted and collated. Many observations will be discarded as dead-ends. Look for recurring patterns, key associations, and also surprising dissonances. Mine the notes like any other cultural text in order to draw conclusions or make generative suggestions. As with any other method that draws on experience, a critical orientation is key to ensuring rigor and relevance.

The Transcorporeal Body: Engaging Multivalent Modalities

Drawing on the writings of Maurice Merleau-Ponty, Canadian phenomenologist Samuel Mallin suggests that our bodies engage the world according to four primary modes: perception, motility, affect, and cognition. In Mallin's parsing, while overlapping and mutually imbricated, each mode has its own logic and yields a nuanced kind of knowledge of the world. In other words, this understanding rejects a Cartesian "mind/body" split (in both feminist and anti-feminist guises) that might loosely differentiate between "rational" and "embodied" knowing. Instead, it argues that all knowledge of the world is embodied (in Merleau-Ponty's terms, consciousness is embodiment), and that there are various ways in which our bodies come to know the world. This conceptual frame productively links to feminist materialist theories of embodiment and epistemology: the matter of our bodies is what enables us to understand our world, but matter matters differently. Our bodies are not amorphous hunks of matter, but sensitive interfaces with multimodal means of knowledge-making in collaboration with the world. The corporeal schema used in weather writing is heavily indebted to Mallin's schema, but adds two modes (viscerality, transcorporeality) to be considered during our experimental writing exercises. It is crucial to bear in mind that all of the six modalities are embodied—that is, each represents a bodily way of generating knowledge of/with the world.

Perception: How are taste, sight, touch, smell, and hearing engaged by the weather? Which senses are most engaged, and which are muted? How are the senses synaesthetically or otherwise stimulated or suppressed? In what specific ways?

Motility/Movement: How does the weather ask you to move? What speeds or rhythms does your body take up? In what specific ways do certain body parts move? Which specific limbs does your situation engage? Are the movements you are being asked to take up physically comfortable or not? Does the situation ask your body to — literally — go to new places? What do you notice if and when you exceed your physical comfort zone?

Sociality/Sexuality/Affect: How does the weather ask you to engage it on an affective level? What/how does it make you feel? How does it choreograph your interpersonal relations with humans or nonhuman species? What are the contours of these engagements? If sexuality can be understood, in part, as a desiring force field that pulls certain bodies or experiences into specific relations, what kind of erotics does the weather call up? How does it "fit" you and you it? Do you feel any dis-ease or psychic discomfort? Do you feel alienated? Or welcomed and on familiar ground?

Cognition/Analysis: What categories or taxonomies or other acts of naming does the weather invoke? What do those names tell you? How do you rationalize

the weather within larger schemes or contexts (its function, its history, its "value," etc.)? What logical or structural associations does it invite you to make?

Viscerality: How does the weather affect your organic, visceral, or biological body? What is going on beneath your skin, in the inner workings of your body? Does this encounter induce an upset stomach, a headache, a quickened heartbeat, etc.?

Transcorporeality: This may or may not be a "mode" of its own. In what ways do experiences, affects, movements, etc. of the weather extend in or through you? Can you identify where and how your body is porous and open, or conversely, closed and seemingly impermeable to the weather? What transits through, and what is blocked? How? Where? Why?

*While schematized as discrete, this division is a cognitive construct that inevitably shows up and accentuates certain aspects of embodiment while covering up others. These modalities bleed into one another, work in tandem, and are often various sides of one experience. This schema provides a starting point, rather than a conclusion, for understanding how bodies know the world. Exploring their inseparability can also be productive.

TIPS

Certain "tricks" can assist us in activating, accessing, and writing our transcorporeal engagements with the weather-world, all the while "bracketing" or attempting to suspend our sedimented human(ist) habits of engagement.

Organic Amplification/Muting: Our bodies interface with the weather world through various bodily portals and pathways — eyes, hands, skin, liver, tongue, language, neurons, etc. Clearly, no body is identical, and bodies of all abilities compensate for a looser grip in some interface regions with amplifications in others. Every body can stretch and amplify its corporeal relations to the world by voluntarily muting or amplifying some of its common modes of interfacing. If we can, and if it makes sense to our bodies, we might shut our eyes, listen closely, explore haptically, or taste things we normally might not. What happens if we

remove our glasses, or turn up our hearing aids? How might we amplify or mute our lungs, our spleens, or our skin in their sensing of the weather?

Scalar Contraction, Expansion, Diffraction: Merleau-Ponty refers to "proximal distance" — i.e. the ideal or perfect distance from which to "take in" certain phenomena. For a painting that is 1x1 meter in size in a gallery, it is likely from about 4 feet away, but for a massive canvas, one will need to increase this proximal distance substantially. At the same time, if we go right up close to the large canvas, we see things we wouldn't otherwise have noticed, and we gain a new perspective that enhances our appreciation for the artwork. We can do the same with the spaces and times of our corporeal existence in the weather world. What if we examined the cracks in the soil right up close? What if we took 10 minutes, instead of 30 seconds, to walk around a tree? How are our various senses of weather affected when we alter our distance from, and temporal engagement with, associated phenomena?

Motile Contortion: Put your body literally in uncommon postures and move in uncommon ways. Stand on your head and see how the sounds change. If it makes sense for your body, walk backwards, or run quickly. Shift your accustomed position in your wheelchair. Feel with your elbow, or toes, instead of your fingers.

Non-Native Languages and Stuttering Tongues: Writing is best able to un-sediment when it can shake off grammatical, syntactical, and semantic strictures that force not only our writing, but our very experience, along "correct" and predetermined paths. Instead, we might try to bend and squeeze the words we know, and their combinations, in new ways. This is what Merleau-Ponty calls "first order language." Not being a "master" of the language in which you are writing can be an advantage that lets you write in more literal and directly experiential ways.

Proxy Stories & Syncretic Assemblages: Weather writing is grounded in embodied engagement. However, our embodiment is also contextualized in and conditioned by stories and knowledges that extend beyond immediate, embodied experience *in situ*. These include *science stories*, which can tell us about molecular, chemical, quantum, or other processes in which our weather bodies engage; as well as *human and more-than-human histories*, which narrate for us the thick pasts

of these weather bodies. Such stories cannot substitute for immediate, embodied engagement *in situ*, but they can serve as amplifiers and sensitizers. We can draw on them as ways to build a more robust bodily imaginary, and thus to intensify or heighten other corporeal experiences.³⁹³ For example, researching local species, hydrogeologies, or climatic anomalies can provide an opening for experiencing an autumn chill or a multi-species encounter in particular ways. Our immediate, embodied experience may support and/or challenge such established knowledges, but in any case, our weather writing will produce another layer of knowledge to be interleaved and negotiated within the broader stories of the weather.

For Sam Mallin (1941–2013)

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³⁹³ Note the resonance between this conclusion and Lorenz-Meyer's suggestions regarding memory work in her contribution to this volume.

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