

Editorial: Posthuman Conceptions of Change in Empirical Educational Research

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Abstract

In this special issue of *Reconceptualizing Educational Research Methodology* the focus is on posthuman conceptions of change in empirical educational research. In the six included papers, the authors address and challenge different aspects of change in different educational settings – ranging from preschools, to universities and public pedagogies. Through activating posthuman perspectives, the papers invite the reader to a wide range of understandings of the concept of change. A conclusion drawn from the papers is that when working with posthuman change in empirical educational research, change becomes highlighted as a *methodological endeavour* while simultaneously being engaged with as processes of *transformations in the educational practice*. What is specifically emphasized is that through posthuman conceptions, change is not something out there to be found, *but an emergent phenomenon that unfolds as we explore it*.

Keywords: change, posthumanism, education, empirical research

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Introduction

Change is at the heart of the educational project. Education has been, and still is, used as a means for a range of processes of change like social transformation, democratization processes, targeting at-risk groups, or for empowering the student (Apple, 2012; Dewey, 1932; Freire, 1972; hooks, 1994; Kumashiro, 2015). What unites these diverse processes is a common subject of change: the student – the individual learning subject – changing from ignorance to knowing, from not being able to being able (Rancière, 1991). In critiquing this position, change has also been proposed as a change in the relationship between the student and the teacher (Bingham & Sidorkin, 2004). Nevertheless, education is primarily understood as a causal process of subjects changing from A to B – an upward enhancement initiated and orchestrated by a teacher, where knowledge is accrued step by step.

However, in this special issue of *Reconceptualizing Educational Research Methodology*, *change in education* will be explored, problematized and challenged in a number of different ways. We argue that change does not necessarily need to focus on the individual subject, nor on particular groups, changing from one state to another. By putting *posthuman* conceptions of change to work, we instead aim at acknowledging the already open-ended processes of differentiation, variation, becoming and diffraction in which “the world [has] the power to change us, to ‘force’ our thinking” (Stengers, 2008, p. 57). From the point of view of a posthuman approach, change is ongoing in all aspects of life and what this special issue will focus on is how this is enacted in empirical educational research.

The papers in the special issue all address different aspects of change in empirical education research, through which posthuman theory is activated and developed. We have collected contributions that address and explore education as a question of transformations, worldings, plasticity, transitions, destructions, cuts, performances, developments, shifts, revolutions, evolutions, innovations or learning. The papers examine change in various educational contexts such as early childhood education, environmental education, museums, social science education, higher education, and social educators in primary and secondary schools, raising such questions as: What is being changed, who is being changed, how does change happen, and for what purpose? Why is something changing, and what kind of change is contested? Which aims for change are being defined? How can posthuman research engage in, argue for, and manifest changes to educational practices? And, moreover, how can posthuman approaches to change be studied through empirical educational research?

Posthumanism, education and change

During the past decade, posthumanism has contributed to new educational, theoretical and methodological research doings (Ringrose et al., 2019). The number of edited volumes, special issues, research papers and doctoral theses show that posthumanism has become an established framework for critical educational research which radically affects how education is understood,

discussed and theorised (c.f. Hinton & Treusch, 2015; Osgood & Robinson, 2019; Reinertsen, 2016; Otterstad & Reinertsen, 2015; Taylor & Hughes, 2016; Taylor & Ivinson, 2013). This is highlighted in a previous special issue of *Reconceptualizing Educational Research Methodology*:

‘PhEmaterialism: Response-able Research and Pedagogy’. Through the concept of PhEmaterialism – an abbreviation that highlights the entanglements of education, pedagogical practice, feminist new materialism and posthumanism – the editors argue that posthumanism becomes a theoretical as well as methodological tool to account for “the multiple, entangled, ever-shifting, difference-rich nature of processes of teaching, learning, schooling, and activism’ (Strom et al., 2019, p. 3).

As the concept *posthuman* suggests, it offers a reconfiguration of the human and humanist ideals in which disrupting and rethinking anthropocentrism – the perception that humankind holds the central position in the universe – is the ontological departure (Alaimo & Hekman, 2008; Braidotti, 2013; Dolphijn & Tuin, 2013). For posthuman educational research, this means that the perspective upon agency has expanded beyond the agency of a human subject (Lenz Taguchi, 2010; Bodén, 2016). Agency is thus not an attribute that someone or something possesses, but rather involves “enactments of iterative changes to particular practices” (Sauzet, 2015, p. 40). As shown in the papers presented in this special issue, posthuman theories disrupt anthropocentric notions of agency that are perceived as an individual attribute. Accordingly, education is portrayed as practices which are entangled, relational, and messy; practices which emerge from the relationality of myriad agents – both human as well as nonhuman. This highlights a shift in which agency is no longer considered an attribute of teaching or learning subjects, but instead considered as an emergent force, connected to and emanating within particular practices. In posthumanist work, agency is shown to be distributed between human / nonhuman forces, whilst investigating the very material-discursive boundary-making practices that enact both ‘humanness’ and ‘nonhumanness’ (Barad, 2007, pp. 92-93; Snaza & Weaver, 2014). A posthuman approach recognises the individual students and teachers as agents, but studies them as parts of ongoing and changing relational processes: embedded and entangled with the world, and always in a process of becoming (Johansson, 2015). As such, posthumanism does not disregard, but rather continues to be interested in both human and nonhuman becomings of agency. The notion of the posthuman then means to question, decentre or disrupt ideas of human superiority, intentionality, and agency as the main analytical focus. It can no longer be assumed that education is a primarily human affair (Pedersen, 2010), and thus posthumanist theories have reconfigured educational research regarding how we understand pedagogy, curricular design and educational institutions – from preschools to universities (Andersen, 2015; Blaise et al., 2019; Davies, 2018; Hinton & Treusch, 2015; Hohti, 2018; Lenz Taguchi, 2010; Moberg, 2018; Moxnes & Osgood, 2019; Otterstad, 2019; Palmer, 2016; Sandvik, 2020; Snaza & Weaver, 2014; Taylor & Hughes, 2016; Taylor & Pacini-Ketchabaw, 2018). This also opens further ways of understanding change in the field of education.

Although the papers in this special issue present a number of different understandings of change, one thing that unites them is a view of change in education as “a collective matter taking place within encounters” (Gunnarsson, this SI). In line with this, Ceder (2019, p. 91) argues that “to act upon something to create a change is not necessarily a quality limited to human beings”. Through a posthuman lens, change in education instead needs to be thought of as emerging in entangled relations between multiple agents in which the exploration, performance and directedness of change must include agencies and forces otherwise unheeded. As described by Evans (see this SI) change means to alter, to make new; it is the process through “which something else may be produced”. What we argue here is that change in education has to be explored as an enactment, a doing. It thus involves a queering of causality, as Barad (2010) puts it. As such, change cannot be perceived as a mere linear progression, but instead “the capacity for change, or change itself, needs to be located within the patterns that contemporary phenomena carry out” (Revelles Benavente, 2015, p. 54). However, this does not mean that change cannot be provoked, directed, explored and described. Change in education *is* crucial as “a faith in our collective capacity to endure and to transform” (Braidotti, 2010, p. 50 see Gunnarsson in this SI).

The intertwinement of the educational practices and the research apparatus

Posthuman theories work from onto-epistemological standpoints in which both ontology (being) and epistemology (knowing) are entangled (Barad, 2007, p. 185). This signifies that the world is in process of becoming as it is being explored, performed and lived. The onto-epistemological standpoints also affect educational research. It is no longer possible to think of the researcher as someone able to stand outside of the educational practice, objectively studying students, teachers or any educational practice. Instead, the researcher is always entangled with the practice that is explored. And likewise, the research practice is always entangled with the phenomenon studied; inevitably, it is part of producing it (Gunnarsson & Bodén, 2021). Or, following the wording used by Barad (2007): the *research apparatus* through which we explore a phenomenon simultaneously *performs* the world. And vice-versa: the theoretical concepts, empirical material, analytical strategies and ethical considerations of the research apparatus are mutually produced by the phenomenon being researched. The apparatus is thus the “boundary-making practices that are formative of matter and meaning, productive of, and part of the phenomena produced” (Barad, 2007, p. 146).

The theorizing of the entangled nature of a research apparatus is evident in all papers in this special issue. When working with posthuman change in empirical educational research, change becomes highlighted as a *methodological endeavour* while simultaneously being engaged with as processes of *transformations in the educational practice*. This approach provides the authors with the possibility of unsettling dominant perceptions of change in educational research and practice. In the following, we will zoom in on the papers through these two intertwined endeavours: educational practice and research apparatus.

The educational practice...

In the call for papers, we as editors looked for contributions with an empirical ambition within educational or pedagogical studies from a posthuman / new materialist perspective. As we were well aware, one of the benefits of posthumanist studies in education is the impossibility of separating the empirical from the theoretical. Nonetheless, we wanted to emphasize an empirical ambition to encourage authors to focus on empirical research, rather than on solely theoretical explorations. The authors in the special issue have accordingly offered us a number of different empirical – yet inevitably theoretical – understandings of the field of education. Teresa Kathrine Aslanian and Anna Moxnes invite the readers on a trip to a farm, arranged by a Norwegian preschool. Through this event, we learn about how change can be explored together with young children and animals. In Simon Ceder's paper, we are instead invited on a trip to museums worldwide. Through a series of visits to natural history museums, Ceder studies the knowledge production in the exhibitions on human evolution. Change, in this paper, is seen as continuous evolutionary change. Sarah Evans takes us to a UK-taught Education postgraduate master's programme, where we get to know how students new to the master's level relate to, negotiate, and 'learn' academic language. Through this, Evans shows a 'messier' ontological understanding of how language learning can be understood as a becoming rather than as a competence. When moving to Karin Gunnarsson's paper, we learn how the researcher was involved in a collaborative engagement with students and a social science teacher in a Swedish suburban upper secondary school. Gunnarsson took part in planning the lessons with the teacher, observed the lessons, and engaged in discussions with the students. In the paper, we become acquainted with how change is enacted within the teaching, as well as follow Gunnarsson's explorations of how to unfold the responsibilities which the teaching entails. Sofie Sauzet in her paper unfolds a review methodology inspired by posthuman theorizing for exploring the ways in which "what we know" impacts educational practice. As such, she combines finding, selecting and reading publications which reportedly produce knowledge about the work of social educators in Danish schools, with the development of a review-methodology. This methodology is attuned to the co-existing differences within the knowledge-field enacted, and highlights how these differences call upon different ways of being an appropriate social educator in schools. Finally, in Sarah Van Borek's paper, we learn about how the author facilitated a university course entitled *Making waveforms* across Canadian and South African contexts. Van Borek describes the intra-actions between students, water bodies and audio / video and how they co-constructed water narratives as films.

... and the research apparatus

When focusing on how the papers highlight aspects related to a research apparatus, other traits become visible. Though each of the included papers have their own shape and voice, what unites them is that they all offer generous methodological reflections from which to draw inspiration, and they offer what Haraway in an interview (Lykke et al., 2000) calls 'thinking technologies' with which to translate other research projects. More than an idea, a thinking technology comes equipped with materiality and effectivity, as it stabilizes meaning in some forms, and creates the

object of study in particular ways, rather than others – which is a material practice (Lykke et al., 2000, pp. 55–56). In this sense, the methodological knowledge that a posthuman theoretical landscape advances in the papers, is a type of knowledge with potential for transposition, that is, leaping from one code to another, or weaving different strands based on shifts of scale in patterns that are discontinuous rather than harmonious (Braidotti, 2006). The papers can also be understood as enacting methodological knowledge that is able to perform quantum leaps, as a dis/continuous movement, and not just any discontinuous movement, but a particularly queer kind that troubles the very dichotomy between discontinuity and continuity (Barad, 2010, p. 246). Methodologies from one paper to another, then, do not work merely through analogies, but rather via philosophical and empirical epistemological and ontological issues that can be used as thinking tools for the development of other methodologies.

The authors have engaged with methodology and the intertwinements of research apparatus and educational practice through a number of different posthumanist theories and concepts. Aslanian and Moxnes combine the new materialist concepts of Barad (Barad, 2007, 2017), with Malabou's (2004, 2008, 2012) studies of plasticity and Pedersen's (2009, 2010, 2013) work in critical animal studies. Through staying close to an empirical event, as well as to theoretical conceptualizations, they show change as both intentional and unintentional, and also as an ontological concept. Ceder benefits from a posthuman version of evolutionary theory, drawing on Grosz (2004, 2011) and Mol (2002), when exploring the tensions involved in knowledge production on human evolution at museums. Evans engages with Deleuzo-Guattarian concepts like major / minor language and desire (Deleuze & Guattari, 1987) in order to explore the potential changes in learner's becomings, while simultaneously addressing how her processes of analysis were part of enacting these transformations. Gunnarsson in turn works with the feminist ethics of Braidotti (2016) and shows that renewed and expanded boundaries involve both unpredictability and responsibility for enactments of teaching and learning. In her collaborative engagement in a school practice, this is shown as messy co-becomings not only of the teaching practice, but also of herself as a researcher and of the theories with which she engages. Sauzet works from agential realism (Barad, 2007) in unfolding a posthuman performative review methodology, which is suggested to afford analytical performances of what "what we know does" to particular educational practices. Sarah Van Borek draws on Barad's agential realism (Barad, 2007) and Ceder's theory of educational relationality (Ceder, 2019). Working with these frameworks, she seeks to explore both who / what is changing in a university course on water, and how a re-reading of the empirical material changes the 'role' of water.

Particular practices and particular apparatuses

Before concluding this introduction, we would like to emphasize that even if the authors engage in a number of different posthumanist concepts, different educational practices, and accordingly, a range of different empirical work, what unites the papers is how each of them are methodologically, analytically and rhetorically designed in entanglement with their respective empirical landscapes. Therefore, some of the papers have a more academic conceptual strategy

and writing style, while others benefit from a more poetic and aesthetic analytical approach. It seems, then, as we read through the papers, that the object of investigation of the empirical material has an effect on the way the text is presented. For Van Borek, water becomes both research-collaborator and research subject, as well as being influential on the artworks performed by the participants in her study. Consequently, water was somehow also tangible in the paper's literary style. For Sauzet, in contrast, grappling with reviewing is a more rigid, and strict style, defining concepts, augmenting loudly, and performing bullet-pointed steps for analysis. It seems not possible, then, to copy a process or style, but rather each researcher designs their text with a close relation to the empirical material and the possibilities and impossibilities it entails. In this sense, the papers elaborate on their onto-epistemological entanglements with the world in different ways, but it is through these very entanglements that the particular apparatus of each paper productively unfolds.

Conclusion

How can change in empirical educational research be conceptualized and how does the empirical educational research change through this special issue? Working with posthuman theories in which ontology and epistemology are both entangled inevitably means that changes will occur at multiple levels and places simultaneously. Change is not something out there to be found, *but an emergent phenomenon that unfolds as we explore it*. The mutual relationship of the educational practices and the research apparatus has resulted in a productive struggle for the authors to pinpoint what is actually changing: is it the educational practice or the research apparatus? What becomes evident in the papers included in this special issue is that from a posthuman perspective, both aspects are inseparable and mutually beneficent. The intertwinement is present in all the contributions, as the authors carefully construct theoretical and methodological apparatuses of investigation that affect how they understand the educational practices they study. Simultaneously, the authors show how educational practices affected construction of the research apparatuses. Importantly, this seems to produce the potential for new ways of *performing changes in education and educational research while studying it*.

As described by Ceder (2019, p. 1): "the world is in a constant state of change, and therefore new descriptions are always needed". However, this does not mean that "anything goes" or that we should avoid plans or preparations. Rather it means that we as educators and researchers need to open up for sensitivity within the unpredictable, as Gunnarson argues in her paper. However, to be able to research movements and transformations, and to make new descriptions, one needs to temporally slow down or even freeze the ongoing processes in relation to the empirical material with which one engages. To research change as an educational phenomenon, one thus needs to zoom in on how and what is stabilized and how and when these stabilizations are enacted. Through engagements with movement and stabilization, the papers perform change as fixity and movement, singularity and multiplicity. This means that a posthuman approach to analysing changes in empirical data is a question of worlding, enactment, performance, speculation or even

fictionality. As shown in this special issue, this does not make empirical analysis unreal, but it is rather an unsettling of analysis, as seen from the vantage point of realist and representationalist analysis of something out there, doing something, awaiting attempts at mirroring or reflecting. Posthuman analyses of empirical data, then, are a move away from anthropocentric regimes of truth (Skiveren, 2020, p. 13). Rather, a posthuman engagement with empirical data through analysis can be conceived of as “performance that forges connections, enacts contradictions, and possible incompatibilities, and manifest agencies, with the intent of addressing issues for educational practice” as Sauzet puts it in her paper.

The papers of this special issue are not seeking realist versions of “truth” – of what change really is or who or what really changes – based on separability and representation. Rather, they invent, slow down, zoom in on, and forge connections across moments, as well as suggesting performances of issues that matter for their particular empirical engagement with change. We as editors of this special issue argue that this becomes a radical, but also affirmative and supportive way of approaching posthuman conceptions of change in empirical educational research that show how posthuman explorations of change are always co-exploratory of what *and* how *and* who is changing.

Summaries of the papers included in the special issue

As already shown, the papers in this special issue enact a number of different ways of relating to, understanding and most importantly exploring posthuman conceptions of change in empirical educational research. Following a rigorous selection and a double-blinded review process, the following six papers are included:

Slaughtering a cow in early childhood education: Pedagogic meetings with destruction as change

Teresa K. Aslanian & Anna Moxnes, University of South-Eastern Norway

Aslanian and Moxnes address change as ontological, challenging the idea of change as cause and effect trajectories (Barad, 2007, p.180). Change moves in uncharted and haphazard directions, producing more than that which humans intentionally make happen and more than can necessarily be recognized.

Change at the museum: The knowledge production of human evolution

Simon Ceder, University of Arts, Craft and Design, Stockholm

For this paper, human evolution is explored as an example of knowledge production about change. Empirical material produced at natural history museums was analyzed together with a posthuman version of evolutionary theory. The analysis unearthed a few tensions around how evolutionary change is produced through various and contentious knowledges.

Material-discursive changes: posthuman methodologies to (re)conceptualize postgraduate encounters in/with/through language.

Sarah Evans, Manchester Metropolitan University

This paper addresses posthuman conceptions of change by exploring how methodologies within this context can be used to alter researcher's analytical strategies. The author uses diffraction along with Deleuzo-Guattarian concepts as generative tools for re-thinking longstanding ideas about academic literacy.

How to expand the boundaries: Feminist posthumanist elaborations on change in education

Karin Gunnarsson, Stockholm University

By addressing the call from Braidotti of expanding the boundaries, Gunnarsson explores change as a vital matter with interwoven layers. This becomes both an empirical question that concerns how change is enacted in the teaching of equality and norms and a theoretical question about how to encounter the ambiguities and responsibilities of change in education within the posthuman framework.

What "what we know" does: A posthuman review methodology

Sofie Sauzet, University College Copenhagen, Denmark

This paper elaborates a case, an argument and methodology for a posthuman, performative review methodology, which is suggested to afford *change* in knowledge-claims. The change involves a move away from representations of "what we know", towards analytical performances of what "what we know does" to educational practice.

Water as Artist-Collaborator: Posthumanism and Reconciliation in Relational Media Arts-Based Education

Sarah Van Borek, Rhodes University, South Africa

Using posthuman theories to re-read a university course with reconciliation aims that involve intra-actions between students, water and technologies (audio / video as *relational texts*), entangled with artistic approaches of *slow media* and *soundscape recording*, the researcher uncovers the agential qualities of water (in artistic / knowledge co-production) allowing students to think *with* water.

References

- Andersen, C. E. (2015). *Mot en mindre profesjonalitet: "Rase", tidlig barndom og Deleuzeoguattariske blivelser* [Ph.D., Stockholm University]. <http://urn.kb.se/resolve?urn=urn:nbn:se:su:diva-114124>
- Alaimo, S., & Hekman, S. (Eds.). (2008). *Material Feminisms*. Indiana University Press.
- Apple, M. W. (2012). *Can Education Change Society?* Taylor & Francis Group. <https://doi.org/10.4324/9780203083550>

- Barad, K. (2007). *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Duke University Press. <https://doi.org/10.1215/9780822388128>
- Barad, K. (2010). Quantum Entanglements and Hauntological Relations of Inheritance: Dis/Continuities, Spacetime Enfoldings, and Justice-To-Come. *Derrida Today*, 3(2), 240–268. <https://doi.org/10.3366/drt.2010.0206>
- Barad, K. (2017). Troubling Time/S and Ecologies of Nothingness: Re-Turning, Re-Membering, and Facing the Incalculable. *New Formations*, 92(92), 56–86. <https://doi.org/10.3898/NEWF:92.05.2017>
- Bingham, C., & Sidorkin, A. (2004). *No Education without Relation*. Peter Lang.
- Blaise, M., Rooney, T., & Pollitt, J. (2019). Weather Wanderings. *Journal of Public Pedagogies*, 4, 165–170. <https://doi.org/10.15209/jpp.1185>
- Bodén, L. (2016). *Present Absences: Exploring the Posthumanist Entanglements of School Absenteeism* [Ph.D., Linköping University]. <https://doi.org/10.3384/diss.diva-130460>
- Braidotti, R. (2006). *Transpositions: On Nomadic Ethics*. Polity.
- Braidotti, R. (2010). On Putting the Active Back into Activism. *New Formations*, 68. <https://doi.org/10.3898/newf.68.03.2009>
- Braidotti, R. (2013). *The Posthuman*. Polity Press.
- Braidotti, R. (2016). Posthuman Critical Theory. In D. Banerji & M. R. Paranjape (Eds.), *Critical Posthumanism and Planetary Futures* (pp. 13–32). Springer India. <https://doi.org/10.1007/978-81-322-3637-5>
- Ceder, S. (2019). *Towards a Posthuman Theory of Educational Relationality*. Routledge. <https://doi.org/10.4324/9781351044196>
- Davies, B. (2018). Ethics and the New Materialism: A Brief Genealogy of the ‘Post’ Philosophies in the Social Sciences. *Discourse: Studies in the Cultural Politics of Education*, 39(1), 113–127. <https://doi.org/10.1080/01596306.2016.1234682>
- Deleuze, G., & Guattari, F. (1987). *A Thousand Plateaus: Capitalism and Schizophrenia*. University of Minnesota Press.
- Dewey, J. (1932). *The School and Society and The Child and the Curriculum*. University of Chicago Press.
- Dolphijn, R., & Tuin, I. van der. (2013). *New Materialism: Interviews & Cartographies*. Open Humanities Press. <https://doi.org/10.3998/ohp.11515701.0001.001>
- Freire, P. (1972). *Pedagogy of the Oppressed*. Penguin Books.
- Gunnarsson, K., & Bodén, L. (2021). *Introduktion till postkvalitativ metodologi*. Stockholm University Press.
- Grosz, E. (2004). *The Nick of Time: Politics, Evolution, and the Untimely*. Duke University Press Books. <https://doi.org/10.1215/9780822386032>
- Grosz, E. (2011). *Becoming Undone: Darwinian Reflections on Life, Politics, and Art* (n edition). Duke University Press Books. <https://doi.org/10.1215/9780822394433>
- Hinton, P., & Treusch, P. (Eds.). (2015). *Teaching with Feminist Materialisms: Teaching with Gender*. European Women’s Studies in International and Interdisciplinary Classrooms. ATGENDER.
- Hohti, R. (2018). Siiri and the “Bag Lady”: Analysing the Material Entanglements of Special Needs. *Reconceptualizing Educational Research Methodology*, 9(1), 6–16. <https://doi.org/10.7577/term.2698>
- hooks, b. (1994). *Teaching to Transgress: Education as the Practice of Freedom*. Routledge. <https://doi.org/10.3366/para.1994.17.3.270>
- Johansson, L. (2015). *Tillblivelsens pedagogik: Om att utmana de förgivettagna. En postkvalitativ studie av det ännu-icke-seddas pedagogiska möjligheter* [Ph.D.]. Lund University, Faculty of Social Sciences.
- Kumashiro, K. K. (2015). *Against Common Sense: Teaching and Learning toward Social Justice*. Routledge.
- Reconceptualizing Educational Research Methodology 2021, 12(1), Special Issue

- <https://doi.org/10.4324/9781315765525>
- Lenz Taguchi, H. (2010). *Going Beyond the Theory/Practice Divide in Early Childhood Education: Introducing an Intra-Active Pedagogy*. Routledge. <https://doi.org/10.4324/9780203872956>
- Lykke, N., Markussen, R., & Olesen, F. (2000). "There are Always more Things going on than you Thought!"—Methodologies as Thinking Technologies. Interview with Donna Haraway. *Kvinder, Køn & Forskning*, 4. <https://doi.org/10.7146/kkf.v0i4.28387>
- Malabou, C. (2004). *The Future of Hegel: Plasticity, Temporality and Dialectic* (1st edition). Routledge.
- Malabou, C. (2008). *What Should We Do with Our Brain?* Fordham University Press.
<https://www.jstor.org/stable/j.ctt1c5chvm>
- Malabou, C. (2012). *The Ontology of the Accident: An Essay on Destructive Plasticity* (C. Shread, Trans.; 1st edition). Polity.
- Moberg, E. (2018). Enacting Affirmative Critique: Exploring the Conjunctions and Overlaps among Actor-Network Theory and Feminist New Materialist Methodologies. *Reconceptualizing Educational Research Methodology*, 9(1), 29–42. <https://doi.org/10.7577/term.2700>
- Mol, A. (2002). *The Body Multiple: Ontology in Medical Practice*. Duke University Press.
<https://doi.org/10.1215/9780822384151>
- Moxnes, A. R., & Osgood, J. (2019). Storying Diffractive Pedagogy: Reconfiguring Groupwork in Early Childhood Teacher Education. *Reconceptualizing Educational Research Methodology*, 10(1), 1–13.
<https://doi.org/10.7577/term.3240>
- Osgood, J., & Robinson, K. H. (2019). *Feminists Researching Gendered Childhoods: Generative Entanglements*. Bloomsbury Publishing. <https://doi.org/10.5040/9781474285810>
- Otterstad, A. M. (2019). What Might a Feminist Relational New Materialist and Affirmative Critique Generate in/with Early Childhood Research? *Qualitative Inquiry*, 25(7), 641–651.
<https://doi.org/10.1177/1077800418800760>
- Otterstad, A.M., & Reinertsen, A. B. (2015). *Metodefestival og øyeblikksrealisme: Eksperimenterende kvalitative forskningspassasjer*. Bergen: Fagbokforlaget.
- Palmer, A. (2016). 'Is this the Tallest Building in the World?' A Posthuman Approach to Ethical Dilemmas in Young Children's Learning Projects. *Global Studies of Childhood*, 6(3), 283–298.
<https://doi.org/10.1177/2043610616665035>
- Pedersen, H. (2009). *Animals in Schools: Processes and Strategies in Human-Animal Education*. Purdue University Press.
- Pedersen, H. (2010). Is 'the Posthuman' Educable? On the Convergence of Educational Philosophy, Animal Studies, and Posthumanist Theory. *Discourse: Studies in the Cultural Politics of Education*, 31(2), 237–250. <https://doi.org/10.1080/01596301003679750>
- Pedersen, H. (2013). Follow the Judas sheep: Materializing post-qualitative methodology in zoethnographic space. *International Journal of Qualitative Studies in Education*, 26(6), 717–731.
<https://doi.org/10.1080/09518398.2013.788760>
- Rancière, J. (1991). *The Ignorant Schoolmaster: Five Lessons in Intellectual Emancipation*. Stanford University Press.
- Reinertsen, A. B. (2016). *Becoming Earth: A Post Human Turn in Educational Discourse Collapsing Nature/Culture Divides*. Springer. <https://doi.org/10.1007/978-94-6300-429-9>
- Revelles Benavente, B. (2015). Materializing Feminist Theory: The Classroom as an Act of Resistance. In P. Hinton & P. Treusch (Eds.), *Teaching with Feminist Materialisms: Teaching with Gender. European Women's Studies in International and Interdisciplinary Classrooms* (pp. 53–65). ATGENDER.

- Ringrose, J., Warfield, K., & Zarabadi, S. (2019). *Feminist Posthumanisms, New Materialisms and Education*. Routledge.
- Sandvik, N. (2020). 'When the Whole Sky Falls Down': Minor Gestures towards Play out of Place/Time in Toddler Groups. *Contemporary Issues in Early Childhood*, 21(1), 33–45.
<https://doi.org/10.1177/1463949118799917>
- Sauzet, S. (2015). Thinking through Picturing. In P. Hinton & P. Treusch (Eds.), *Teaching with Feminist Materialisms: Teaching with Gender*. European Women's Studies in International and Interdisciplinary Classrooms (pp. 37–51). ATGENDER.
- Skiveren, T. (2020). Fictionality in New Materialism: (Re)Inventing Matter. *Theory, Culture & Society*.
<https://doi.org/10.1177/0263276420967408>
- Snaza, N., & Weaver, J. (2014). *Posthumanism and Educational Research*. Routledge.
- Stengers, I. (2008). Experimenting with Refrains: Subjectivity and the Challenge of Escaping Modern Dualism. *Subjectivity*, 22(1), 38–59. <https://doi.org/10.1057/sub.2008.6>
- Strom, K., Ringrose, J., Osgood, J., & Renold, E. (2019). Editorial: PhEmaterialism: Response-able Research & Pedagogy. *Reconceptualizing Educational Research Methodology*, 10(2–3).
<https://doi.org/10.7577/term.3649>
- Taylor, A., & Pacini-Ketchabaw, V. (2018). *The Common Worlds of Children and Animals: Relational Ethics for Entangled Lives*. Routledge. <https://doi.org/10.4324/9781315670010>
- Taylor, C.A., & Hughes, C. (Eds.). (2016). *Posthuman Research Practices in Education*. Springer.
<https://doi.org/10.1057/9781137453082>
- Taylor, C.A., & Ivinson, G. (2013). Material Feminisms: New Directions for Education. *Gender and Education* 25(6), 665-670. <https://doi.org/10.1080/09540253.2013.834617>

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