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Chapter 1

Towards Socio-material Research Approaches in Language Education



Johanna Ennser-Kananen  and Taina Saarinen 

Abstract This chapter outlines the socio-material framing of the book that it opens. We situate this volume materially not only in the discipline of applied linguistics and language education, but also in the long tradition of applied language studies at the University of Jyväskylä in Finland and the community there. In doing so, the book builds on the authors' roots in social constructionist thought and explicates why an orientation towards new materialism may be useful for a consideration of equity issues in language education. Socio-materialism fosters a critical, transformative perspective and encourages an ontological ethical grounding of research, thus providing a starting point for research that implicates (but yet decenters) the role of the researchers. Having conducted the work presented in this book in a community of applied linguists has also made us aware of the material role of the community and its scholars in the process; not just as a vessel of knowledge, but as a part of an assemblage.

Keywords New materialism · Socio-materiality · Social constructionism · Equity · Ethics · Negotiability

Social Constructionism as a Starting Point

This book analyzes language education in society in a frame that acknowledges the ways in which humans socially construct reality on the one hand (Pennycook, 2018) and act in a dynamic relationship with the material world on the other (Bennett,

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2010; Pennycook, 2018). The relationship between social constructionism and the material has been debated by researchers working within the social constructionist paradigm (Fairclough et al., 2004) as well as outside of it (for instance critical realism; Bhaskar, 1989). Building on this tradition, the authors contributing to this book approach society and social phenomena as both “materially real and socially constructed” (Coole & Frost, 2010, p. 26).

We¹ want to examine and revisit our position as researchers by decentering ourselves and humans in general from the main focus of research activities and giving way to the materialities that deeply shape our environments and societies. Through this *critical posthumanist realism* (Pennycook, 2018), we hope to engage in research that sees society as an ethical interrelationship between humans and the material world (Bennett, 2010; Pennycook, 2018, p. 9). Our approach is eclectic rather than fixed or dogmatic, and the chapters we have collected in this volume explore the socio-materialities of language education from the perspectives of material agency, spatial and embodied materiality, and human and non-human assemblages.

Posthumanism is an umbrella term for various lines of thought that have in some way or other challenged anthropocentric ways of thinking and redefined the idea of what it means to be human and how humans (should) relate to their material and mediated environment. As editors of the volume, we have challenged ourselves and our colleagues to problematize *anthropocentrism* (i.e. the idea of humans as the centre of the natural or social environment) and *logocentrism* (i.e. the idea of language as superior means of meaning making). This we want to do by understanding humans as entering an ethically motivated relationship with their material environment, “*entangled and implicated in other beings*” (Pennycook, 2018, p. 126) and communicating meaning with a diverse range of social and material means (Canagarajah, 2021). Our intention is to expand our theoretical roots towards approaches that acknowledge the materiality of language and its functions in education.

This Book as an Assemblage

This book is an assemblage, or a material-discursive dynamic (Barad, 2007) of several elements and entities that have come together in the Jyväskylä applied linguistics community over several decades. The assemblage comprises (at least) of the community of applied linguists and language education scholars and educators at the university, their individual socio-historical and institutional positions, and a higher education policy that promotes and rewards “profiling” of universities. By profiling, we refer to a higher education policy that encourages universities to focus

¹Unless otherwise specified, “we” refers to us as the editors of the book.

on particular disciplinary areas, and supports those activities with Academy of Finland funding. Having hosted a large community of applied linguists since the 1970s, the University of Jyväskylä became a site for such profiling in 2016, as the Department of Language and Communication Studies and the Centre for Applied Language Studies received a large multi-year grant to develop the initiative *Applied Language Studies for the Changing Society*. Later named *Research Collegium for Language in Changing Society* (RECLAS), the profiling initiative aimed at building on the long tradition of applied language studies at the university to develop the field further, particularly in the areas and intersections of language education and assessment, language policies and social structures, and discourses of language, diversity and (in)equity.

The goal of the profiling activity was to support “a significant contribution to the development of the research field theoretically, methodologically, and empirically” (RECLAS application, 2016, p. 10). These multi-level expectations were a constant challenge to us as members of RECLAS, as they seemed vague, exciting, necessary, and ambitious at the same time. The influx of financial resources from the Academy of Finland not only triggered several hiring and (re)structuring processes, but also carved out spaces and times for Jyväskylä scholars in applied language studies to think and talk about where we would like our work, our research community, and our field to move, and how. This almost hyperbolic goal of “developing the field” became a backdrop for the activities that took place sometimes inside university walls, other times in spaces leaving and refusing those walls, but always in a constellation of people with varying relationships with the community, the university, the discipline, and the ambitious profiling goal. Only as the process of writing this book came to a close, did we begin to see the book not just as another academic output of a funded project on the topic of new materialism in language education, but as a material assemblage in itself (see Engman, Ennser-Kananen & Saarinen, Chap. 10, this volume).

Based on existing work and long traditions at our institution, the RECLAS understanding of language as a situated means for social construction and mediation was made explicit in the application for the profiling funding:

Overall, the thematic areas [of RECLAS] share an understanding of language that **recognizes its dynamic, social and situated nature** and its role in **constructing social realities, norms, ideologies, processes of identification, participation, inclusion and exclusion**, each providing its specific perspective to the exploration of language-based phenomena in current day society. (RECLAS application, p. 11, our emphasis)

This understanding of language reflects the theoretical foundations of the bulk of work within RECLAS thus far. The community was relatively firmly situated within a social constructionist tradition that grounded much of our work in an understanding of language, change, and society as socially constructed, dynamic, and shaped by the discourses, power dynamics, and societal processes that permeate it. This theoretical basis still is our breeding ground. We, the editors and authors of this book, are working in a field that has largely been socialised into a research paradigm

that considers reality as something constructed and constructive, although we may use slightly different terminology depending on our research focus.²

As members of the RECLAS community put many potential issues on the table, ranging from research (as) ethics to methodological advancements, epistemological equity, and the negotiation of new academic identities, genres, and spaces, the two of us grew increasingly unsatisfied with our relatively inflexible theoretical rooting in social constructionism. Although it remains valuable and important for our work, we became more and more aware of the times and places when it did not suffice to deeply explore or understand our data, our analyses, our participants, and our academic selves. While we were indebted to social constructionism as well as used to centre-staging language and discourses, and understanding humans as their main owners, producers, and users in our work, we felt this paradigm needed to be challenged.

We wondered what other approaches that currently receive attention in our field might add to our work and began looking into *posthumanism* (e.g., Pennycook, 2018) as an umbrella term for *new materialist* (e.g. Coole & Frost, 2010) approaches. We were hoping to find ideas that would stretch and challenge our thinking and help us understand the entangled materialities (Barad, 2007) of our social world. In this book, our focus is on challenging this perspective together with new materialism (Fox & Alldred, 2019), or the idea of social and material production rather than social construction. This was also a stretch on our thinking and made us turn over and over again to the relationships between our socio-constructionist traditions and the new materialist theorising, struggling to grasp concepts that went against our internalised Cartesian and Enlightenment ideologies of what research should or could be (Engman, Ennser-Kananen & Saarinen, Chap. 10, this volume).

Exploring the Material

In one of our discussions on developing the field within the profiling area, we asked ourselves and our colleagues the following question: If we weren't focusing mainly on humans in our research, what would we write about? As we began to consider the classrooms and schools, interview situations, survey responses, electronic media, archives, and documents that tend to constitute our primary data sources, we came to acknowledge that our work has rarely been limited to humans, but we have been interested in a plethora of factors beyond humans for a while: spaces, times, objects, emotions, physical processes and forces, for instance. However, it seems that these tended to slip in the background to form the context, data sources, or

²Generally, *social constructivism* implies the individual cognitively engaging in construction of knowledge vs. *social constructionism* refers to knowledge and meaning as historically and culturally constructed through social processes and action (Young & Collin, 2004, p. 375–376).

backdrop of our main analyses, which usually consisted of primarily human activities. Not surprisingly, our list resembled Fox and Alldred's (2019) definition of the "material":

The materialities considered in new materialist approaches include human bodies; other animate organisms; material things; spaces, places and the natural and built environment that these contain; and material forces including gravity and time. Also included may be abstract concepts, human constructs and human epiphenomena such as imagination, memory and thoughts; though not themselves 'material', such elements have the capacity to produce material effects. (Fox & Alldred, 2019, p. 1).

Several lines of research that include such materialities exist at our institution and beyond. Our colleagues, both those contributing to this volume and others, have been drawing on and making contributions to this scholarship for many years, for example by including spaces, objects, and multiple modes and modalities into their research. Local and international colleagues have worked on and with artefacts (Vygotsky, 1997; Dlaske, 2015; Muhonen & Vaarala, Chap. 4, this volume), human-computer interaction (Suchman, 2006; Thorne et al., 2021; Jakonen & Jauni, Chap. 2, this volume), embodiment and embodied applied linguistics (Canagarajah, 2018; Dufva, 2004; Dufva, Chap. 5, this volume), actor-network-theory (Latour, 2005), and language ecological approaches (van Lier, 2004; Skinnari, 2012). The increasing interest in material approaches also transpires in research on schoolscapes (Laihonen & Szabó, 2018; Laihonen & Szabó, Chap. 6, this volume), our locally developed branch of linguistic landscaping (Shohamy & Gorter, 2008), the ongoing work on nexus analysis at our institution (Scollon & Scollon, 2004; Pietikäinen, 2010), and a renewed interest in multimodalities and multiliteracies (Cope & Kalantzis, 2000; Ennsner-Kananen, 2019; van Leeuwen, 2011; Dufva, Chap. 5, this volume; and the new profiling initiative MultiLEAP at our university <https://multi-leap.org>). All these are indicators of our sustained interest in looking besides and beyond humans in our work.

In all, the interest in materialities is neither limited to our local context, nor is it new. The shift towards scholarship that focuses on "physical environment, everyday objects or the bodies we inhabit" (Brooks & Waters, 2018, p. 21; for language education, see Toohey, 2018) is also underway in the area of education and specifically language education (see for instance Guerretaz et al., 2021b). Taking this locally and globally surfacing interest in the material world seriously, we believe it is time to make a concerted effort of evaluating this trend through an empirical contribution that explores the interplay between socio-constructivist/constructionist and material realities, in which humans retreat from their center-stage position and are understood as entangled with the material world.

Considering the materialities in our research, however, does not refute or contradict social constructionism. In their foundational work, Berger and Luckmann (1991) suggest that the construction of society happens in dialogue with the material environment, reminding us that their approach to social construction did not exclude materialities. Instead, Berger and Luckmann (1991) saw society as continuously shaped and (re)created within the dialectic between the subjective (human)

and the objective (material) realms. In a similar vein, critical materialism acknowledges that society is “simultaneously materially real and socially constructed” insofar as “our material lives are always culturally mediated, but they are not only cultural” (Coole & Frost, 2010, p. 27). This brings us to *sociomateriality* (Fenwick, 2015), i.e. the entanglement of social and material forces in continuous assemblage and reassemblage (p. 83).

Whereas “strong” or “radical” social constructionism blurs the lines between natural and the social, suggesting that there is ultimately no objective reality outside human perception of it, the socio-material view echoes the “weak” (Searle, 1995) or “moderate” (Heiskala, 2000) social constructionism, which sees the natural and the social as interacting (for example through artefacts, Coole & Frost, 2010; Muhonen & Vaarala, Chap. 4, this volume; Jakonen & Jauni, Chap. 2, this volume, Laihonon & Szabó, Chap. 6, this volume). However, although social constructionist approaches carve out spaces for the material, their role remains limited and separated from the ones that drive societal processes and developments: humans. In order to address pressing societal issues, we believe that such a limited role of the material aspects of society does not suffice. We therefore challenge this view of a human-centered and socially constructed society and agree with Coole and Frost (2010) that change is only possible through reorganization of societal structures and material (e.g., economic) resources. In their words, it would be ...

[...] ideological naïveté to believe that significant social change can be engendered solely by reconstructing subjectivities, discourses, ethics and identities - that is, without altering their socioeconomic conditions or tracing cultural aspects of their reproduction to the economic interests they unwittingly serve (p. 25–26)

Empirical applications of socio-materialism in learning and education are relatively recent (see for instance Toohey, 2018; Guerretaz et al., 2021a). However, already in her 2009 monograph *The Materiality of Learning*, Sørensen develops a posthumanist theory of learning as an alternative to humanist educational research approaches. Based on her ethnographic studies in a Danish fourth-grade classroom, she proposes understandings of materiality, learning, and knowledge that de-center humans for the benefit of socio-material relationships, including her concept of “liquid knowledge” (p. 126), a “continual mutation” of socio-material interactions of learners, objects, and the learning environment, which enacts qualitative change but refuses the idea of “growth”.

Analyzing the interactions of her participants with a 3D learning platform, Sørensen concludes that liquid knowledge “was all over, embedded in the socio-material practice; it was becoming” (p. 130). In line with Sørensen’s (2009) understanding of learning and knowledge, this book contributes to an understanding of the material and non-material, the human and non-human as assemblages rather than binaries. Focusing on language education, we bring together different understandings and aspects of (socio)materiality to offer a more varied view on how the social and the material are intertwined and how this entanglement can be studied (Fenwick, 2015; Guerretaz et al., 2021b).

Problematizing the Assumption of Negotiability and the Risk of Relativism

Following Bennett's (2010) call for ethical materiality as *practice of ethical behavior* instead of *endorsement of ethical principles*, we reassess our socio-constructionist and socio-constructivist traditions in dialogue with material approaches to allow for a more explicit grounding in equity and social justice-based applied language studies. It seems that our earlier neglect for the material has been more than an oversight, and sometimes even originated from good intentions. A related reduction of "material" to "biological" that we have observed across different disciplines may be based on a limited understanding of the entangled relationships between the social and material. While this view has led to attempts at distancing ourselves from a reduction of humans to biology (a view that has caused highly oppressive societies, for example in the form of biological conceptualizations of race and gender), it may also have caused us to ignore or neglect the material aspects of societal processes. At the same time, as Ahmed (2008) points out, the assumed "antibiologism" or the habitual labelling of socio-constructionist feminist research as reducing "matter" to "culture" is a caricature at best that overlooks the entangled socio-material traditions of the field.

Similarly, an understanding of "material" as merely "artefacts" or "things" would greatly limit our work. Looking at textbooks just as artefacts to be used instrumentally by students and teachers would miss the ways in which the books are designed to enable and facilitate entangled agency (Saarinen and Huhta, Chap. 9, this volume). We believe there is something to be learned from theories that understand society as "material-discursive" or "socio-material" (Fenwick, 2015), as physically and discursively built by and for human and nonhuman matter. Our goal is thus to not only add a material perspective to our social constructionist one, but to ensure that our understanding of "material" remains open and broad (see Fox & Allred, 2019 above) so that we can transcend the dualism (see also Barad, 2007) between socially constructed and material in ways that have the potential to make a positive societal contribution.

Understanding society in a material way in our work requires an understanding of the role of materiality in shaping societies and our lives in them. In our professional and institutional context, we have already seen approaches (see above section on *Exploring the Material*) that understand action and meaning as mediated by (both material and socially constructed) artefacts. For example, society as a way of organizing reality shapes and is shaped by physical locations, spaces, geographical territories, and social interaction that is mediated by material artefacts, spaces and tools (see Chimbutane, Ennsner-Kananen and Kosunen, Chap. 7, this volume, or Laihonen & Szabó, Chap. 6, this volume). In media reports on elections, for instance, we come across examples of voting as a form of embodied citizenship that includes activities such as watching and commenting on pre-election debates, going to the polling site, standing in line, casting votes, and posting selfies with "I voted" stickers on social media. In governmentality theories (Miller & Rose, 2008), the

materiality of society becomes apparent in the organized and repeated ways in which citizen-subjects internalize societal orders and rationalities (also Saarinen & Huhta, Chap. 9, this volume). In nexus analytical approaches, social action has been understood as being materialized in embodied performances (e.g., Scollon & Scollon, 2004). We suggest drawing on such existing work for a renewed and strengthened emphasis of the socially constructed, the material, and their interaction, in order to not just study the election example above as a material context and discursively analyse that, but to analyse these as the actual phenomenon, as an assemblage of material and social in which society itself is being enacted.

We seek to build on the idea that not all social constructs are equal and their acceptance as legitimate representations of our reality may follow hegemonic patterns that are far from politically innocent or continuously negotiable. On that path, we have become increasingly aware of the limited ability of social constructionism to address some of the issues that we find more and more pressing in our research and the societies we live in. Following Fenwick's call (2015) for educators to acknowledge the violence of their (our) material engagements, we suggest that two related potential shortcomings of social constructionism need to be addressed: its overgeneralized assumption of negotiability and its overestimation of relativity.

Assumed Negotiability

When assuming negotiability (either epistemologically in research activities or ontologically in constructing social realities), we keep being reminded that negotiability is a privilege, it is politically charged, and it is dependent on factors that are either a result of construction themselves, or material conditions. In other words, constructing social realities does not happen in a power-free vacuum and is therefore always susceptible to the risk of reproducing particular hegemonic understandings of society.

By framing structural and/or societal issues as socially negotiated ones, they may appear as changeable through (re)negotiation rather than acknowledging that some material or physical action is needed to remedy particular problems. More often than not this happens unintentionally as a consequence of constructionist thinking but nevertheless has severe consequences. Especially socio-politically sensitive issues like any forms of inequity and oppression cannot be addressed solely through discursive changes or renegotiations of social constructs (see for instance Brooks & Waters, 2018). Room for negotiation is often limited or even non-existent, for instance, when policies push people into illegality (e.g., so-called undocumented migrants), officials operate based on racial profiling (Keskinen et al., 2018), or, to use a more language-based example, speakers of minoritized languages are threatened, ridiculed, or attacked as a result of using their languages. In such cases, exclusion and violence are enacted and experienced through material realities that are barely, if at all, negotiable. We found ourselves concerned that if we ignored this materiality, even unintentionally, our work would be limited in its potential for

social change and run the risk of exploiting participants and realities for its own satisfaction.

Risk of Relativism

Our second issue with social constructionism relates to the above in that its potential for negotiation, interpretation, and construction can (inadvertently) promote a relativist agenda. We, as a field (see Pennycook, 2018, p. 108) have grown accustomed to putting “reality” and “truth” in (air) quotes in our thinking, speaking, and writing; thus reminding ourselves and each other that every statement we make is fundamentally contingent on our momentary context, ourselves, and all participants in the social construction process of our reality. While such a view of reality has had an important role in enabling us to identify and undermine absolutist, normative, and dogmatic thinking and given agency and responsibility to (those who get to be) human participants of constructionist activities, it also has its drawbacks, especially in its extreme forms that near social relativism.

We ask ourselves rather bluntly with Pennycook: if we take a standpoint where everything is socially constructed, dynamic, and discursively negotiable, what are our arguments that can fundamentally challenge a “post-factual society” and the spreading of “fake news” (Pennycook, 2018, p. 108)? Of course, we do not argue to take off the (air) quotes and reestablish positivist ideologies based on empirical realities and unquestioned “truths”. We do, however, hope to encourage a self-reflexive critical stance that recognizes the material hegemonies in our social constructions and understands that not everything is dynamic, negotiable, and constructable for everyone and in all contexts in the same way, and that the structures that reinforce and uphold these hegemonies are often material in nature. As applied linguists, we see our possibility for overcoming the risk of relativism in a focus on social constructs as situated and operating within a physical world, a black-box we are only beginning to open.

What, then, does new materialism have to offer to applied linguists? Pennycook (2018, p. 6) asks how, as a field, we have come to think of humans in particular ways, with boundaries between humans and (other) animals, humans and nature, humans and (other) intelligences, humans and (other) artefacts. The both of us would like to expand on that question and ask ourselves and our co-authors why we have, in addition, created boundaries between different kinds of humans? As Pennycook (2018, 121–122) points out, (social) constructionism did not intend to deny material reality as such but rather to understand itself as a “critique of the ways in which particular people, or particular ways of doing research or particular regimes of truth” enable some claims to represent reality. Understanding the foundations of inequities as socially constructed has in some cases been important as it has helped dismantle their legitimacy and strengthened the argumentative basis for their removal. Examples of this are, for instance, racial discrimination or exclusion based on ability.

However, inequities are rarely exclusively socially constructed and often manifest themselves in very material ways (e.g. financial or personal resources, mobility, access, or possessions). As we go about putting the socially constructed and material aspects of equity into dialogue in our respective work, we acknowledge the need for a material understanding that would also allow for a renewed push for social equity and justice between the human, non-human, and material worlds (Bennett, 2010).

Starting Points for Socio-material Research

While it may intuitively be easy to accept the inseparable entanglement of human and non-human or material and non-material in theory, the empirical practices of taking up research that acknowledges these socio-material assemblages are more challenging. The above discussion on the intertwinedness and the ethical implications of the socially constructed and material encourages researchers to frame their work in new ways, or to “queer the familiar” (Barad, in an interview by Kleinman, 2012, p. 77). In the case of our chapters, the “queering” of our work does not only involve adding a material dimension to the socio-constructivist one, but also acknowledging socio-material factors and ways in which we engage with materiality as part of critical learning (Fenwick, 2015). To us, as to Barad, this is an ethical commitment.

The queering of the familiar implies acknowledging the political and ideological interests embedded in the material world, not merely acknowledging the material as operated by humans (Fenwick, 2015). This implies finding new “cuts” in rethinking the interrelationship of human and matter as constructed and material; i.e. ways of appreciating, and understanding, and rethinking what takes place between the material and the human (see Saarinen & Huhta, Chap. 9, this volume; Jakonen & Jauni, Chap. 2, this volume). Barad’s (2007) notion of “new agential cuts”, i.e. new lines along which agency is assigned or distributed, offers one view of understanding the entanglement of what is often termed “subject” and “object” in research processes. Rather than separating the subject and object in a substantialist (Canagarajah, 2021) Cartesian way, we need methodologies and instruments that help us understand the heterogeneous elements and the collective socio-material enactments (Fenwick, 2015) that constitute our environment. This is not only an epistemic or methodological requirement, but also involves resisting existing normative social categories and ideologies.

The mutual enactment of the various heterogeneous elements in the socio-material assemblages also implies a need to question our Cartesian agential cuts between the (human, active) subject and the (material, passive) object (Coole & Frost, 2010; Canagarajah, 2021). Rather than reproduce this distinction, a socio-material approach involves seeing subjects and objects as entangled. Barad (2007, p. 139) rejects a focus on pre-existing entities such as human agency or observable objects and encourages us to be interested in *phenomena* in which agency emerges

in *intra-action*. Barad's agential realist ontology (Barad, 2007; Kleinman, 2012, p. 77) does not separate the observer from the observed, but instead sees subject and object as entangled enactment. Thus, rather than focusing on "interaction", which implies separate fixed entities that come into contact, Barad uses the concept of *intra-action* (Barad, 2007, p. 177–178), a relationship in which the entangled "phenomena, observers and apparatuses" (Toohey, 2018, p. 30) bring about agency through their entanglement, and how these phenomena eventually come together (Fenwick, 2015). Barad's (2007) understanding of human agents who do not precede agency but participate in *intra-action*, from which agency emerges, challenges the relatively persistent human-centered view in applied language studies of humans as actors who have intentional agency over (material) objects. The contingent elements in the *intra-action* lead to an understanding of agency not as inherent property of an individual or human to be exercised, but as a dynamism of agential forces (Barad, 2007, p. 141; see also Guerrettaz et al., 2021b; Muhonen & Vaarala, Chap. 4, this volume; Saarinen & Huhta, Chap. 9, this volume).

To make all this empirically more concrete, Toohey (2018, p. 32–33) offers several examples for applying such a framework to educational contexts. For instance, rather than analysing teacher or pupil agency and assuming an interaction (e.g. a causal relationship between action and change) between them, a starting point for an investigation could be the ways in which humans, spaces, policies, discourses etc. *intra-act* and change together and bring about agency (i.e. Chimbutane, Ennserr-Kananen & Kosunen, Chap. 7, this volume). Rethinking these cuts within an *intra-action* framework would thus not only offer new perspectives on the phenomena that surround us, but also on our ways of doing research.

Introducing the Chapters

The chapters in this volume explore language educational contexts through different lenses of (socio)materiality. We organized them in three parts based on how they conceptualize (socio)materiality and seek answers to the following overarching questions:

- In what ways do *material agencies* emerge in language educational contexts?
- How are educational choices and experiences intertwined with *materialities of spaces and bodies*?
- What assemblages of *human and non-human* may occur in language education contexts?

The first part on *material agency* consists of three chapters:

Teppo Jakonen and Heidi Jauni's chapter examines *intra-actions* from a language classroom with a telepresence robot. Their analyses show that the situation of remote classroom participation demands and triggers complex negotiations of social and material realities, which can blur the lines of agency that are traditionally drawn between humans and machines.

Ari Huhta and Nettie Boivin continue the discussion of human-machine agency in their analysis of large-scale testing in Denmark and Finland through a social constructionist and new materialist lens. They ask how, through the introduction of new assessment tools, agential cuts may have shifted from their conventional place between humans and machines and what implications for test takers and their agency this may have.

Anu Muhonen and Heidi Vaarala conclude the first part with their chapter whose main character is a map. Their analysis of an intra-action of a map of Finland, Finnish senior citizens, and college students in a Canadian *Suomi-koti* (“Finland-home”) shows how the map enacts agency, profoundly shapes the encounter, and opens up important possibilities for analysis and learning about time, space, and belonging.

The three chapters in the second part focus on *spatial and embodied materialities*.

In her opening chapter, Hannele Dufva critically reviews the role of materiality in the field of applied linguistics and particularly language learning, and argues that repertoires are always both personal and material. Through her profound theoretical analysis, she calls on applied linguists to move away from an abstract and disembodied understanding of language learning and instead bring together cognitive, sociocultural, and material approaches for a more embodied concept of personal repertoire.

Petteri Laihonen and Tamás Peter Szabó focus on space as a learning environment in the context of co-located schools in Finland, i.e. school buildings that exceptionally house both Finnish and Swedish-medium schools together. Their analysis shows that such spaces that embody multiple languages in social and material forms can serve to embrittle even long-standing monolingual ideologies.

Feliciano Salvador Chimbutane, Johanna Ennser-Kananen and Sonja Kosunen offer a DeleuzeGuattarian (Deleuze & Guattari, 1987) framework of striation and smoothness to understand the socio-material realities behind parents’ choices for their children’s language education in Finland and Mozambique. They arrive at the conclusion that choice is a complex and dynamic assemblage of material and social (f)actors, rather than a rational decision made by an agentive human subject. All these have to be addressed in order for sustainable social change to take place.

In the third part, two chapters examine *assemblages of human and non-human in learning contexts*.

Tarja Nikula, Anne Pitkänen-Huhta, Johanna Saario, and Sari Sulkunen present a rhizomatic analysis of three teacher interviews on change in educational contexts. Their conceptualization of interviews as assemblages allows them a non-linear, dynamic look at the intra-actions of social and material realities in teachers’ discourse, challenging conventional approaches to data analysis and the causalities and hierarchies these tend to produce.

Taina Saarinen and Ari Huhta continue by offering an analysis of the discursive assemblage of an English textbook, the Finnish National Core Curriculum, teacher, and pupil from the Finnish comprehensive school context. Their analysis of the textbook itself and its potential for agency in envisioning an ideal learner is a

contribution to a material understanding of learning that encourages a critical look at the way in which learner behaviour and learning are inseparably intertwined in the textbook.

In the epilogue, Mel Engman, Johanna Ennsner-Kananen and Taina Saarinen conclude the book by circling back to the notion of the book as an assemblage of disciplinary, community, and scholarly practices. They offer perspectives on the process of compiling the book as a diffraction that renders its components visible in a new way.

Our chapters, each in their own way, question the notion of the human subject as rational, enlightened being and sole possessor of agency and offer examples of allowing for other-than-human agency to enter the picture. They show how materialities can be taken into account, whether or not that was the original starting point of a particular research endeavor. They exemplify how researchers who have been committed to social constructionist thinking for most of their careers learn to make space for new theories, wherein, we believe, lies their greatest potential to inspire.

While some of our authors have collected and analyzed new data, others have reanalyzed existing data and/or combined data sets in new ways for their contributions. Taken together, these exemplify the diversity of starting points that legitimately co-exist and interact in our work as academics who enter new projects and collaborations. Relatedly, our chapters illustrate not only the promise and excitement about exploring new theoretical and practical grounds, but also the difficulty of empirically doing this. As editors, we hope that within the richness of this volume, each reader will be intrigued by an aspect that has the potential to “develop the field” and carry a part of our work forward in their own work.

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