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MATERIALIZED DISCOURSES IN THE LANDSCAPE

Language, Multimodality and Agency in a School in Southwest Finland

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Sense is therefore a complex notion; there is always a plurality of senses, a constellation, a complex of successions but also of coexistences which make interpretation an art.

Gilles Deleuze, Nietzsche and Philosophy

ABSTRACT

This thesis investigates materialized discourses in a landscape of education in Southwest Finland. It focuses on the construction of student identities through the school landscape and the materialized discourses that inform it. The analysis focuses on de jure and de facto discourses pertaining to language, semiotic modes and agency.

This thesis consists of four research articles. The articles function as self-contained units. They can therefore be read independently and in any order. It is, however, recommendable to read them in the order they are presented in this thesis, as intended by the author. Article I provides the reader a toolkit. Article II gives the reader a broad overview of the linguistic aspects of the landscape. Article III provides a closer look to the key findings of article II. Article IV shifts the focus from language to semiotic modes, while also reassessing agency in relation to articles II and III. The thesis expands on the four research articles. It provides a more detailed account of the conceptual framework and the research design. It also includes a more in-depth discussion of how the articles are related to one another, i.e., how they supplement one another, forming a whole greater than the sum of its parts.

The results indicate that a de jure discourse of parallel monolingualism and a de facto discourse of internationalism are materialized in the school landscape. Moreover, a discourse of logocentrism is materialized in the landscape, giving primacy to writing over image. In addition, an education specific discourse of agency is materialized in the landscape, creating a dichotomy between the teachers and the students. These materialized discourses discipline the students to adopt a certain code of conduct which reflects what is considered proper and desirable in Finnish society.

While the school landscape may appear to be a mere backdrop, materialized discourses contained in it are obscured by it. The learning environment appears to them as natural and unproblematic, thus reinforcing the disciplinary capabilities of the materialized discourses and (re)producing the social conditions in this microcosm of Finnish society.

KEYWORDS: discourse, society, education, space, landscape

TIIVISTELMÄ

Tämä väitöskirja tarkastelee materialisoituneita diskursseja varsinaissuomalaisen koulun maisemassa. Tutkimus keskittyy oppilaiden identiteettien rakentumiseen maiseman ja materialisoituneiden diskurssien kautta. Analyysi rajautuu kieliin, semioottisiin modaliteetteihin ja toimijuuteen liittyvien de jure ja de facto -diskurssien tarkasteluun.

Väitöskirja koostuu neljästä tutkimusartikkelista. Ne toimivat itsenäisinä kokonaisuuksina, joten ne voi lukea toisistaan irrallaan, missä tahansa järjestyksessä. On kuitenkin suositeltavaa lukea ne esitetyssä järjestyksessä. Artikkeli I tarjoaa lukijalla eräänlaisen työkalupakin. Artikkeli II tarjoaa lukijalle yleisen katsauksen koulun kielimaisemaan. Artikkelissa III keskitytään artikkelin II keskeisten tutkimustulosten tarkempaan tarkasteluun. Artikkeli IV tarkastelee kielten sijaan semioottisia modaliteetteja ja arvioi uudelleen artikkelin II ja III toimijuuteen liittyvät tutkimustulokset. Yhteenveto-osa tarjoaa lukijalle seikkaperäisemmän selonteon tutkimuksen käsitteellisestä viitekehyksestä sekä sovelletuista menetelmistä. Lisäksi yhteenveto-osiossa käsitellään sitä, miten artikkelit muodostavat osiensa summaa laajemman kokonaisuuden.

Tutkimustulokset osoittavat rinnakkaisen yksikielisyyden de jure -diskurssin ja kansainvälisyyden de facto -diskurssin materialisoituneen koulun maisemassa. Lisäksi maisemassa materialisoituvat logosentrismin diskurssi, joka korostaa kirjoittamisen merkitystä kuvallisen ilmaisun kustannuksella, ja koulutukseen liittyvä toimijuuden diskurssi, joka puolestaan ilmentää koulun opettajien keskeistä roolia suhteessa oppilaisiin. Nämä ohjailevat oppilaiden käytöstä kohti haluttuja ja hyväksyttyjä käytösmalleja.

Koulun maisema saattaa vaikuttaa pelkältä taustakulissilta, mutta se hämärtää materialisoituneiden diskurssien läsnäolon. Oppimisympäristö vaikuttaa luonnolliselta ja ongelmattomalta, mikä puolestaan vahvistaa materialisoituneiden diskurssien vaikutusta oppilaisiin ja auttaa toisintamaan vallitsevat yhteiskunnalliset olosuhteet.

ASIASANAT: diskurssi, yhteiskunta, koulutus, tila, maisema

Acknowledgements

I wrote about a thousand pages for this thesis, which, I'm sure you didn't read and probably never will, not that I blame you for that. Or did I? After all, aren't we all always many, as Deleuze and Guattari remind us? This thesis is certainly attributed to my name, but this is only a mere matter of convention, to whom something is attributed to. I say I, but only purely out of habit, not that it matters, considering that I am, no longer, myself, having been inspired and influenced by many others, who are or were also many. Once I'm done with this, this thesis will start to live a life of its own, in dialogue with who comes across it. Subjects, objects, figments of imagination.

It should be easy to figure out that my primary inspirations are Gilles Deleuze, Michel Foucault, and Félix Guattari. There are, of course, other influences, including but not limited to philosophers Walter Benjamin, Henri Bergson, Maurice Blanchot, Jacques Derrida, William James, Bruno Latour, Henri Lefebvre, Gottfried Wilhelm Leibniz, Marshall McLuhan, Friedrich Nietzsche, Michel Serres, Gilbert Simondon, Baruch Spinoza, and Alfred North Whitehead. I'm also influenced by sociologists Pierre Bourdieu, Ibn Khaldun and Gabriel Tarde, anthropologist Tim Ingold, archaeologist André Leroi-Gourhan, art historians W. J. T. Mitchell and Erwin Panofsky, and art critic John Berger. Regarding linguistics and/or semiotics, my influences include Mikhail Bakhtin, Oswald Ducrot, Louis Hjelmslev, Jean-Jacques Lecercle, Edward Sapir, Ron Scollon, Suzanne Wong Scollon, Valentin Voloshinov and Benjamin Lee Whorf. I've also been influenced by landscape geographers, including, but not limited to, Denis Cosgrove, James Duncan, Nancy Duncan, J. B. Jackson, Kenneth Olwig, Maurice Ronai and Richard Schein. In addition, I've drawn inspiration from artists, such as painters Paul Cézanne, Paul Klee, René Magritte and Salvador Dalí. These authors all speak through me, some more than others, albeit it should be noted that some conceptual sodomy may also have occurred in the process.

Instead of extending my list of influences to the ancient Greeks and Romans, I want to thank everyone who played a part in this project, my thesis supervisors Attila, Paul and Matti, my thesis reviewers Sari Pietikäinen and Crispin Thurlow,

my language checker Timothy Wilson, my family and my friends, those living in Finland and those living abroad. Those who know they played a part, played a part. Those who don't, didn't.

<div align="right">T.S.</div>

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List of Original Publications

This dissertation is based on the following original publications, which are referred to in the text by their Roman numerals:

I   Savela, T. (2018b). The advantages and disadvantages of quantitative methods in schoolscape research. *Linguistics and Education*, *44*, 31–44.

II   Savela, T. (2019). They appear missing – An examination of the apparition of language, discourse and agency in a Finnish landscape of education. *Language, Discourse & Societ*y, *7*(1), 85–107.

III   Savela, T. (2018a). One, two or more? – an examination of the apparition of language and discourse in a Finnish landscape of primary education. *International Journal of Bilingual Education and Bilingualism*, 1–15.

IV   Savela, T. (forthcoming). More than writing on the wall – An examination of writing and image in a Finnish primary and secondary level learning environment. *Pragmatics and Society*.

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1   Introduction – contextualizing the study

Systems of education remain a central concern in contemporary societies due to the way they function as embryonic microcosms (Dewey, 1915, p. 15), shaping future citizens. This thesis investigates this aspect, focusing on what Kraftl (2015, p. 219) refers to as the mainstream school system. It is therefore not illustrative of various alternative educational practices, such as schools that apply the ideas of Célestin Freinet, Rudolf Steiner or Maria Montessori. Similarly to a small but growing number of linguistic landscape studies (LLS) and schoolscape studies, this thesis is dedicated to examining learning environments as landscapes. These prior studies have illustrated the potential of learning environments as means of education (Jakonen, 2018; Malinowski, 2015; Menken et al., 2018; Scarvaglieri, 2017; Shang and Xie, 2019) and/or examined how they play a part in the formation of identities (Brown, 2018; Dressler, 2015; Garvin and Eisenhower, 2016; Im, 2020; Jocuns, 2021; Laihonen and Szabó, 2017; Laihonen and Tódor, 2017; Symes, 2020; Szabó, 2015; Szabó and Troyer, 2020).

What distinguishes this thesis from most LLS and schoolscape studies (but see Jaworski and Thurlow, 2010) is the underlying emphasis on landscape, assessing not only what landscape *is* but also how it *works*, what it and its particulars *do* to people while they take the presence of the particulars for granted. It is in this sense that my work is more aligned with the textual or discursive tradition of geographic landscape studies, as exemplified by Schein's (1997, 2003, 2009a, 2009b, 2010, 2018) work, than it is with LLS or schoolscape studies. What also distinguishes it from prior studies that examine learning environments as landscapes is the clear emphasis on discourse (but see Årman, 2018). What interests me is the interplay of landscape and discourse, hence their prominence in this thesis.

This thesis is dedicated to the examination of a landscape of education in the context of Finland, with particular emphasis on the (re)production of identities, as also examined in other studies conducted in Finland (From, 2020; From and Holm, 2019; From and Sahlström, 2017; Pakarinen and S. Björklund, 2018; Szabó, 2018). I seek to understand how students come to identify themselves through landscape, as well as through the various materialized discourses that come to inform it.

I am keenly aware that my approach may appear to be distant, if not detached or even inhuman, considering that I do not engage with people nor observe them. This is, however, intentional. Firstly, as argued by Tarde ([1890] 1903, pp. 101–102), this shifts the focus from individuals to desires and beliefs, as manifested in various social acts, as further elaborated in section 2.2. This is advantageous as it deprivileges and decenters the individual, the autonomous and intentional human subject (de Freitas, 2016, p. 231, 2017, p. 40). Secondly, I am interested in what Latour ([1992] 2008) refers to as the missing masses of our society, all the mundane artifacts that are typically understood as inert, having no effect on people, and thus ignored in social studies. This should not, however, be understood as indicating that people do not matter, as they do, but rather that things *also* matter (Coole and Frost, 2010, pp. 26–27). Things matter especially because they do affect people and because they tend to be ignored. Moreover, they are ignored because they tend to appear as integral parts of the landscape, as part and parcel of the natural order of things, hence my keen interest in the study of landscapes.

In practice, this investigation of the Finnish education system is based on mediated discourse analyses of a school situated in a bilingual urban municipality in Southwest Finland, as presented in the four articles included in this thesis. The goal of this thesis can be summarized in the form of a research question: what de jure and de facto discourses are materialized in this landscape of education situated in Southwest Finland? This question is subdivided into several more specific research questions that all pertain to the materialization of educational discourses related to language, multimodality, and agency. The specific questions and the answers to these questions are discussed in detail in section 5 which provides an overview of the research articles included in this thesis.

As the study was conducted in 2015, the content of this thesis deals with Finnish primary and secondary education prior to the adoption of new primary and secondary level core curricula (FNBE, 2014, 2015) that were put into effect in 2016. This thesis therefore provides a unique look into the Finnish education system during the time the previous core curricula (FNBE, 2003, 2004) were in effect. It also provides potential points of contrast for similar subsequent studies that examine the visual aspects of mainstream education, as manifested in the Finnish primary and secondary education systems.

The landscape of education investigated in this thesis concerns a school located in an officially bilingual urban municipality in the region of Southwest Finland. The school in question offers compulsory basic education (grades 1 to 9) and voluntary upper secondary education (grades 1 to 3) to approximately 800 to 900 students each year. To be more specific, it hosts approximately 300 primary level students (grades 1 to 6), 250 lower secondary level students (grades 7 to 9) and 250 upper secondary students each year. The medium of instruction is primarily

Finnish. The data gathering was conducted solely by me in the spring of 2015. It was done in cooperation with the school administration and it conformed to relevant existing legislation and research ethical principles, as further discussed in section 3.3.

The education legislation and the national core curricula steer education in schools, which makes the education provided in them highly uniform across the country. Schools are, however, allowed to deviate from the national framework to a limited extent in their local curricula (FNBE, 2003, p. 8, 2004, p. 10). This makes it possible for the schools to emphasize certain subjects in their curricula. For further information pertaining to the provision of education in the context of Finland, see sections 4.2 and 4.3. The school examined in this thesis offers a variety of languages to its basic education students: English, French, German, Russian, Swedish, Spanish and Latin. All these languages, except Latin and Spanish, are also offered to the upper secondary level students. It is, however, worth noting that a certain language is offered to students only if enough of them wish to study it, which constrains the available options, often quite considerably (Hakulinen et al., 2009, pp. 79–82), as further discussed in section 4.3.

The school offers optional tracks in basic education: English (grades 1 to 9), media studies (grades 1 to 6), science studies (grades 1 to 9) and arts (grades 1 to 6). The English track is marked by content and language integrated learning (CLIL) and therefore the medium of instruction includes English alongside Finnish. This aspect is of particular interest in this thesis and it is closely investigated in article III. The upper secondary level has an English language program but no specialized tracks. This results in further emphasis on English as a medium of instruction in the school. The English language program also restricts the students' choice of language subjects by excluding Russian as an optional language subject while also mandating the study of German or French in the first year. Moreover, any non-Finnish nationals must study Finnish as a foreign language in the first year, which, in turn, emphasizes the importance of Finnish.

The school also provides additional learning support to speakers of foreign languages, such as Albanian, Arabic, Kurdish, Somali, and Vietnamese. The provision of this support is, however, dependent not only on how many students happen to speak these languages, but also on the available resources. Firstly, schools have limited resources and additional public funding for this purpose may only be available if the number of students speaking a certain language is high enough (Suni and Latomaa, 2012, pp. 73–74). Secondly, qualified teachers who are competent in both Finnish and the various languages spoken by the students are in short supply and vary each year (Tainio et al., 2019, pp. 70–71).

The areas investigated in this thesis consist of school interior and exterior areas, the building itself, the school yard, and the immediate exterior surroundings. The

interior areas include the entrances, corridors, staircases that connect the classrooms and shared facilities, such as the school sports facilities, the cafeteria, and the auditorium. The investigated classrooms consist of 39 basic level classrooms, of which 21 serve the primary level students and 18 serve lower secondary level students, 9 upper secondary level classrooms and two classrooms that serve both the lower and the upper secondary level students.

The items investigated in this school include nearly everything, in the sense that anything on display containing writing and/or image were included as units of data. These include various everyday items, such as decorations, health and safety signage, learning materials, notice board announcements, posters, placards and student art works. I had initially planned to only include items that contain language, i.e., writing that is recognizable as language, but as soon as I started gathering data, it became apparent to me that I would ignore a substantial portion of data if I excluded items that do not contain language. In other words, I realized that I might risk simplifying much of the visual complexity of the landscape by choosing to ignore items that contain image. Therefore, as also advocated in a number of schoolscape studies (Laihonen and Tódor, 2017; Laihonen and Szabó, 2017; Szabó, 2015, 2018; Szabó and Troyer, 2020), I opted to expand the assessment of items in the learning environment from writing to image. Moreover, I realized that I would also be simplifying the issue of agency if I chose to limit my study by covering only the linguistic aspects of the landscape. These aspects that pertain to the use of visual modes and agency are investigated in detail in article IV, whereas articles II and III focus only on the linguistic composition of the landscape. Article IV therefore functions as a reassessment of the landscape as it expands the scope from writing to image.

Following this short introduction, the conceptual framework utilized in this thesis is presented. This section, section 2, elaborates the foundations of this study. It covers the initial presuppositions and the key concepts that are relevant to the study of landscapes in this thesis. This section consists of five parts: discourse, society, education, space, and landscape. The presentation of the conceptual framework is followed by a presentation of the materials and methods that are relevant to this thesis. Section 3 builds on the conceptual framework introduced in the previous section. It also includes a short discussion of research ethics. The following section, section 4, is dedicated to further examining the contextually relevant background information which helps to understand how the findings of this study are justified. Section 5 focuses solely on the original research articles included in this thesis. This section not only addresses the results of these articles, reiterating their core content, but also indicates how the findings are linked together, functioning like components of a larger whole, that is, nonetheless, an open-ended system rather than a closed set that I attempt to piece together in this thesis. The overview is followed by the final

section, section 6, which contains the conclusion. The articles themselves are contained in the appendices. They are included in the print version of this thesis, but not in the electronic version due licensing restrictions.

2 Conceptual framework

I agree with Deleuze ([1968] 1994, p. xvi) that we do not think according to a given method, whatever it may be once it is explicitly defined by us, but rather according to an "implicit, tacit or presupposed image of thought which determines our goals when we try to think." Furthermore, I also agree with him that one should always begin by examining all *presuppositions*, i.e., assumptions or prejudices that are carried by one's utterances (Deleuze, [1968] 1994, pp. 129–130). In other words, as counterintuitive as it may seem, one should always start by taking a step back (Malpas, 2012, pp. 231–232). This is, of course, by no means an easy task as, according to Deleuze and Guattari ([1991] 1994, pp. 35, 40– 41), one always seems to rely on some presuppositions, some intuitions, some pre-philosophical understandings of the world, which come to inform how one thinks. This does not, however, mean that one should therefore ignore the issue simply because it appears to be unavoidable to have some presuppositions. On the contrary, as argued by Simondon ([1964] 1992, p. 297), one should be very open and explicit about one's presuppositions as not only do they come to inform the constitution of subsequent problems that one seeks solutions to but also the possible solutions to these problems.

Because one seems to rely on some presuppositions, no matter what, I opted to designate this section as the conceptual framework of this thesis rather than referring to it as the theory section. As discussed by Foucault and Deleuze ([1972] 1977, pp. 206–208), the problem with *theory* is that it is typically understood as standing in opposition to *practice*, when, in fact, theory is practice, because it is always based on practice. The framework is therefore to be assessed in terms of its usefulness, like a well-stocked toolbox, and not in terms of whether it reflects theory as that presupposes that theory has an existence of its own, separate from practice, yet informing it. Simply put, I consider theory to be utterly pointless unless its practical, as contradictory as that may seem. I realize that this is in direct contradiction with the dominant way of thinking, also known as *dualism*, *representationalism* and *Platonism*, what Deleuze ([1968] 1994, pp. 131–132) refers to as the *dogmatic*, *orthodox,* or *moral image of thought*, but it is exactly for this reason that I opt to think otherwise and dedicate this section to the discussion of concepts that seek to avoid its pitfalls. I realize that the terms used and the concepts discussed in this thesis may be unfamiliar and difficult to

the many, because they are (St. Pierre, 2017, p. 1081, 2019, p. 8). This is, however, all intentional. The purpose is, at all stages, to avoid taking things for granted, as a matter of *doxa*, because that is exactly how the dominant way of thinking functions, how it seeks to abolish anything that is not grounded in reason, i.e., anything that is intuitive or concrete (James, 1909, pp. 218, 237, 245).

I try to be very explicit about my presuppositions and the concepts that I utilize in my work. I abhor the commonplace practice of attributing and justifying something based on implicit presuppositions, also known as *a priori* judgments, because, as argued by Guattari ([1979] 2011, p. 52), they can be utilized to legitimate anything. These presuppositions or *a priori* judgments are empty and static notions, including but not limited to divinity, nature, culture, myth, economy, structure, and ideology. They are used for their supposed explanatory value, yet they are themselves rarely explained. In short, they function like trump cards, invoking the supposed will of God, which, rather conveniently, happens to be aligned with what is being asserted. I take issue with such because it tends to be all too convenient, a place to retreat to when one runs out of arguments, an *asylum of ignorance*, as Spinoza ([1677] 1884, p. 78) might characterize it. For this reason, because nothing should be taken for granted, as merely given, the concepts used in this thesis are rigorously investigated in this section.

From a linguistic or, more broadly speaking, a semiotic perspective, this thesis could be defined as linguistic landscape research (cf. Jaworski and Thurlow, 2010) and, more specifically, as linguistic landscape research that focuses on education, also known as schoolscape research (cf. Laihonen and Szabó, 2018), considering that I do focus on language and education. However, as my work emphasizes the importance of space and landscape, much more explicitly than most LLS, including schoolscape studies, it can be understood as more aligned with geography and, to be more specific, geographic landscape research than linguistic landscape research. Nevertheless, my work also differs from geographic landscape research as language has hardly been addressed in that tradition (but see Drucker, 1984; Weightman, 1988). This also applies to education (but see Olwig, 1990, 1991; van Ingen and Halas, 2006). My research is also distinguished from contemporary LLS, including schoolscape studies, and geographic landscape studies by being largely quantitative, whereas these two traditions are both largely qualitative (but see Amara, 2018; Bellinzona, 2018; Gorter and Cenoz, 2015). It is in this sense that my work is arguably more sociology oriented than linguistics or geography oriented.

To be clear, I do not consider my work to neatly fit in any existing field, discipline, or school of thought, which is also why I have opted to go my own way, to create my own conceptual framework, going above and beyond what any existing framework could offer me on its own. My approach is, first and foremost, discursive and, by extension, non-discursive or diagrammatic, which is why I dedicate section 2.1 to

discourse (see also the graphic summary of diagrammatics). It is also markedly philosophical, as, perhaps, evident from the depth of discussion of various concepts in this thesis. While it is notably Foucauldian, Deleuzian and Guattarian, and, in terms of its methods, Tardean, I want to emphasize that, similarly to Honan (2007, p. 532), St. Pierre (2004, pp. 283–284) and Strom (2018, pp. 106, 112), I do not slavishly adhere to them, to their work, to any existing method drawn from their work, nor do I want to canonize them, nor anyone else. My approach can be understood as nomadic or *transversal*, in the sense that it defies disciplinary boundaries and resists top-down hierarchies (Guattari, 1984, pp. 17–18). It is therefore *problematic* rather than *theorematic*, as it revolves around *inventing* problems and subsequently solving them, one by one, with whatever conceptual tools I happen to find useful for the task, instead of attempting to *uncover* truth with a correct set of tools (Bergson, [1934] 1946, p. 58; Deleuze and Guattari, [1980] 1987, pp. 361–362).

My nomadism or transversality does not, however, mean that I disregard the work of scientists and scholars in various fields or disciplines, despite drawing most of my conceptual framework from the works of Deleuze, Foucault and Guattari. For example, while I may not subscribe to their views, certainly not wholesale, I am most certainly indebted to geographers who specialize in space and spatiality (cf. Harvey, 1973; Massey, 2005; Soja, 1996; Thrift, 2007; Tuan, 1974), as well as landscape, regardless of their philosophical underpinnings, whether they draw from phenomenology (cf. Meinig, 1979), (neo-)Marxism (cf. Cosgrove, 1984; Daniels, 1989), post-structuralism (cf. Duncan, 1990; Matless, [1998] 2016; Schein, 1997) or pave their own way (cf. Jackson, 1984). I draw from their work, both explicitly and implicitly, directly and indirectly, as evident in all the articles included in this thesis. I therefore dedicate sections 2.4. and 2.5 to the discussion of space and landscape, as opposed to treating them as givens. The same applies to sociologists who focus on space (cf. Lefebvre, [1974] 1991) and practice (cf. Bourdieu, [1972] 1977), albeit I otherwise prefer Tarde's ([1890] 1903, [1893] 2012) microsociology in which everything is social, a society, including the collective entity formed by individuals but also the individuals themselves, so that all sciences come to appear as branches of sociology. I have dedicated section 2.2 to the discussion of society because it is immanently linked to how space and landscape are socially produced. In addition, as this thesis pertains to learning environments, section 2.3 is dedicated to the discussion of education and educational institutions.

2.1   Discourse

It is worth emphasizing that I follow Foucault's ([1969, 1971] 1972, p. 49) definition of *discourse* as pertaining to "practices that systematically form the objects of which they speak." It should therefore not be understood as merely pertaining to language

in use, defined as "connected stretches of language that make sense, like conversations, stories, reports, arguments, essays and so forth" (Gee, [1990] 2015, p. 171), as a matter of coherence of language, as often defined in applied linguistics (Pennycook, 1994, pp. 116–118). Furthermore, it should not be understood as a socially embedded linguistic phenomenon, so that language is connected to practice, yet separate from it, as often defined in critical discourse analysis (CDA) or critical discourse studies (CDS) (Pennycook, 1994, pp. 126–127).

To be clear, as explained by Foucault ([1969, 1971] 1972, p. 49), discourse is to be understood as something that is more than representational, not merely referring to this or that object, nor to its form or idea, but as pertaining to the formation of objects that one subsequently comes to refer to. This definition of objects involves no dualism of *appearances*, what something looks like, and corresponding *essences*, what that something is. Instead, as explained by Deleuze (1978), objects are apprehended as a matter of *apparition*, as how something appears, becoming apparent to senses, inasmuch as it does, but without recourse to something pre-existing, to some essence that one recognizes. Therefore, if objects are said to correspond, represent or reflect something, they do so only in reference to their own principles of structuration, to their formation, to what Foucault ([1969, 1971] 1972, p. 28) calls their *conditions of existence*. The term apparition is utilized in articles II, III and IV and included in the titles of articles II and III for this reason.

Discourse analysis deals with looking at the conditions of apparition, i.e., the conditions of existence, "for that which gives rise to the chance series of these events and fixes its limits" (Foucault, [1969, 1971] 1972, p. 229). My task as a researcher or, to be more precise, as a discourse analyst is therefore not to assess what happened in the past for things to be the way they appear to us in the present, as a matter of necessity, but to assess whatever could have happened in the past for things to appear the way they do to us in the present, as a matter of contingency (Deleuze and Guattari, [1980] 1987, p. 193; Foucault, [1969, 1971] 1972, pp. 230–231). In other words, I must think in terms of *difference* rather than *identity* as I am tasked to render visible the invisible, not the visible, the already seen, as aptly expressed by Klee (1920, p. 28). To be more specific, as explained by Deleuze, paraphrasing Whitehead ([1929] 1979, p. 20), the task of a researcher is therefore always empiricist, "to find the conditions under which something new is produced" but never in search "to rediscover the eternal or the universal"; "the abstract does not explain, but must itself be explained" (Deleuze and Parnet, [1977] 1987, p. vii). Simply put, the Foucauldian approach to discourse analysis deals with taking issues seriously rather than dealing with serious issues as it is not concerned with their existence but rather their formation, as aptly explained by Pennycook (1994, p. 132).

The underlying *discursive practices* function not only to define a field of objects, i.e., the formation of *knowledge* through various *practices*, but they also pertain to

the process of legitimizing it, determining what is considered legitimate knowledge, which, in turn, involves prescribing *codes of conduct*, what can be said and done, and *disciplining* those who fail to adhere to these norms in order to make them obedient (Foucault, 1977a, pp. 199–200, [1975] 1995, pp. 122, 137). It is also worth emphasizing that discourses, or, rather, the practices that underlie them, are not to be attributed to anyone specific, to the will of an individual, but to an anonymous will that is polymorphous, as well as susceptible to systematic transformations, involving the interplay of identifiable dependencies (Foucault, 1977a, pp. 200–201). Nevertheless, as discourse is a matter of practice, it is never neutral. It always involves *power relations* and exercises of *power* that produce reality, the "domains of objects and the rituals of truth" (Foucault, [1975] 1995, pp. 93–94, 194; Gee, [1990] 2015, pp. 171–173). Therefore, the underlying *will to knowledge* is not to be understood as *will to truth* as discourses always pertain to *inventions*, to the formation of knowledge, not to *discoveries*, uncovering what is supposedly hidden (Deleuze, [1973] 2000, pp. 15–17; Foucault, 1977a, pp. 202–203; Nietzsche, [1887] 1974, p. 121). This connection between discourses and inventions will be further elaborated in following section on society, in section 2.2.

In this thesis I focus on *materialization of discourses* (Caborn, 2015, p. 115; Jäger, 2001, p. 83; Scollon, 2008, p. 234), which, in my understanding, occurs when one no longer only deals with *discursive formations* (statements), but with *non-discursive formations* (visibilities) (Foucault, [1969, 1971] 1972; Deleuze, [1986] 1988a). In Deleuzo-Guattarian parlance, materialization of discourses occurs when one is no longer merely concerned with *forms of expression* (collective assemblages of enunciation or semiotization) but also with *forms of content* (machinic assemblages of bodies or desire) (Deleuze and Guattari, [1980] 1987; Guattari, [1979] 2011). For example, clothing (Bouvier, 2017, p. 195), food (Scollon, 2008, p. 234) and zebra crossings (Blommaert, 2013, pp. 34–36; Scollon and Wong Scollon, 2003, pp. 180–183) are all materialized discourses. This underlines the importance of addressing discourse in connection to spatiality and materiality, as emphasized in all the articles included in this thesis and further discussed in sections 2.4 and 2.5.

It is worth emphasizing that while these two formations or forms are distinct from one another, it is not possible to define one without the other. Once we realize that everything is *collective* (social), everything we state is always connected to what we see, or, more broadly speaking, sense, and vice versa (Bakhtin, [1975] 1981, p. 259; Spinoza, [1677] 1884, pp. 45, 131). In other words, the terms used make little difference once they are considered as functioning in a *diagram* (Deleuze, [1986] 1988a, pp. 34, 38; Foucault, [1975] 1995, p. 171, [1977] 1980a, p. 198), at times referred to as *apparatus*, *dispositive* or *mechanism* (Deleuze, [1989] 1992b; Foucault, [1977] 1980a, p. 194; Jäger and Maier, 2016, p. 113), in what Deleuze

([1986] 1988a, p. 37) and Deleuze and Guattari ([1980] 1987, p. 142) refer to as an *abstract machine*, which acts as a non-unifying immanent cause to the way we make sense of the world, to what kind of *order of things* appears to us. To be clear, it would be tempting to argue that discourse is simply about language, but, as clarified by Foucault ([1976] 1978, p. 27, [1977] 1980a, pp. 197–198), if one examines something in actuality, for example the school investigated in all the articles included in this thesis, it is no longer purposeful to differentiate between the discursive and the non-discursive, except when what one encounters, the non-discursive formations, does not conform with what one expects to encounter, the discursive formations. Therefore, discourse analysis should always be diagrammatic, taking place at the intersection of the formations or forms, between words and things (Buchanan, 2015, pp. 471–473; Guattari, [1992] 1995, p. 23; Guattari and Rolnik, [1986] 2007, p. 186), and in connection with other diagrams (Foucault, 1983, p. 222), as exemplified by Foucault's studies of hospitals, mental hospitals, schools, army barracks, factories, and prisons (Deleuze, [1986] 1988a, pp. 31–35). This focus on reality creation (Jäger and Maier, 2016, p. 115) is central to this thesis and further elaborated in detail in sections 2.4 and 2.5.

Jäger and Maier (2016) refer to this diagrammatic approach to discourse analysis as *dispositive analysis*. It is similar to what Scollon (2008) refers to as mediated discourse analysis (MDA) and as nexus analysis (NA) due to the shared interests in *mediational means* and *materialized discourses*. In MDA the focus is not on words, sentences, texts, images, gestures, sounds, or the like, but on the acts themselves, as they happen, while, at the same time, acknowledging the action that takes place does require them as the mediational means, as the *media*, hence the emphasis on *mediation* (Jones, 2014, pp. 40–41). In other words, the medium cannot be separated from the message or, as McLuhan ([1964] 1994, p. 7) expresses it, the medium is the message. NA is an application of MDA that can take many forms, but it tends to be centered around a *nexus of practice*, a network of linked practices (Scollon, 2001, p. 147), what others have also referred to as a nexus of discourses (Pietikäinen, 2015, p. 207), as a nexus of knowledge (Pietikäinen, Compton and Dlaske, 2015, p. 188) and as a node of intersecting discourses or knowledge networks (Schein, 1997, p. 663, 2009b, p. 820). It typically focuses on *social action* mediated by the *historical bodies* of various social actors, i.e., by their *habitus* (Bourdieu, [1972] 1977, p. 72), the *discourses in place*, i.e., the written or spoken discourses in a specific social setting, and the *interactional order*, the social arrangement of that social setting (Hult, 2017, p. 93; Pan, 2014, pp. 53–54; Wong Scollon and de Saint-Georges, 2012, pp. 71–73). It involves "tracing pathways and trajectories of texts, actions, practices, and objects, of people and communication across time and space and multiple modes" (Scollon, 2008, p. 241). The diagrammatic approach is also similar to another application of MDA known as geosemiotics (Scollon and Wong Scollon,

2003) due to the shared emphasis on the discourses in place, i.e., how discourse, society and space are connected.

Regardless of the term one prefers, discourse analysis, dispositive analysis, MDA, NA, geosemiotics or something else, I agree with Bhatia, Flowerdew, and Jones (2008, p. 231) and Scollon (2008, p. 241) that the goal is never simply about identifying an object of inquiry, what something *is*, and describing it, but rather explaining how it functions, what it *does*, and how it may have come to be the way it appears to us under certain circumstances. I consider studying materialized discourses important for that reason. Moreover, I believe that studying them is particularly important as they can discipline those who encounter them to act in a certain way, regulating their actions and thoughts (Blommaert, 2013, pp. 34–35; Scollon and Wong Scollon, 2003, p. 183). The medium is therefore not only the message but also the massage (McLuhan, [1964] 1994, p. 7; McLuhan and Fiore, [1967] 2008, p. 26). Furthermore, studying them becomes even more important once one addresses how landscape enhances their disciplinary capabilities by granting people an illusory sense of control over their environment, which, in turn, makes people take their presence for granted (Schein, 1997, p. 663), as emphasized in all the articles included in this thesis and further elaborated in section 2.5.

2.2   Society

I agree with Deleuze and Guattari ([1980] 1987, pp. 218–219) who state that in order to understand *society*, rather than relying on mere abstractions, one needs to understand its flows, i.e., people's desires and beliefs. Similarly to Tarde ([1890] 1903, p. 74, [1893] 2012, p. 36) and Voloshinov ([1930] 1973, p. 12), I reject that society has an existence of its own, holding primacy over the individuals, as opposed to being constituted through discourse and power (Foucault, [1977] 1980c, p. 93), as discussed in section 2.1. The underlying problem with stating that society holds primacy over people is not merely that it is deterministic, arguing that the macro level social structures determine the micro level practices that then inevitably reproduce the macro level social structures (Pennycook, 1994, pp. 124–126; Tarde, [1898] 1899, p. 48), but also that it exhibits a circular logic, as such "collective representations presuppose exactly what needs explaining" (Deleuze and Guattari, [1980] 1987, p. 218). In other words, if defined as such, society is merely a statistical fiction, a unicorn (Sapir, [1932] 1999a, pp. 286–287), typically invoked similarly to other abstractions such as culture only to fill in the gaps, when and where there is a deficit of information (Latour, 2010, p. 155), when one runs out of arguments (Spinoza, [1677] 1884, p. 78). Instead, I believe that one should always focus on the people. To be more specific, as explained by Deleuze and Guattari ([1980] 1987, p. 219), one should assess the "molar realm of representations, individual and

collective", how people come to identify themselves as autonomous subjects and as members of groups, and "the molecular realm of beliefs and desires in which the distinction between the social and the individual loses all meaning". Therefore, when seeking to understand how *a* society, such as the Finnish society, its education system or an individual school, works, it is not a matter of assessing it either on macro or micro level, contrasting society and individuals, how the former determines the latter, which, in turn, reproduces the former, but a matter of focusing on the discourses that people participate in as it is the everyday practices that shape a society and its members, as explained by Jäger and Maier (2016, p. 112).

Tarde (1880, pp. 150–151, [1890] 1903, pp. 145–146) defines *desire* (will) and *belief* (judgment) as quanta, what is psychologically quantifiable, and designates them as the *substance* and the *force*, distinct from *sensation*, which, in turn, is only psychologically qualifiable and pertains to sensory experiences (e.g. color and sound) that may well be shared, for example when being a member of a theater audience, but not communicated between people, for example between the members of the theater audience. Tarde ([1890] 1903, pp. xvi, 146) defines desires as fundamental and object oriented, pertaining to "[e]conomic or aesthetic wants", involving what Deleuze and Guattari ([1980] 1987, p. 154) refer to as "a process of production without reference to any exterior agency", whether it is deemed positive or negative, "whether it be a lack that hollows it out or a pleasure that fills it." Simply put, desire is the underlying creative force "'that produces reality' in the guise of new objects of knowledge", i.e., discourses, "for the subject of experience, for which novel concepts are to be invented" (Semetsky, 2009, p. 446). To be clear, desire is not active, conscious, nor lacking. In other words, it is not about what one claims to desire. Instead, it is passive, unconscious, and machinic. It is about what takes place prior to subjects and objects. It is about *desiring-production*, involving *desiring-machines* (Deleuze and Guattari, [1972] 1983), also known as forms or *assemblages* (Deleuze and Guattari, [1980] 1987; Guattari, [1979] 2011) in order to avoid "persistent subjectivist misunderstandings" (Massumi, 1992, p. 82). To be more specific, what Tarde ([1890] 1903) refers to as desire is the non-discursive formation, the form of content, i.e., the *machinic assemblage of bodies or desire* (Deleuze and Guattari, [1980] 1987, p. 219; Tonkonoff, 2017, pp. 100–101), as discussed in section 2.1. In plain terms, desire has to do with what it is that makes people tick, what draws them to do something, regardless of what it is that they want.

In contrast to desires, Tarde ([1890] 1903, p. 146) defines beliefs as pertaining to ideas, "the plastic forces of societies" that organize people into societies according to the agreement or opposition to them, either reinforcing themselves or functioning in opposition to one another. Beliefs can be of any kind but, in general, they tend to be markedly religious or moral, and, by extension, judicial, political, and linguistic (Tarde, [1890] 1903, p. 146). In addition, beliefs tend to exert subtle, if not uncanny

influence over people, operating through the power of persuasion rather than coercion (Tarde, [1890] 1903, p. 146). If pushed to the extreme, strong agreement with beliefs and, conversely, strong opposition to other beliefs can lead to *dogmatism*, holding certain beliefs to be undeniably true, which, in turn, represses desire (Tarde, [1890] 1903, pp. xvi–xix), functioning as its countereffect (Deleuze and Guattari, [1972] 1983, p. 27). To connect this to section 2.1, what Tarde ([1890] 1903) refers to as belief is the discursive formation, the form of expression, i.e., the *collective assemblage of enunciation or semiotization* (Deleuze and Guattari, [1980] 1987, p. 219; Tonkonoff, 2017, pp. 100–101). In plain terms, belief has to do with what people have come to think they want.

These definitions of desire and belief are still somewhat superficial and provide only a static account of these concepts as beliefs also come to shape desires (Tarde, 1880, p. 158; [1890] 1903, p. xvi; Deleuze and Guattari, [1980] 1987, p. 219). It is therefore more apt to state that neither desire nor belief precedes the other. In other words, they are in reciprocal presupposition, one always gripping the other, or, as expressed by Latour (2010, p. 150), striving to possess one another. Therefore, instead of discussing desire and belief in isolation from one another, it is more fruitful to focus on *social relations* as they pertain to both desires and beliefs at the same time (Tarde, [1890] 1903, p. xvi).

To make more sense of desire and belief, as they make little sense on their own, being mere psychological quantities, Tarde ([1890] 1903, pp. 2–3, 145–146) pairs them with two types of *social acts*, *inventions* and *imitations*, which, together, make the underlying desires and beliefs specific, embodying them, making them "real social quantities." Simply put, inventions and imitations are what mark the underlying desires and beliefs, the two forms or aspects of an assemblage. Tracing and analyzing inventions and imitations is what allow us to understand desires and beliefs (Marrero-Guillamón, 2015, p. 242). For Deleuze ([1968] 1994, pp. 207–209, 222), this distinction between invention and imitation pertains to the *virtual* and the *actual*, the virtual being "real without being actual", and the actual being what virtual has become actualized through difference or, to be more specific, the process of differentiation "by which the given is given". To be more specific, inventions are flashes of genius, bringing about something new or improved upon, even if what is new or novel is considered rather minor (Tarde, [1890] 1903, p. 2). These inventions can be anything, including but not limited to various social phenomena pertaining not only to technology, but also to art, language, law, politics, and religion (Tarde, [1890] 1903, p. 2). Imitations pertain to the propagation of inventions, what becomes commonplace (Tarde, [1890] 1903, pp. 2–3). It is, however, worth noting that this propagation of innovations is inherently variable, i.e., prone to variation and open to subsequent innovation, which is why it is apt to refer to it as imitation, rather than as repetition (Barry and Thrift, 2007, p. 517; Tarde, [1890] 1903, p. 7).

To explain this in more contemporary terms, and to connect this to section 2.1, Tarde ([1890] 1903) can be understood as defining the imitation of an invention as a matter of practice, discourse, or interlocution, occurring, as observed, "whenever there is a social relation between two living beings" (p. xiv). To be clear, this does not, however, reduce Tarde's ([1890] 1903) conception of imitation to a mere matter of psychology or inter-psychology as for there to be interlocution between people, they must have interlocuted with other people, who must have interlocuted with other people, *ad infinitum*. Discourse is therefore always a matter of *indirect discourse* or *interdiscourse*, i.e., for there to be a discourse that can be analyzed, there must be other discourses linked to dialogically (Deleuze and Guattari, [1980] 1987, p. 77; Scollon and Wong Scollon, 2003, p. 193), involving what Foucault ([1969 1971] 1972, pp. 158, 191, 288) refers to as the great anonymous murmur, as also mentioned in section 2.1. Therefore, what Tarde ([1890] 1903) calls imitation "has to do not with an individual but with a flow or a wave" (Deleuze and Guattari, [1980] 1987, p. 219).

Tarde ([1890] 1903, p. 94) expands on the flow of imitation by stating that what we say, do and think "are what they are because they are the fittest to satisfy and develop the wants which previous imitation of other inventions had first seeded in us" and "because they were the most consistent with the knowledge acquired by us of other thoughts which were themselves acquired", having been themselves "confirmed by other preliminary ideas or by visual, tactile, and other kinds of impressions which we got by renewing for ourselves certain scientific experiences and observations, after the example of those who first undertook them." To explain this in less abstract terms, we are all copycats as we *pattern* ourselves after others (Sapir, [1932] 1999a, p. 288, [1928] 1999b, pp. 156–159), borrowing not only from "one person or a few" but "from a hundred, a thousand, or ten thousand persons, each of whom is considered under a particular aspect, the elements of thought or action which we subsequently combine" (Tarde, [1890] 1903, p. xxiv). In other words, there is no point of departure, nor arrival, "no terminus from which you set out, none which you arrive at or which you ought to arrive at" (Deleuze and Parnet, [1977] 1987, p. 2) as we are always in the middle of things (Deleuze and Guattari, [1980] 1987). One's existence is marked by a mode of becoming in which "*the living being conserves in itself an activity of permanent individuation*" that occurs internally, in relation to oneself, and, externally, in relation to what is outside oneself, in part but not wholly "*brought about by the individual itself*" (Simondon, [1964] 1992, p. 305). The individual is therefore to be understood as a terminal, a point of connection, as well as an end point of various processes that sustain the person to appear as such, rather than a given starting point (de Freitas and Curinga, 2015, pp. 257–258; Guattari, [1989] 2000, p. 36; Latour et al., 2012, pp. 598, 600). This should not, however, be understood as a total loss of volition but rather as treating freedom

as a matter of contingency. As posited by Tarde ([1890] 1903), "[d]o we not pass by insensible degrees from deliberate volition to almost mechanical habit?" (p. xiii).

It is also worth emphasizing that this does not mean that I consider people to be mere clones of one another. As argued by Voloshinov ([1930] 1973, pp. 12, 88–89), our experience is not individual, "I-experience" nor "self-experience", but shared, "we-experience". This does not, however, mean that our experience is thus mere nebulous herd experience (Voloshinov, [1930] 1973, p. 88). Instead, despite being collective, i.e., shared or social, our experience is differentiated; "[t]he stronger, the more organized, the more differentiated the collective in which an individual orients himself, the more vivid and complex his inner world will be" (Voloshinov, [1930] 1973, p. 88). Therefore, as stated by Tarde ([1890] 1903, p. 84), some come to have more influence over others than others and, consequently, "the very nature and choice of these elementary copies, as well as their combination, expresses and accentuates our original personality" (p. xxiv).

What is particularly interesting and refreshing about Tarde ([1890] 1903, [1893] 2012) is that he defies deeply ingrained attitudes by arguing that social sciences are, in fact, the quantitative sciences par excellence because, for him, everything is a society, a collective, including the cells that our bodies consist of, but unlike natural sciences that must study their objects from afar, often at a considerable distance, the societies investigated in social sciences are what we are embedded in, as aptly summarized by Latour (2010, p. 148). In other words, as everything is social, i.e., a society, including each of us, and as we are always operating as components of societies, we are perfectly situated to study the societies we are part of. Simply put, because all experience is collective (Voloshinov, [1930] 1973, pp. 12, 88), we can understand each other as members of various collectives. Highly importantly, this erases any possibility of employing dualism, approaching the world in terms of "inner and outer worlds", "mind and matter, meaning and substance", subject and object, ideal and material, cognized and operational, emic and etic, as argued by Ingold (1993, p. 154). This erasure of the subject, the individual or the 'I' (St. Pierre, 2017, p. 1082, 2019, p. 8) means anyone can study anything, inasmuch as they know what to look for, inasmuch as they have the knowledge to do so (Barry, 2010, pp. 186, 188; Ingold, 1993, pp. 154, 172), which, in turn, merely requires sharing in the relevant collective experience. This is particularly relevant to this thesis and the articles included in it, as, being a member of the Finnish society, the product of its mainstream system of education, having gone through all levels of education, as well as having the formal credentials to teach in that education system, to produce more people like me, this makes me a perfect fit to scrutinize it.

To summarize how I think societies should be studied, to put all this in less abstract terms, what matters is not what people think they do, but what they do, as assessed by examining what they have done. Moreover, it is not only important to

look at what people do, or, more specifically, are in the habit of doing, but also to identify who gets to influence what it is that they do or are in the habit of doing, which is why agency is a particularly important topic in all the articles included in this thesis. As also argued by Amos (2016), I believe that examining the various patterns of people's behavior is well suited to explaining how a society works as patterns pertain to *tendencies* (Deleuze, [1956] 2004, p. 34), activities that are not individual but collective (Sapir, [1932] 1999a, p. 288, [1928] 1999b, pp. 156–159). This is exactly what I am interested in: what tendencies people have, what are they in the habit of doing, what discourses are they entangled in, as examined from what they have done, as apparent from the materialized discourses in the landscape of the school investigated in the four articles included in this thesis, as opposed to explaining these manifestations as micro level reproductions of macro level social structures that determine them.

2.3   Education

Education should not be confused with educational institutions, such as schools, albeit they do also provide education. As distinguished from one another by Foucault ([1969, 1971] 1972, p. 227), *education* is an instrument for gaining access to any kind of discourse in a society, whereas a *system of education*, such as a school system, is the mode through which discourses are maintained, appropriated, and modified, according to how the society is organized and what powers are vested in it. Moreover, systems of education function to fix people's roles, determining how they are expected to adhere to existing discourses (Foucault, [1969, 1971] 1972, p. 227; Hall, 1996, p. 4).

Educational institutions, such as schools, tend to become *governmentalized*. This means that the power relations within these institutions tend to become regulated and centralized (Foucault, 1983, pp. 218–219, 224). This is the case in Finland, as indicated in the introduction. The purpose of this centralization of power in educational institutions is to produce docile bodies, productive and obedient subjects of the state through discipline (Deleuze and Guattari, [1980] 1987, pp. 75–76; Foucault, [1975] 1995, p. 138, 1983, pp. 218–219; Gramsci, [1949] 1971, pp. 26–27). The exercise of power in educational institutions is therefore best conceived as a matter of conduct, leading people to behave in certain ways, governing them by structuring "the possible field of action of others", rather than as a matter of agreement or consent or as a matter of violence or coercion, even though they may play a role alongside conduct and governance (Foucault, 1983, pp. 220–221). This disciplinary aspect is of particular importance as it pertains to how the existing states of affairs are (re)produced, how certain identities come to be viewed as desirable or proper while others come to be viewed undesirable or improper (Braidotti, 2013, p.

26; de Freitas and Curinga, 2015, p. 261; Tavares, 1996), as demonstrated in existing schoolscape studies, as indicated in the introduction.

Governmentalization of educational institutions tends to lead to the *biunivocalization* of agency, resulting in binary oppositions, forming superordinate/subordinate relationships between the school staff, namely the teachers, and students, the competent members of the society and incompetent members of the society, the adults and the children (Deacon and Parker, 1995, pp. 115–116; Deleuze and Guattari, [1980] 1987, p. 177; Thompson and Cook, 2013). This should not, however, be understood as merely pointing out the obvious, as indicating that teachers and other staff members are largely responsible for the everyday life in these institutions, but rather that they participate in enacting long-term societal projects (Deleuze and Guattari, [1972] 1983, p. 62; Guattari and Rolnik, [1986] 2007, pp. 138–139; Hallinan, 2005, p. 130; Kraftl, 2015, p. 222), often inscribed in legislation and curricula (Apple, [1982] 1995, p. vii; Corson, 1999; pp. 2–3), as investigated in articles II, III and IV. Legislation and curricula pertaining to the Finnish education system will be further assessed in section 4.2.

I approach the school investigated in this thesis as its own miniature world, an embryonic microcosm (Dewey, 1915, p. 15) of the Finnish society, not unlike Benjamin (1999) and Goss (1993, 1999) who investigate arcades and shopping centers as microcosms of capitalism and consumerism in Western societies. My interest lies in these connections between discourse, society, and space, how people come to identify themselves as members of this and/or that society with and through space (Del Casino, 2009, p. 13), as shaped by the materialized discourses that surround them in the school landscape, as discussed in the following sections, sections 2.4 and 2.5.

2.4   Space

Crang and Thrift (2000, p. 1) argue that *space* is everywhere in contemporary thought. They state that it is "an all-purpose nostrum to be applied whenever things look sticky", "an invocation which suggests that the writer is right on without … having to give too much away" and thus functions as a highly flexible explanation, "a term ready and waiting in the wings to perform that song-and-dance act one more time" (Crang and Thrift, 2000, p. 1). However, they specify that it is not that "space means very different things" in different contexts, but rather that it is such a convenient concept that it has been emptied of its meanings (Crang and Thrift, 2000, p. 1), a mere hollow abstraction that is applied for its supposed explanatory value. Simply put, like with many other abstractions, the problem with space is that it is often used to explain something without first explaining what it is, what it does and how it came to be (Deleuze and Parnet, [1977] 1987, p. vii; James, 1909, pp. 217–

218; Whitehead, [1929] 1979, p. 20). It is often simply assumed that what is meant by space is clear to everyone, which is why such use tends to remain uncontested (Massey, 1992, p. 66).

Lefebvre ([1974] 1991, pp. 2–4, [1986] 2003, p. 206) argues that space has become a mere buzzword utilized by scholars of different disciplines for different purposes, tailored to suit the relevant methodological premises, case by case. The problem with this is that it is rarely explained what is meant by space, and how it is connected to everyday life, how it is relevant, which results in what Lefebvre ([1974] 1991, pp. 3–5) calls a "yawning gap" between the two, how it is presented as mental space and how it functions in practice. Lefebvre ([1974] 1991, p. 4) argues that this gap or split is a (by)product of the emphasis put on the Cartesian *cogito*, the abstract rational subject. He specifies that this has not always been the case, but contemporarily space has been hollowed out of its meaning to such an extent that it is, at best, understood as a mere empty zone, a realm of extension (*res extensa*), or a container that has no effect upon the content, echoing a Euclidian-Cartesian-Newtonian definition of space as absolute, optical, and geometrical (Lefebvre, [1974] 1991, pp. 1–6, [1986] 2003, p. 206).

Extending Lefebvre's criticism, Massey (2005, p. 4) notes that treating space as absolute, optical, or geometrical reduces our understanding of it to a mere surface that the abstract rational subject traverses, making discoveries, as if the world were immobile, simply waiting for the subject to discover and make record of it, thus reinforcing the Cartesian cogito. This treatment of space, common in contemporary thought, claims to be innocent, apolitical, but it is, in fact, the exact opposite because it immobilizes and dehistoricizes everything, as remarked by Massey (2005, p. 4). Simply put, this static understanding of space involves forgetting and not, no longer, paying attention to the conditions of existence, to the apparition of both subjects and objects, i.e., whole of reality. Everything seems to be simply given and "all very obvious", as aptly summarized by Massey (2005, p. 4). This treatment of space becomes even more problematic as contemporarily *time* is presented as linear and progressive, involving unilinear or teleological progression towards some universal goal or a purpose, like a force of nature, as elaborated by Massey (2005, pp. 4–5). On one hand, *place*, typically understood as meaning space that is parceled or divided into something local, appears as juxtaposed with how space and time are understood contemporarily because it involves multiple trajectories instead of one universal trajectory and thus seeks to resist any absolutism and universality (Massey, 2005, p. 5). On the other hand, it ends up essentializing everything that is deemed local, treating it all as given and thus creating territorial parochialisms, such as nationalisms (Massey, 2005, pp. 5–6). This process of *dividuality* (Deleuze, [1990] 1992, p. 5) emphasized by Massey (2005, pp. 5–6) is highly relevant to the discussion of landscape in this thesis because it is tied to the way people come to

identify themselves as this and/or that through landscape, as emphasized in all of the articles and further discussed in the following section, section 2.5.

Echoing Lefebvre's and Massey's criticisms, Thurlow (2019, p. 99) indicates that this issue concerns a large proportion of LLS as linguistic landscape scholars tend to sideline the issue, taking space for granted, effectively treating it as a mere container or a surface. While there are exceptions (cf. Jaworski and Thurlow, 2010; Jaworski and Yeung, 2010; Leeman and Modan, 2009; Moore, 2019), this issue is typically sidelined in LLS, as also noted by Blommaert (2013, p. 32) and Mac Giolla Chríost, (2020, p. 77). It is, however, also worth noting that this issue is by no means unique to linguistic landscape scholars as much of linguistics and sociolinguistics tends to be affected by it, as noted by de Saint-Georges (2004, p. 71) and Karlander (2021, pp. 179, 189). This is the reason why I draw heavily from geography and why I consider myself indebted to the work of geographers, as well as philosophers and sociologists, as indicated in section 2 and evident in all the articles included in this thesis.

I subscribe to Lefebvre's ([1974] 1991) definition of space as socially produced, as both the result of production and the precondition of production. Space is therefore never merely a given, nor a closed system in which everything in it is also given, having an existence independent of everything else, but instead always in the making, in the process of becoming, as argued by Massey (2005, pp. 9–11). In other words, space is a *multiplicity* defined in terms of its relations and the relata, which, of course, are not pre-established but always in the making (Malpas, 2012, p. 239; Massey, 2005, pp. 10–11).

As space should be uprooted from being trapped in representation, as argued by Massey (2005, p. 13), I opt for a discursive take (Shields, 1999, p. 161) of Lefebvre's ([1974] 1991, pp. 38–39) interconnected spatial triad, consisting of *spatial practice*, how physical space is used, perceived and practiced, *discourse on space*, how space is conceptualized and depicted, both artistically and scientifically, and *discourse of space*, how the various discourses overlay physical space, the world of practice. To explain this in Foucauldian parlance, space can be understood as pertaining to non-discursive formations and discursive formations which link with one another diagrammatically (Foucault, [1969, 1971] 1972; Deleuze, [1986] 1988a). In Deleuzo-Guattarian parlance, space can be understood as assembled or arranged according to forms of content (machinic assemblages of bodies or desire) and forms of expression (collective assemblages of enunciation or semiotization), as effectuated by the relevant abstract machines (Deleuze and Guattari, [1980] 1987; Guattari, [1979] 2011), by what one might call distinctive plans (Buchanan, 2015, p. 385).

In summary, when we engage with space we deal with *corporeal bodies,* physical or material states of affairs, intermingling of bodies, how things are, or, rather, how they appear to us as extensional, which are simultaneously overlaid by

incorporeal events, phantasms, immanent surface effects that appear on the surface of bodies, intervening with them, transforming our understanding of them, but never altering them physically (Buchanan, 2015, p. 390; Deleuze, [1969] 1990, pp. 4–8; Deleuze and Guattari, [1980] 1987, pp. 80–81, 86; Foucault, 1971, pp. 22–24, [1970] 1977b, pp. 174–175). For example, when a hijacker declares a hijacking, by verbally expressing it, while brandishing a gun, a *speech act* (Austin, 1962) takes place (Deleuze and Guattari, [1980] 1987, p. 81). Nothing changes physically. The passengers, the cabin crew and the pilots all remain the same physically, but they are instantaneously transformed into hostages, just as the plane is transformed from a transport into a mobile prison (Deleuze and Guattari, [1980] 1987, p. 81). In this example, it is necessary that we have a shared understanding of what qualifies as a hijacker as otherwise the hijacking is nonsensical. Importantly, this is not only about the act of declaring a hijacking but also about having a gun to support that act, for it to have effect. Then again, we must also have a shared understanding of what qualifies as a gun and what is it made of, which, in turn, leads us to further qualifications, which is why all discourse is indirect discourse or interdiscourse, as indicated in section 2.2.

2.5   Landscape

Landscape is a concept linked to space, but it is not space itself, nor a fraction of it (Ronai, 1976, pp. 126–127). To be clear, it does pertain to, on one hand, corporeal bodies, and, on the other hand, incorporeal events or surface effects, but it is not space itself. Instead, following the discussion of space in section 2.4, I understand landscape as a dominant discourse of space (Lefebvre, [1974] 1991; Jaworski and Thurlow, 2010, pp. 7–8; Shields, 1999), as a diagram (Foucault, [1969, 1971] 1972; Deleuze, [1986] 1988a) or an abstract machine of space (Deleuze and Guattari, [1980] 1987; Guattari, [1979] 2011). Simply put, it is a dominant mode of space (Malpas, 2012, p. 226), a specific way of how we have come to understand space and engage with it visually, largely at the expense of other senses. Therefore, what one may call *a* landscape is not a given or a pre-existing material entity. It is a discourse of space, an immanent surface effect of the relevant diagram or abstract machine. These definitions underpin all the articles included in this thesis.

Summarizing Deleuze and Guattari ([1980] 1987) and Guattari ([1979] 2011), landscape or, to be more specific, *landscapity* involves a diagram or an abstract machine that functions to define the order of things, how people come to *see* the world as this or that landscape. It sets limits to what can be said and done at any given moment regarding one's surroundings. It is, however, a mere projection, a surface effect, an incorporeal event, that takes shape during one's engagement with one's surroundings that consists of corporeal bodies. In other words, it acts as the

immanent cause to the way we come to see the world, how it assembles or arranges in front of our eyes. It "plays a piloting role", never functioning "to represent, even something real, but rather constructs a real that is yet to come, a new type of reality" (Deleuze and Guattari, [1980] 1987, p. 142). To be clear, it is never a mere representation, "a code to be broken" or an "illusion to be dispelled", but a performance in itself, a doing, a matter of practice, of discourse (Dewsbury et al., 2002, p. 438).

To be less abstract, landscape functions as a model of how our surroundings should look according to existing dominant social categories (Duncan, 1989, p. 186) under a certain *regime of truth* (Foucault, [1977] 1980b, p. 131, [1997] 2003, p. 164). As landscape is a visual concept, it is typically defined as a *gaze* (Ronai, 1976, 1977) or as a *way of seeing* (Cosgrove, 1985) the world. Summarizing Bogue (2003, pp. 97–98), landscape can be understood as a power function that distances people from their surroundings, severing them from the immediacy of their environment, rendering reality seemingly external to them, as if one simply occupied a place in space for the purpose of observation. The observer is thus seen as being in control of the world, treating it as his or her property, as argued by Bogue (2003, p. 97) and Cosgrove (1985, p. 46). It is possible illustrate this by drawing a pyramid, as presented in figures 1 and 2:
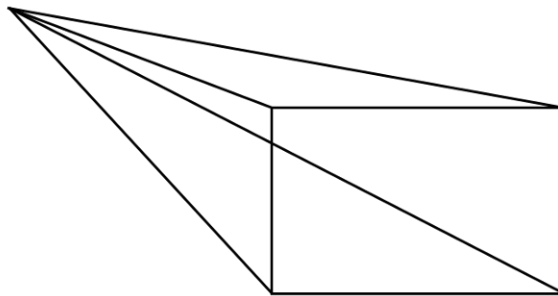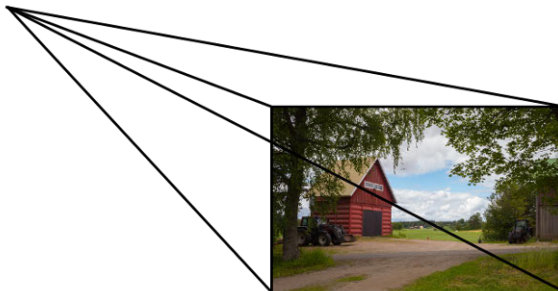

Figure 1: Pyramid of vision

Figure 2: Landscape in a pyramid of vision

This can be simplified by flattening the pyramid into a triangle, as presented in figure 3:

Figure 3: Triangle of vision

However, what is presented in figures 1 to 3 offers only a partial account, a common misconception tied to a dominant visual regime, also known as Cartesian perspectivalism (Jay, 1988, pp. 3–4). Situated at the apex of the pyramid presented in figures 1 and 2, at the point of convergence, one's eye is not merely observing the world autonomously (Berger, 1972, p. 9). Instead of looking at things, focusing on them one by one, in isolation, one is always also looking at looking itself, i.e., the relation between the observer and the observed; "vision is continually active, continually moving, continually holding things in a circle around itself, constituting what is present to us as we are" (Berger, 1972, p. 9). The apparent sense of ownership and control is therefore only a partial account of how gaze functions as it is always reciprocal, conditioned and conditioning (Benjamin, [1977] 2011, p. 153; Berger, 1972, p. 9; Deleuze and Guattari, [1980] 1987, p. 171; Lacan, [1973] 1977, p. 84; Merleau-Ponty, [1961] 2007, p. 359; Sartre, [1943] 1992, p. 258). Lacan ([1973] 1977, pp. 106–108) exemplifies how this functions by superimposing two triangles, divided by an additional line in the middle, by what he calls the image screen, the locus of mediation that re-establishes the world into distinct things and thus substantially reduces the complexity of reality. This is presented in figure 4:

Figure 4: Superimposed triangles of vision

On each end of the superimposed triangle in figure 4 the point marks either the gaze or the subject of representation, depending on from whose viewpoint this is assessed (Lacan, [1973] 1977, pp. 105–106). Two smaller triangles appear within the two superimposed triangl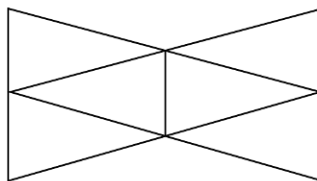es, emanating from the same points but meeting in the middle. This is how, for Lacan ([1973] 1977), the image screen rearranges the visual order for the observer prior to observation. Therefore, as explained by Lacan ([1973] 1977), "in the scopic field, the gaze is outside, I am looked at, that is to say, I am a picture"; "I am *photo-graphed*" (p. 106).

This is highly relevant to landscape because it means that the observer not only observes the world and structures it but is also observed by it and structured by it (Deleuze and Guattari, [1980] 1987, p. 175). This results in an illusion of control over one's surroundings (Cosgrove, 1985, p. 85; Ronai, 1977, pp. 80–81) as the parameters for the structuration of one's surroundings are effectively fed to the observer prior to conscious observation, occurring at the subconscious level of perception (Lacan, [1973] 1977, p. 107). It is also for this reason, for this visual reciprocity (Delaney and Rannila, 2020), that gaze comes to be understood as masculine in its possessiveness; "[m]en look at women" whereas "[w]omen watch themselves being looked at" (Berger, 1972, p. 47); "it is man who creates for himself the image of woman, and woman forms herself according to this image" (Nietzsche, [1887] 1974, p. 126). In short, what people see is therefore actually a projection of themselves, what they desire, a mere fantasy (Lacan, [1973] 1977, pp. 101–112; see also DeLyser, 2003), and how they see, whatever it is that they desire to see, is constructed, assembled or arranged according to the parameters set by the relevant diagram or abstract machine (Deleuze and Guattari, [1972] 1983, pp. 64, 142, [1980] 1987, pp. 168, 175).

Landscape should be understood as a process through which identities are formed in societies. It functions principally in two ways. On one hand, it functions as a matter of *propriety*, informing what it is like to be someone, what is *within* (Matless, [1998] 2016; Mitchell, [1994] 2002b; Rose, 2006). On the other hand, it functions as a matter of *property*, what it is like to own something, to be in control of what is *without* (Cosgrove, 1985; Ronai, 1977). When the two functions are combined, landscape can be understood as the (sur)face of the land or nation (Deleuze and Guattari, [1980] 1987, p. 533; Jackson, 1980, p. 5; Montaigne, 1889, p. 187; Ronai, 1976, pp. 154–156). The task of the researcher is to analyze its traits, the lines and wrinkles on its (sur)face (Deleuze and Guattari, [1980] 1987, p. 170).

Landscape can function to (re)produce identities, including but not limited to socioeconomic class, ethnicity, gender, nationality, and religion. Moreover, these identities are by no means mutually exclusive. In fact, in many cases they are intertwined. For example, what is considered proper Englishness is tied to certain socioeconomic, gender and ethnic identities, to wealth, masculinity, and whiteness

(cf. Burden, 2006; Darby 2000; Helsinger, [1994] 2002). Therefore, as argued by Mitchell ([1994] 2002a, p. 5, [1994] 2002b, pp. 1–2), once one understands how landscape functions, how it comes to being through the diagram or the abstract machine, it is possible utilize it (Foucault, [1977] 1980a, pp. 195–196) as a medium of discipline (Foucault, [1975] 1995) and social control (Deleuze, [1990] 1992a) by setting the parameters, the frames of reference, for self-identification with and through landscape (Deleuze and Guattari, [1980] 1987, pp. 176–177; Guattari, [1979] 2011, p. 89; Guattari and Rolnik, [1986] 2007, p. 56).

The formation of one's identity through landscape is particularly problematic because it is largely involuntary. People do not identify themselves with landscape because they choose to do so or because they have to do so but because they desire to do so. As explained by Rose (2006, p. 544) landscape is desirable to people because "[i]t is the dream of a world that is explainable and accountable, a dream where we know who we are and what kind of world we belong to", the dream "of a stable, knowable life – a life that is blind to immanence, impervious to movement, and invested in with certitude." People are tempted by what Mitchell ([1994] 2002a, p. 10) refers to as "the 'dreamwork' of imperialism", by what Rolnik calls a "facile dream", an "illusion that life can be 'resolved' or 'governed' under the auspices of consciousness", "that everything works out in the end" (Guattari and Rolnik, [1986] 2007, p. 196). It is worth noting that it is not any current predicament that makes people turn to the imagined comforts of the past, but rather the uncertainty of future, what may go wrong, as noted by Lowenthal (1975, p. 1). People are terrified of change. As specified by Jameson (1991), people are not actually nostalgic for the past, but for the present, fearing that the present states of affairs may change unpredictably if they are not vigilant. In other words, summarizing Cosgrove (2006), Lowenthal (1975), Rose (2006) and Williams (1973), landscape is desirable to people because it offers them dreams of presence, a reassuring foundation mixed with nostalgia, conservative sentimentality, and aesthetic pleasure.

It is worth emphasizing that, as noted by Mitchell (2002c, p. vii), landscape is a particularly effective medium of *normalization* because it "exerts a subtle power over people, eliciting a broad range of emotions and meanings that may be difficult to specify." Conversely, its power is so weak, so indirect, so gradual, and so granular that, unlike the power exercised by entities such as "armies, police forces, governments, and corporations", its influence is particularly hard to notice (Mitchell, 2002c, p. vii). Furthermore, landscape is indeterminate to the point of redundancy as it draws people to look at nothing, except looking at looking itself, which, in turn, results in people ignoring all the particulars that surround them, taking their presence for granted, as parts of a whole, a gestalt, which is, nonetheless, irreducible to them (Mitchell, 2002c, p. vii–viii). It is this seductive and indeterminate aspect of landscape, this duplicity that dissolves or conceals the exercises of power (Braidotti,

2011, p. 4; Daniels, 1989, p. 196; Guattari, [1979] 2011, p. 87), often overlooked, if not ignored in LLS (Mac Giolla Chríost, 2020, p. 77; Nash, 2016; Thurlow, 2019, pp. 99, 102), including schoolscape studies, that makes it particularly important for my thesis. Moreover, it is for this very reason that I am interested in the items found in the landscape. This aspect will be further discussed in section 3.2.1 as it focuses on the units of analysis.

But why would one study various practices or discourses, what it is that people do in their everyday life, by examining everyday surroundings and their features? Why not observe and/or gather information from people whose surroundings one is investigating? There are two primary reasons for that. Firstly, gathering information from people about their surroundings is problematic as for the many landscape simply *is* and thus their engagement with their surroundings tends to be limited and uncritical (Lewis, 1979, p. 11; Ronai, 1976, p. 127). As argued by Cronin (2006, p. 625), people do not simply move around, actively engaging with the world, seeking to decode messages presented to them in their surroundings. Instead, people's engagement with their surroundings is rather unconscious and habitual, inattentive, if not blasé, which is something that, for example, advertisers seek to take advantage of, not by appearing conspicuous, purposely standing out in the landscape, as that may invite resistance, but by blending in with the landscape, attuning to it by becoming part of people's everyday life (Cronin, 2006, pp. 623–627). It is worth emphasizing that laypeople and experts do observe the world differently (Dupont, Antrop and van Eetvelde, 2015; Ingold, 1993, p. 153). Following Bourdieu ([1972] 1977, p. 164), by involving people one would be asking them to do the unthinkable, to go beyond their *sense of limits*, their *sense of reality*. It would risk projecting one's own sense of limits, one's own sense of reality on them, thus producing expert accounts masquerading as non-expert accounts. To be more specific, it would risk involving forced choice (Deleuze, [1973] 2000, pp. 96–97; Deleuze and Parnet, [1977] 1987, pp. 19–20), imposing the subject position of the researcher upon others by inverting statements into questions and thus making it appear as if the statements originated in the people who answer the questions (Lecercle, 1987, pp. 28–30; St. Pierre, 2011 p. 51). In my own experience, it is very hard to involve people as the research setting prompts people to be very conscious about their engagement with their surroundings and pay attention to various particulars, which is not how people behave in everyday life. The goal-orientedness of a research setting alters whether and how people pay attention to something (Leimgruber, Vingron and Titone, 2020, p. 20; Rayner et al., 2009, p. 225). Moreover, as aptly expressed by Ingold (2014), "there can be no observation without participation" (p. 387). The presence of a researcher is enough to make people act unlike they would otherwise. This problem, commonly known as the *observer's paradox* (Labov, 1972, p. 209), involves "a temporal distortion that contrives to render the aftermath of our meetings with people

as their anterior condition" (Ingold, 2014, p. 386). Moreover, it reinforces the idea of human intentionality and exceptionalism" (de Freitas, 2017, p. 28).

Secondly, as expressed by Lewis (1979, p. 12), as "landscape is our unwitting autobiography, reflecting our tastes, our values, our aspirations, and even our fears, in tangible, visible form", it is a record of our actions that "is liable to be more truthful than most autobiographies because", in this way, "we are less self-conscious about how we describe ourselves." This is particularly relevant to assessing vested interests, which people might not be willing discuss with researchers. As further elaborated by Lewis (1979, p. 12), "[a]ll our cultural warts and blemishes are there, and our glories, too; but above all, our ordinary day to day qualities are exhibited for anybody who wants to find them and knows how to look for them." In other words, assessing our surroundings and the particulars in our surroundings, i.e., the landscape, what appears to us as the visual form of our surroundings, not only allows the researcher to address issues that people might be unwilling to discuss, but it also allows the researcher to address those issues proportionally. Of course, none of this prohibits involving people. If one does, however, involve people, the problem is that our surroundings are unlike biographies; they are not produced as cohesive units, nor are they meant to be read, as noted by Lewis (1979, p. 12). They can be read, i.e., assessed, but reading them is a difficult skill to whet due to the conceptual complexity involved and the lack of coherence in what one is assessing. I spent years coming to terms with landscape as a concept, as evident from the sheer depth of the discussion in this thesis, and I dedicate a great deal of my time to understanding the various particulars that come to inform the totality that I am dealing with. I do not speak for others but, to me, it seems outlandish to expect that people have the required expertise to do this or that they are at liberty to invest their time to learn to do that.

It should be noted that, despite appearing as a totality, landscape cannot be simply defined by itemizing its parts, by listing all the items that are in a certain delimited area, as noted by Tuan (1979, p. 89). According to Ingold (1993, p. 172), Meinig (1992, p. 16) and Tuan (1979, pp. 89–90, 93), the parts do, however, function as subsidiary clues to a totality, the ordering of reality known as landscape. Furthermore, it is worth emphasizing that the unity that they inform is never based on a pre-existing whole or a totality (Blanchot, [1969] 1993, p. 358; Deleuze, [1973] 2000, pp. 111–115, 123; Deleuze and Guattari, [1972] 1983, p. 42). Instead, they function in unison, as parts of a totality, but their unity is "*of* all of these particular parts" (Deleuze and Guattari, [1972] 1983, p. 42). The unity of landscape is therefore to be understood as a multiplicity, informed by its parts but never reducible to them, nor to the totality they inform as it is not unchanging (Deleuze, [1973] 2000, p. 163; Deleuze and Guattari, [1972] 1983, p. 42), despite the stable appearance (Bender, 2002; Massey, 2006). Nevertheless, be as it may, landscape cannot be assessed

without examining its features (Guattari, [1979] 2011, p. 78; Ingold, 1993, p. 172). This is my approach to the study of landscapes, which will be further discussed in section 3.2.1.

In summary, I consider landscape a central concept in this thesis because it explains how and why various materialized discourses come to be taken for granted in everyday life, as the natural order of things, which, in turn, enhances their disciplinary capabilities (Schein, 1997, p. 663). This emphasis on landscape is in stark contrast with most LLS, which, while increasingly addressing space and spatiality, still often treat landscape as a given, as the content of space, as an entity that can be situated in space, a place waiting to be discovered (cf. Anfinson, 2020), as identified by Mac Giolla Chríost (2020, p. 77), Nash (2016) and Thurlow (2019, pp. 99, 102). It is in this sense that my I associate my own work more with the work of the proponents of the textual or discursive tradition of geographic landscape studies (cf. Barnes and Duncan, 1992; Duncan, 1990; Duncan and Duncan, 1988, 2004; Duncan and Ley, 1993; Lewis 1979; Ronai, 1976, 1977; Samuels, 1979; Schein, 1997, 2003, 2009a, 2009b, 2018; Yoon, 2020) who typically employ post-structuralist approaches to landscape than with the work of practitioners of LLS, despite my shared interest in language with LLS practitioners.

3   Materials and methods

My own approach to studying societies is markedly quantitative, despite it being virtually unheard of to approach landscape quantitatively in geographic landscape studies, as well as largely frowned upon among contemporary LLS practitioners (cf. Weber and Horner, 2012, p. 179). Among the LLS scholars, I agree with Barni and Bagna (2015 p. 14) who opt for a more balanced view on the issue and argue that while quantitative approaches certainly have their limitations, as explicitly addressed in article I, they are, nonetheless, legitimate, inasmuch as the tools are apt for the purpose of the study, as noted in section 2. If one wishes to address patterns, i.e., tendencies pertaining to people's engagement with discourses or, more simply put, their systematic practices, it is arguably only fitting to opt for a quantitative approach, as also discussed in section 2.2.

Following Deleuze and Guattari ([1980] 1987, p. 219), I consider statistics to be particularly apt in assessing the actualization of the virtual, the desires and beliefs, as conducted through the examination of what has been actualized, the various infinitesimal imitations, counter-imitations or oppositions and inventions. Similarly to Tarde ([1890] 1903, pp. 109–111), I utilize statistics to measure these desires and beliefs, what it is that people do or are in the habit of doing and, more importantly, what they think they are doing or think they should be doing, as manifested in the elusive quantities of acts and/or products that resemble one another, in specific contexts. In more contemporary parlance, this involves utilizing statistics to examine discourses, the systematic practices which form the objects, the materialized discourses, by assessing various ensembles of the objects, the materialized discourses, quantitatively. Statistics is, however, merely a means to an end, a useful tool in assessing what people are in the habit of doing through examining what they have done (Didier, 2010, p. 165; Tarde, [1890] 1903, p. 110).

The purpose of this application of statistics to examine societies is twofold (Tarde, [1890] 1903, p. 111). Firstly, the task is principally as simple as assessing the prevalence of imitation of a certain invention in a specific spatio-temporal context. Secondly, the task extends to demonstrating the potential positive and/or negative effects of the imitation of a certain invention in a specific spatio-temporal

context. Of course, this approach does not address the *intensity* of the underlying desires and beliefs, as quantification deals only with the propagation of certain phenomena, the expansion of the imitation of some prior inventions, nor does it specify to whom the effects of imitation of an invention are positive or negative (Tarde, [1890] 1903, pp. 106, 111–112). In other words, quantitative approaches work well in measuring *extensity*, how common something is, but not *intensity*, how important something is to people.

Likening quantification with the practice of archaeology, Tarde ([1890] 1903, p. 112) exemplifies the purpose of statistics with creating precise and complete inventories of items, such as common household items. I agree with him on how this would "give us an excellent photograph of our social condition" (Tarde, [1890] 1903, p. 112). This census of items is exactly what I have sought to achieve in this thesis, similarly to what is done in quantitative studies in LLS (Amos, 2016, 2019; Amos and Soukup 2020; Blackwood, 2015; Hong, 2020; Lyons, 2020; Lyons and Rodríguez-Ordóñez, 2017), as well as in quantitative schoolscape studies (Amara, 2018; Bellinzona, 2018; Gorter and Cenoz, 2015), despite the contrary claims made by many others who argue that studying society cannot be done properly through quantification, as opposed to nuanced and context specific interpretative ethnography that includes locals, as juxtaposed by, for example, Weber and Horner (2012, p. 179). Moreover, as discourses are not about an individual act, will or work, but about regularity or systematicity, it is only apt to assess them in terms of recurrence, as manifested in a large number of individual works (Bourdieu et al., 1990; Bourdieu and Wacquant, 1992, p. 227; Foucault, 1977a, pp. 199–200). What may at first appear to be about quality is, in fact, about quantity (Latour, 2010, pp. 149, 156). In other words, it would appear that there is a certain quality to quantity, as noted by Lyons (2020, p. 31) and Schein (1997, p. 663). Tarde might not have been able to achieve a census of items, but the advances made in digital technology since his time have made it possible, in many ways going even beyond what he could dream of, as elaborated by Barry and Thrift (2007, p. 517), de Freitas (2016, pp. 230–231, 2017, pp. 35–37) and Latour (2010, pp. 159–161).

I rely on statistics as my primary focus is on imitation rather than on invention, on quantity rather than quality. I must, however, take inventions into account and it is highly important that I do so. These approaches are by no means mutually exclusive, as also noted by Barni and Bagna (2015, p. 14). In other words, to study how commonplace or relevant something has become in a society, I first need to be aware of its existence, to know what to look for (Barry, 2010, pp. 186, 188; Ingold, 1993, p. 172). To explain this in Foucauldian terms, to understand the propagation of discourses and their materialization in our surroundings, I need to be familiar with them. Simply put, I need to be both qualitative and quantitative. I have therefore opted to also investigate the relevant background information in this thesis, what

Schein (2010, pp. 223, 226–30) refers to as archives, the various texts that are considered legitimate in a society, including but not limited to judicial, literary, religious, and scientific texts (Foucault, [1969, 1971] 1972, pp. 220–221). The relevant background information can be found in section 4.

Summarizing Tarde ([1890] 1903, pp. 105–106), it is also worth noting that both qualitative and quantitative approaches are not without their limitations. Any qualitative approach is crippled by its lack of comprehensiveness. A qualitative approach is, however, better at illustrating specific conditions than any quantitative approach. In contrast, quantitative approaches suffer from a certain illusory quality of comprehensiveness. They rely on counting instances of various phenomena, but they are poor in weighing the importance of those phenomena, as already noted. As elaborated by Tarde ([1890] 1903, p. 106), participation in some practice may remain the same over time but the interest in that practice may still be on the decline. For example, church attendance may remain the same over time, yet faith, devotion or fervor may well be on the decline (Tarde, [1890] 1903, p. 106). This topic of advantages and disadvantages, why it is that I consider quantitative approaches to be apt for studying societies through landscapes, forms the core of article I. Moreover, it is worth noting that articles II, III and IV all contain qualitative assessment of de jure and de facto discourses pertaining to language and education and therefore my work can also be understood as qualitative, albeit to a limited extent.

It was my intent to go beyond what has been achieved in prior quantitative LLS (cf. Lyons, 2020). I intended to improve the potential of the statistical analysis presented in articles II, III and IV by utilizing correspondence analysis (cf. Beh and Lombardo, 2014; Benzécri, 1992; Greenacre, [1993] 2017). I consider it a particularly useful technique as the data is presented in a way that is easy to comprehend, allowing one to think in terms of relation (Bourdieu and Wacquant, 1992, p. 96; Sallaz, 2018, pp. 493–494). However, it was not utilized in the articles due to editorial decisions and limitations of scope.

In summary, my approach involves a large number of items and subsequently examining them in aggregation with one or more variables in order to assess the materialization of discourses in the landscape. This section is dedicated to examining the data, where and how it was gathered and annotated, and subsequently analyzed. The method of analysis is a form of *content analysis*. In short, it can be conducted on anything deemed to be meaningful (Krippendorff, [1980] 2018, pp. 24–25), conveying a *sense* (Deleuze, [1969] 1990) or a *purport* (Hjelmslev, [1943] 1953), not only texts, i.e., written materials, but also "works of art, images, maps, sounds, signs, symbols, and even numerical records" to make replicable and valid inferences from them.

3.1   Content Analysis

There are different definitions of content analysis. Krippendorff ([1980] 2018, pp. 25–28) lists three types of definitions. The first type involves a very restrictive definition that insists that the meaningful matter that one investigates is the content (cf. Berelson, 1952; Gerbner, 1985; Shapiro and Markoff, 1997). The matter is treated as containing an inherent objective meaning that can be extracted from it and then described by the analyst. If there is disagreement between descriptions regarding the same matter, the content is defined as what is considered common between the different accounts. The second type relies on an inverse assumption that the content is defined by the source of the meaningful matter under investigation, that the originator encodes a message that can be decoded by the analyst by either contacting the originator and/or the intended recipient and asking for clarification, which is the ideal case, or, less ideally, by inferring the content if the originator and/or the intended recipient are not accessible to the analyst (cf. Holsti, 1969). The matter is thus treated as containing a subjective meaning that its originator and, by extension, the intended recipient know. The third type treats the content as emerging in the process of engaging with the meaningful matter relative to its specific context. The analyst approaches the matter as meaningful in general, but not treating it as a simple container of content, nor privileging its originator and/or intended recipient. It is, perhaps, a misnomer to call this third type content analysis, considering that what one analyzes is not simply *content* contained in a certain *expression*, in something or someone, waiting to be discovered and extracted from it or from that person. In my view, this type of analysis is, in fact, discourse analysis or dispositive analysis, as defined in section 2.1. It could also be viewed as pragmatics (Deleuze, [1973] 2000, pp. 26–38; Deleuze and Guattari, [1980] 1987, pp. 76–79), in the sense that while it does deal with content and expression, it is really about sense (Deleuze, [1969] 1990) or purport (Hjelmslev, [1943] 1953), as indicated in section 3 and further elaborated in section 3.2.1. The method is, nonetheless, known as content analysis and I have therefore opted to refer to it as such.

I agree with Krippendorff's ([1980] 2018) third type of definition of content analysis as it is in line with my own views, as elaborated in the previous sections of this thesis, and apply it in the articles included in this thesis. Krippendorff ([1980] 2018, pp. 27–30) specifies the third type of content analysis that he subscribes to by listing six features that pertain to meaningful matter. Firstly, meaningful matter does not contain an objective or reader-independent meaning and, secondly, such meaning is not waiting to be found, identified, or uncovered by an analyst. Thirdly, while there is no single correct objective meaning, nor a subjective meaning that can be deciphered based on the intention of the author (cf. Barthes, [1967] 1977; Deleuze, [1973] 2000; Foucault, [1969] 1988; Derrida, [1980] 1987, 1988), there is no necessity to ground the analysis on intersubjective agreement or consensus. In fact,

it is arguable that there is no consensus, no public opinion that exists, as provocatively argued by Bourdieu ([1984] 1993). Moreover, it would be impossible to conduct critical analysis if one had to base the assessment of meaningful matter on what is universally agreed by everyone. As similarly noted by Bourdieu ([1984] 1993, p. 149), such requirement would be based on false premises. It would assume that everyone not only can, but also must have an opinion about the matter and that everyone's opinion is of equal value. This does not, however, mean that the views of others do not matter, but rather that they matter *in research* only inasmuch as they help in providing answers to the problems posed by the analyst, as noted in section 2. Fourthly, as also argued by Blanchot ([1969] 1993, p. xii) and Deleuze and Guattari ([1980] 1987, p. 75), meaningful matter is not merely informational, nor communicational. It does not function to neutrally relay information from one person to another. Instead, it should be understood as consisting of speech acts (Austin, 1962), *order-words* (Deleuze and Guattari, [1980] 1987) or *slogans* (Lenin, [1917] 1964) that carry *illocutionary* force, resulting in *perlocutionary* effects, immanent incorporeal events or transformations that do not alter the bodies but how people react in relation to them, such as invoking feelings or causing people act in certain ways, as exemplified in section 2.4. In other words, one should not focus on what the meaningful matter *is*, what it consists of, as it is a given that it must always consist of something, but rather on what it *does*, what it is capable of doing, what kinds of effects it can have on people. Therefore, for me, examining agency, namely who is responsible for the presence of a certain item, is particularly important. It helps us to understand not only people's positions in society, but also who gets to have a say, who gets to potentially influence others by what they say (Foucault, [1969, 1971] 1972, pp. 50–51; St. Pierre, 2000, p. 503). Fifthly, while there is virtually an infinite number of interpretations of the same meaningful matter, the multiplicity of meanings is always bounded by the actual context it appears in, which limits the number of interpretations considerably. The purpose is not to assess what the matter truly means but whether it makes sense in a certain context and whether it is relevant to answering the problems posed by the researcher. Sixthly, while content analysis is, and will remain, essentially inexact, it is, nonetheless, rigorous, as Deleuze and Guattari ([1980] 1987, p. 367) might characterize it. In other words, what differentiates the analyst from the non-analyst is the awareness of the problems posed by the analyst, as Bourdieu ([1984] 1993, p. 149) would likely agree on, and how well informed the analyst is regarding not only to the specific problems but also other related problems. In short, the analyst is more systematic, better informed and geared to provide answers to the problems that most people are not necessarily even aware of.

3.2   Research design

Following Krippendorff's ([1980] 2018, p. 86) definition of content analysis, I came up with a *research design* and applied a certain *logic* that seeks to make the process efficient, avoid redundancy and prevent inconsistency in the data. The purpose of article I was to function as a proof of concept, to provide *instructions* as to how one *might* conduct content analysis in the contexts that I deal with in my own research (Krippendorff, [1980] 2018, p. 86). It should be noted that the instructions pertaining to the research design and its logic always impose themselves on the meaningful matter, which means that the analyst should be careful when drafting instructions for others to follow and when following instructions created by others (Krippendorff, [1980] 2018, p. 90). In other words, as the research design of content analysis is purposely context sensitive, i.e., created in relation to a set of data gathered in a specific spatio-temporal context, applying the instructions of the research design in other contexts should always be done with caution (Krippendorff, [1980] 2018, p. 91).

As indicated in article I, I first attempted to utilize existing research designs, but I ended up creating my own set of instructions as the existing instructions proved to be ill-fitting for the purposes of my study for the reasons elaborated by Krippendorff ([1980] 2018, pp. 90–91). A central problem with many of the existing designs was that the unit of analysis tended to be defined too broadly or too narrowly for the purpose of my study (Krippendorff, [1980] 2018, pp. 90–91). I simply was not happy with how this issue was handled in previous studies, hence the emphasis given to this issue in this thesis. Some designs had inconsistent sampling, picking a little bit of this and a little bit of that for the data without assessing their relevance for the purpose of the study (Krippendorff, [1980] 2018, pp. 90–91). Moreover, the conceptual frameworks behind the coding schemes were not apt for the purpose of this study (Krippendorff, [1980] 2018, p. 91). To be clear, it is of utmost importance that the analyst does not simply force the instructions on the data but reformulates the instructions so that they are appropriate for the purpose of the study, so that they are relevant to the problems posed by the analyst and provide solutions to those problems, as emphasized by Krippendorff ([1980] 2018, p. 91). Simply put, the analyst should never make the data conform to existing instructions. The analyst should be sensitive to the data and reformulate the conceptual framework if it fails to address the data.

I considered the research design created Barni and Bagna (2009) to be the most fitting for my purposes. However, while I found their set of instructions to be the most comprehensive and clearly defined, I felt that it needed some reformulating to fit the context of my study. Moreover, while I appreciated the categories that pertain to spatiality, namely where the meaningful matter is encountered, I felt that they needed some reconceptualization as my study is focused on a school that is primarily

an indoor environment, whereas they had focused more on outdoor environments in their study. Therefore, I adapted the spatial categories to be more specific than what is applicable to outdoor environments. Moreover, besides the categories pertaining to languages and spatiality, I considered the existing coding or annotation categories to be too limited for the purposes of my study.

It is worth emphasizing that in response to the lack of fitting research design, I created *a* model, *a* data annotation scheme, not *the* model nor *the* scheme. I agree with Krippendorff ([1980] 2018, pp. 86–87) that unlike with computers that can be given clear-cut instructions, my instructions can be, at best, an approximation of such explicitness. Moreover, instead of attempting to uncover some canon data annotation categories to be faithfully followed by others, I wanted to create a modular scheme that can be utilized not only by me, but also by others, in ways that they see fit for their purposes and to the extent that makes sense to them. In fact, as it is a modular scheme, even I only apply parts of it at a time, as evident from articles II, III and IV.

Krippendorff ([1980] 2018, pp. 87–90) summarizes content analysis as involving six steps: *unitizing*, *sampling*, *recording/coding, reducing*, *inferring*, and *narrating*. Firstly, one must first unitize, to come up with a definition for a unit of analysis. Unitizing is the single most important step as everything else is defined in relation to it. Secondly, one must sample. This simply means that one must limit one's research in some proportion. Thirdly, one must record/code what is sampled. One must therefore record the data and code it. Fourthly, one must reduce the recorded and coded data into a presentable form. Fifthly, one must abductively infer contextual phenomena. This means that one must contextually justify one's findings. Sixthly, one must narrate the findings. It is not enough to simply present them and indicate how were they achieved.

3.2.1   Unitizing the data

Unitizing was the first and arguably the most important thing that I had to take into consideration. As explained by Krippendorff ([1980] 2018, p. 88), this meant that I had to make a choice as to what to include in the data and contextually justify the applied criteria of inclusion. However, as emphasized by Krippendorff ([1980] 2018, p. 88), this does not mean that I must defend my position as to why something is omitted (see also Healy, 2017), nor explain the relationship between the units. In other words, as also discussed in section 2, the applied model of content analysis is problematic, not theorematic as it relies on posing problems, i.e., inventing them, and seeking solutions to those problems as opposed to attempting to uncover the truth, as if completing a puzzle, piece by piece (Bergson, [1934] 1946, p. 58; Deleuze and Guattari, [1980] 1987, pp. 361–362).

Following Voloshinov ([1930] 1973, pp. 101–102), I opted to approach the issue of unitizing from the point of view of the *problem of understanding*. I chose to assess what I encountered both semantically and pragmatically, considering semantic meaning, the shared lower limit of meaning of an instance in the same coded system, and pragmatic or contextual meaning, the upper limit of meaning, as one cannot separate one from the other (Voloshinov, [1930] 1973, pp. 101–102). Firstly, the upper limit is the actual definite limit, how one can, for example, express the same thing, the same sense (Deleuze, [1969] 1990) or purport (Hjelmslev, [1943] 1953), in different ways, for example, in one word, sentence or paragraph (Ricœur, [1972] 1985, p. 883; Voloshinov, [1930] 1973, pp. 101–102, 111). Conversely, it also pertains to how one can express a different thing using the same expression, for example, the same word (Voloshinov, [1930] 1973, pp. 103–104). Secondly, the lower limit is the limit of the system, how, if one needs to express something to others, it must be done within the limits of the modes of semiotization that others are familiar with (Guattari, [1977] 1996 pp. 150–151; Voloshinov, [1930] 1973, pp. 101–102). It is worth emphasizing that this has nothing to do with usual or occasional meanings, *denotation* or *connotation*, as there are no inherently central meanings, nor peripheral meanings (Voloshinov, [1930] 1973, p. 102). Instead, there are only seemingly stable social purviews within actual social groups that come to (re)generate semantic properties of modes of semiotization such as language (Deleuze, [1993] 1998, pp. 96–98; Deleuze and Guattari, [1972] 1983, pp. 109, 181; Voloshinov, [1930] 1973, p. 104). Therefore, what is important or central is *dialog* or *interaction*, hence the emphasis on understanding (Voloshinov, [1930] 1973, pp. 102–103). Thirdly, the sense or purport cannot be uncovered by examining the expressions, regardless of whether it is assessed semantically or pragmatically and regardless of the mode of semiotization (Hjelmslev, [1943] 1953, p. 48). For example, as concisely explained by Deleuze ([1969] 1990, pp. 20, 337), a Möbius strip has only one plane, one continuous surface, yet it appears to have two planes, two surfaces. If one places the strip between two fingers, it clearly appears to have two sides, yet, when one runs one's fingers on it, it appears to have only one side, considering that one's fingers appear in the opposite configurations as one runs one's fingers on the strip. The way it is can only be inferred indirectly because one fails to grasp its intrinsic property by cutting the loop, by examining it in terms of its extrinsic properties. As elaborated by Deleuze ([1969] 1990, p. 22), "this is not a circle", "[i]t is rather the coexistence of two sides without thickness, such that we pass from one to the other by following their length" and, to connect this back to the problem of understanding, as sense or purport it "is both the expressible or the expressed of the propositions, and the attribute of the state of affairs", "the boundary between propositions and things." It is therefore not bound to words, nor things. It is the *event* that takes place between words and things, the

act itself, which is why it cannot be defined in words, nor in things (Deleuze, [1969] 1990, pp. 20–22).

It is difficult to define an *action* as a unit of analysis as each unit is, in itself, a *composite* of actions, a blend of tendencies of acting in certain ways (Bergson, [1907] 1911, pp. 7–8, 98–100; Deleuze, [1956] 2004, p. 34; Spinoza, [1677] 1884, pp. 83, 95). Therefore, each unit can be understood as a *higher-level action*, composed from other *lower-level actions*, or, alternatively, as a lower-level action that is a component of a higher-level action (Norris, 2004, p. 14). In fact, both assessments are technically correct. They both make sense. Each action can be understood as a higher-level action and as a lower-level action, functioning in a multiplicity of chained or sequential actions (Norris, 2004, p. 13), in an ever composing and decomposing infinite set (Debaise, 2008, pp. 459–460; Spinoza, [1677] 1884, pp. 95–96; Tarde, [1893] 2012, pp. 35–36). The actions form unities, totalities or wholes of these and/or those particular actions (Deleuze and Guattari, [1972] 1983, p. 42), also referred to as discursive and non-discursive formations, forms of expression and content, desiring-machines, assemblages and societies, as discussed in sections 2.1 and 2.2. In this way of thinking the closed equation of representation is replaced with an open equation, substituting the mutually exclusive logic of alterity, EITHER this OR that, with a logic in which heterogeneous elements function together, bonded and interleaved, in series (Deleuze and Guattari, [1972] 1983, pp. 76–78; Doel, 1996, pp. 422–423; Massumi in Deleuze and Guattari, [1980] 1987, p. xiii), as "AND … AND … AND …" (Deleuze and Guattari, [1980] 1987, p. 98; Deleuze and Parnet, [1977] 1987, pp. 9–10; Spinoza, [1677] 1884, pp. 83, 95).

The actions are incorporeal events, ensembles linked to one another in diverse converging and diverging series (Foucault, [1969, 1971] 1972, pp. 230–231). In less abstract terms, action is always interaction that takes place between two entities, typically understood as taking place between people, as exemplified by Voloshinov ([1930] 1973, pp. 102–106). Therefore, understanding is always dialogic or interactional; "[t]o understand another person's utterance means to orient oneself with respect to it, to find the proper place for it in the corresponding context", as "each word of the utterance that we are in process of understanding, we, as it were, lay down a set of our own answering words" and "[t]he greater their number and weight, the deeper and more substantial our understanding will be" (Voloshinov, [1930] 1973, p. 102).

Interaction can, however, also take place between humans and non-humans, what one might be tempted to call subjects and objects. Norris (2004, pp. 13–14) indicates that it is evident that not all actions between people take place in real time, one person expressing something to another person. In many cases the action is *mediated* through various expressions that appear to have been frozen in time, having a life span that far exceeds speech. Following Norris (2004, pp. 13–14), these *mediated*

actions can be referred to as *frozen actions*. For example, pedestrian crossings are frozen actions. The objects themselves, such as paint markings on a road, are not as important as how prior actions appear to have been frozen in these objects (Norris, 2004, p. 14). Frozen actions can also be understood as materialized discourses as it is only through systematic practices, i.e., discourses, that various objects make sense to people (Foucault, [1969, 1971] 1972, p. 49, [1977] 1980a, pp. 197–198), how prior actions are understood as embedded or entailed in objects that would otherwise only have materiality (Norris, 2014, pp. 11, 13–14), as discussed in section 2.1 and exemplified in section 2.4.

To be clear, higher-level frozen actions incorporate a host of lower-level actions that must have occurred for people to make sense of them, to come to understand what they are and how they function, how they should orient themselves in relation to them and engage with them. Some of them are more general while others are more specific. Figure 5 illustrates this:

Figure 5: 15 pieces of paper

Each of the 15 pieces of paper depicted in figure 5 contains writing in English and Finnish, accompanied by an illustration situated on top of the writing. Each of these small items could be understood as a higher-level frozen action that consist of four lower-level frozen actions: the illustration, the number, writing in English and writing in Finnish. It would be equally possible to assess each of these as higher-level frozen actions, consisting of multiple lower-level frozen actions, such as the letters of the words. However, as these items are marked by numbers ranging from 1 to 16 and considering that they appear to have been cut into pieces from a sheet of

paper, they can be understood as one higher-level frozen action consisting of 15 lower-level frozen mediated actions. One could also view that higher-level frozen action as a lower-level frozen action that is part of a higher-level frozen action, such as all the learning materials put on display in a classroom. There is no right or wrong way to assess these items. All these assessments make sense on some level. The point is that the actions embedded in other actions are too numerous to list. It would be impossible and thus futile to attempt to take all the levels into consideration as the list is virtually endless. The relevant level of assessment depends on what one wishes to investigate, what is relevant to one's study. What is relevant in this case is that these pieces of paper are placed on a classroom door and they appear to be dedicated to teaching students what items commonly found in classrooms are called and what they look like. Therefore, they are understood as functioning as one unit, despite being physically isolated from one another. They function similarly to what is depicted in figure 6:

Figure 6: A poster

Figure 6 depicts a poster that functions as learning material. It contains the alphabet, a to z, with illustrated examples. Placed against the white background, each of these letters could be understood as lower-level frozen actions. The same applies to the heading above these. However, what is relevant here is that together these function as one higher-level frozen action, as most likely intended by the company that made this poster. What is different between what is depicted in figures 5 and 6 is that in

one case a physical object, a sheet of paper, appears to have been cut into pieces, whereas in the other case a physical object, another sheet of paper, has not been cut into pieces. In short, while it would not be wrong to classify what is presented in figure 5 as containing 15 units of analysis and what is presented in figure 6 as containing only one unit of analysis, it would, nonetheless, be absurd to assert that, considering that both arrangements appear to function in the same manner.

It is worth noting that the definition of unit of analysis utilized in this thesis is not wholly uncontroversial, nor accepted by everyone. To my knowledge, only Jocuns (2021) and Pietikäinen et al. (2011) have utilized a similar definition, qualifying the units of analysis as frozen actions. Some prefer to do the exact opposite and advocate for a strictly physical definition (cf. Amos and Soukup, 2020), despite the apparent flaws that one comes across when examining items such as the ones depicted in figures 5 and 6. The physical definition works in most cases as items do tend to be like the poster depicted in figure 6, but it results in absurdity in cases like where sheets of paper appear to have been cut into pieces, as depicted in figure 5. This is not really an issue in a qualitative study, but it becomes a major issue in a quantitative study as one is forced to treat each physically separate item as a unit of analysis, which may skew the results considerably.

I recognize that it might be possible to resolve this issue pertaining to the units of analysis by categorizing each unit by size, thus giving more emphasis to large items than small items. It would make sense. However, the problem with giving more emphasis to large items is that, while certainly important, size is only one factor that affects what people pay attention to. One should also take into consideration other *bottom-up factors*, such as curvature, colour, contrast, luminance, motion, orientation and reflectance, and *top-down factors*, such as one's knowledge and one's expectations (Wilson et al., 2015, pp. 235–237). For example, one might be looking at several large items and one small item. The small item would catch one's attention because it stands out by being smaller than the other items. Similarly, one might be faced with items of equal physical proportions, but one of the items is of different colour or oriented differently from the others. The item that is of different colour or oriented differently would catch one's attention. One might also encounter something large that has low contrast when assessed against its background. One would likely ignore it, especially if there is something else, possibly even something small, that stands out from its background in high contrast. In addition to these external bottom-up factors, one would have to consider the top-down factors that pertain to the differences between people's backgrounds. However, this is very hard to take into consideration even if people's backgrounds are very similar. To my knowledge, there is no existing solution to this issue, despite the advances made in the computational approaches that seek to synthesize what people pay attention to (cf. Bruce et al., 2015; Li and Gao, 2014).

3.2.2   Sampling and recording/coding the data

It would be ideal to look at everything, what is typically known as the population, but as research is always constrained by resources, one must limit one's observations to a mere sample, as aptly summarized by Krippendorff ([1980] 2018, p. 88). For this thesis I had to limit my research based on what I considered to be relevant to the research questions, as well as to the possible solutions to those questions, as further specified by Krippendorff ([1980] 2018, p. 117). I had great initial plans and intended to investigate more schools, but I ended up focusing only on one school. The school building contains three largely physically separated areas that correspond to the three levels of education investigated in this thesis. In short, as this thesis was completed on a virtually non-existing budget, consisting of less than a full year's worth of funding, I had to curb my enthusiasm and limit the project accordingly.

The *raw data* of this study consists of 2373 raw image files, photos taken in the premises of the school investigated in this thesis. The data gathering took place in the spring of 2015. Photography was chosen as the data recording method to make it possible to assess the data without time constraints, as recommended by Krippendorff ([1980] 2018, p. 89). It would have been possible to achieve the same results by other means, but photography proved to be the most efficient and reliable way of gathering data. For example, it would certainly have been possible to only take notes, but that would have been very time consuming and thus unfeasible, considering that the study had to be carried out as part of the everyday activities of the school, as further elaborated in section 3.3. Moreover, considering that the various objects varied considerably, including but not limited to decorations, health and safety signage, learning materials, notice board announcements, posters, placards and student art works, assessing them consistently on site would have been very hard, if not impossible. The raw data was subsequently post-processed into a set of data consisting of 6016 frozen actions.

To be more specific, the raw data was recorded using a digital camera, a Ricoh GR, chosen for its good combination of image quality, low light capabilities, portability, and discreetness. I opted to use this plain looking digital compact camera because it does not make people pay attention to you as much as a DSLR camera would. This is something that I learned from street photography, where it is important that people do not mind what you are doing. It was important to me that the landscape would not be altered for me. In this school I did not sense that my presence influenced the behavior of others, perhaps because it is not out of the ordinary for there to be some visitors and because most of the photos were taken in the absence of students and teachers so that they would not alter their behavior in relation to the landscape, thus skewing the data. I conducted a similar study in another school, where I had a sense that the school staff may have catered to my visit

and thus altered what is present in the landscape. This connects to the benefits of studying human activities through landscape rather than through involving people, as further discussed in section 2.5.

3.2.3 Data reduction

It is not enough to define a sample and record data. While this may be sufficient in a qualitative study, large volumes of data require the recorded and coded data to be reduced into a form that makes it possible to answer the set research questions, as indicated by Krippendorff ([1980] 2018, p. 89). In other words, simply presenting all the data, as such, is not enough. Instead, one must tease out what is relevant to the task at hand and present it in a way that is easy for others to understand, for example by using tables and figures.

The items investigated in this thesis, the 6016 frozen actions, were assessed in 22 categories and annotated accordingly, as elaborated in even greater detail in article I. In summary, the first five categories (1 to 5) are administrative categories pertaining to the study, not the items themselves. Most importantly, the first category is the number that identifies the item. The following six (6 to 11) categories pertain to *languages*, identified as distinct entities in the existing regimes of truth (Foucault, [1977] 1980b, p. 131, [1997] 2003, p. 164; Pennycook, [1994] 2017, pp. 117–124), their number, their saliency or order in relation to one another, their uses as a matter of *translation* or *code-mixing,* providing the same information or fragments of information in different languages in variable degrees of overlap with one another. The next two categories (12 to 13) address *modes of semiotization* (Guattari, [1979] 2011), what is more commonly referred to as *multimodality* (Kress and van Leeuwen, [1996] 2006), and the *medium* that the *mode* is presented on. The following three (14 to 16) categories are dedicated to the assessment of *agency* according to not only who *designed* a certain item, i.e., created or produced it, but also, more importantly, who *issued* that item, who is responsible for its presence. The assessment of agency also includes a category that indicates the *intended audience*. As the issue of agency is particularly complex, to some even prickly and thorny, it is worth emphasizing that in my study it does not pertain to specific people, nor their personal experiences. It is not about the intentions of autonomous individual subjects (Mazzei, 2017, pp. 676, 678; St. Pierre, 2018, p. 603). On the contrary, following Foucault ([1969, 1971] 1972, pp. 50–51), the purpose of addressing agency is to ask certain questions, not only who is expressing oneself but also who gets to express oneself, who is in a position to express oneself, who has the right to express oneself, who gains something from expressing oneself, who guarantees what is being expressed is considered legitimate and in what conditions these apply? My interest in agency or participation therefore lies in understanding the *collective*

production of subjectivity, not merely what people do, but how they come to do what they do and how what they do comes to affect what they and others do (Guattari, [1992] 1995, p. 25). Agency is therefore to be understood as a matter of distribution, as "distributed across a network of interactions" (de Freitas and Sinclair, 2012, p. 136). The next three categories (17 to 19) pertain to different functions. The first of these categories deals with *genre*, what type of an item one is dealing with. The second deals with *indexicality*, *symbolization* and *iconicity*, what Deleuze and Guattari ([1980] 1987, p. 65) refer to as *territoriality*, *deterritorialization* and *reterritorialization*. The third deals with *representativeness*, how an item hints to its own structuration principles, marking power relations, identifying with a group, identifying oneself as an individual and/or appealing to the intended audience. The final three categories (20 to 22) are used to specify where an item can be found, as classified according to the type of area in question, such as a classroom or a corridor, who or, rather, what group of people use the area in question and which specific area one is dealing with, such as a specific classroom or a corridor. These categories are particularly useful when it comes to examining the data in smaller subsets, which adds more granularity to the analysis.

3.2.4   Inferring contextual phenomena

Once the complexity of the data has been sufficiently reduced, it is possible to answer the set research questions. However, it is not enough to simply present the findings. Instead, one must be able to abductively *infer* contextual phenomena, i.e., contextually justify the findings, as noted by Krippendorff ([1980] 2018, p. 88). It is therefore important to provide enough background information to warrant the inferences. This does not, however, mean that the analyst seeks to uncover what happened, as a matter of necessity, but to explain what might have happened for things to come to be the way they appear to us, as a matter of contingency, as discussed in sections 2.1 and 2.2. The relevant background information can be found in section 4.

3.2.5   Narrating the findings

Answering the research questions is crucial, but it should be done in a manner that is easy for others to understand. In other words, one must narrate the contextually justified findings to demonstrate the potential positive and negative effects of both the problems and their solutions and who they concern, regardless of whether they are of actual practical everyday significance or contributions to the research literature, as argued by Krippendorff ([1980] 2018, pp. 88–89), as well as Tarde ([1890] 1903, p. 111). This emphasizes the importance of presentation.

The findings can be presented in summary form in various ways, including but not limited to counts, tabulations, associations, correlations, clusters, and factors, using one or more categories, i.e., one or more dimensions at a time (Krippendorff, [1980] 2018, pp. 196–214). There is no right or wrong way of presenting the data in summary form. Instead, what matters is that the findings, what can be inferred from the data, can be easily understood (Krippendorff, [1980] 2018, p. 196). The patterns and relationships that can otherwise be easy to overlook should be made easy to notice and understand (Krippendorff, [1980] 2018, p. 196). The narration is, of course, provided only after the findings have been presented and visualized, but the presentation and visualization should nonetheless be as clear and easy to comprehend as possible.

Summarizing Krippendorff ([1980] 2018, pp. 196–214), I consider some presentation techniques to be more apt for my purposes than others. Counts are useful, but only to a limited extent. They indicate *frequencies*, how many times something occurs in the data, but they do not indicate anything beyond that. One must make the inferences oneself, which, in turn necessitates having background knowledge, for example, if what is assessed is otherwise considered common or not. The problem with frequencies is that they are, at best, telling of one category and thus do not indicate if and how other categories are connected to it. Cross-tabulating categories and their variables, i.e., examining variables of two or more categories in a *contingency* table, is particularly useful in remedying this issue as it can be used to assess the *co-occurrences* of variables of different categories. It is possible to examine multiple categories at a time, but it is advisable to limit the number of assessed categories. The presentation of data becomes complicated if many categories are utilized at the same time, which, in turn, makes it harder to comprehend the findings. Relevant to my approach, as the data annotation includes only *nominal categories*, i.e., variables that have no numerical values and thus no intrinsic order or scale, cross-examining the categories can indicate *associations* or *correspondences* between categories. As aptly expressed by Benzécri (1992), "the relations between numbers are more interesting than the numbers themselves" (p. 4). In terms of visualization, I find simple bar charts to be suitable for most of my purposes. This does, however, not mean that bar charts are always preferable as each form of visualization has its advantages and disadvantages. For further clarity, I tend to supplement them by providing counts (frequencies) and proportions (percentages) in the text. I also intended to visualize my findings with correspondence analyses (cf. Beh and Lombardo, 2014; Benzécri, 1992; Greenacre [1993] 2017) in articles II, III and IV. However, this intuitive technique was not utilized in the articles due to editorial decisions and limitations of scope.

3.3   Ethics

The research ethics applied in this thesis build on Deleuze's ([1970] 1988b) reading of Spinoza ([1677] 1884). In summary, the underlying ethical principle of this thesis is one's dual capacity to act and to be acted upon, so that everything that increases one's capacity to act and be acted upon is defined as good for oneself and, conversely, everything that decreases one's capacity to act and be acted upon is defined as bad for oneself (Deleuze, [1970] 1988b, p. 71). In short, while studying society, i.e., actual people, I sought to do so in a way that did not cause harm to them, diminishing their capacity to act and be acted upon.

The school was investigated solely by me in the spring of 2015. This was done in cooperation with the school administration, and it conformed to existing legislation (Basic Education Act, 628/1998; Copyright Act, 404/1961; Criminal Code of Finland, 39/1889; Personal Data Act, 523/1999; Public Order Act, 612/2003; Upper Secondary Schools Act, 629/1998) and research ethical principles (FABRI, 2009). The existing legislation in effect at the time defines schools as open to the public, meaning that anyone has the right to investigate school properties and follow education, inasmuch one does not negatively impact the provision of education with one's conduct or presence, as defined in the government proposal for the relevant education legislation (HE 86/1997, vp, p. 62) and confirmed by the Supreme Administrative Court of Finland (KHO:2013:159). I also confirmed the validity of this from The Office of the Data Protection Ombudsman via telephone. Therefore, by default, this permits data gathering in schools without any need to ask for a permission to do so. The applicability of this is, however, limited to the areas pertaining to the provision of education, namely classrooms, and shared spaces, such as corridors and school exterior areas. Conversely, areas that do not pertain to the provision of education, nor are accessible to everyone, such as offices and meeting rooms, are therefore off limits. Moreover, this applies only when the school is in session and not during after-hours.

Full access to the public should not, however, be understood as carte blanche as gathering publicly available information is not the same as publishing that information. Therefore, the relevant legislation on privacy and copyright still apply, with copyright being given priority over privacy. This resulted in a legal conundrum as the visual integrity of a protected work must not be infringed upon without the consent of the rights holder, which, in turn, may result infringing on the privacy of the creator and/or the rights holder. Moreover, in many cases it would be impossible to contact the rights holder for permission to do this in order to protect their privacy as the rights holder may no longer be present to be consulted and/or the rights have been transferred to a third party. These factors are not evident from the protected works themselves. For this reason, I chose to avoid illustrating the data with anything that would infringe upon someone's privacy and/or copyright. This bewildered many

of my colleagues because they did not understand this legal aspect or have chosen to ignore it in their own work. In order to adhere to the law, I paid painstaking attention to detail in all stages of this thesis, including the planning, the execution and the publishing. In addition, the study was evaluated by the principal of the school and carried out as part of the everyday activities of the school, which exempts the study from having to ask for informed consent from the students and/or their parents or guardians, inasmuch no directly identifying information is collected, as defined in the research ethical principles that were in effect at the time of the study (FABRI, 2009, pp. 6–7). From a legal perspective, this evaluation was, technically, not even necessary, but I chose to do so anyway in order to make sure that I adhered not only to the law but also to the research ethical principles. Moreover, vetting the study with the administration of the school provided me better access to the areas included in the study. To be clear, no areas in which privacy is expected were included in the investigated areas. These include changing rooms and toilets, as well as the school kitchen facilities and administrative staff offices. It is also for this reason that the school is not identified in this thesis and all the information pertaining to it and its students and staff is kept to a bare minimum. The illustrations included in this thesis have been carefully selected in order to avoid revealing their identities.

4 Background information

This section provides relevant background information that helps to understand the context of this thesis, which, in turn, also functions as contextual justification for the findings of this thesis, as discussed in sections 5 and 6. The first part, section 4.1, will present the geographic and historical context of the study, whereas the following sections, sections 4.2 and 4.3, are dedicated to the assessment of various official, hegemonic or de jure discourses and de facto discourses pertaining to language and multimodality, as linked to education.

4.1 Demographics

Finland is a relatively small country, situated in the fringes of the European Union, bordering Norway and Sweden in the west and the north and Russia in the east. The histories of Finland, Russia and Sweden are intertwined, which explains some of the language policy developments relevant to this thesis. To be more specific, Finland was a part of Sweden from 1323 to 1809, with the areas of contemporary Finland being gradually incorporated to Sweden. Being part of Sweden, legally as a set of its provinces, meant that Swedish gained prominence in Finland (Latomaa and Nuolijärvi, 2005, pp. 126–127). From 1809 to 1917 Finland was a part of Russia, but Swedish did not initially decline despite Finland gaining more autonomy than it did under Swedish rule, being treated as its own national entity as the Grand Duchy of Finland in the Russian Empire, and undergoing a nation building phase in the 1800s (Latomaa and Nuolijärvi, 2005, p. 127). The language declined, losing its prominence to Finnish by the early 1900s, and has further declined ever since (Latomaa and Nuolijärvi, 2005, p. 127), despite being enshrined as a national language alongside Finnish in the Finnish Constitution of 1919 and the Language Act of 1922 and retained in the Finnish Constitution of 1999 and the Language Act of 2003.

The situation remains largely the same a hundred years later, albeit Swedish has declined in the meanwhile, not because its status has changed, but because the Swedish speaking population has slightly declined, dropping from 340 963 speakers or approximately 11 percent of the population recorded in 1920 to 290 161 speakers or approximately 5.3 percent of the population recorded in 2015, when this study was

conducted, while, in comparison, the Finnish speaking population has boomed, increasing from approximately 2.7 million to approximately 5.5. million and remaining proportionally the same, at around 89 percent of the population, in the same time span (Statistics Finland, 2002, p. 73, 2016, p. 422). The most recent trend affecting both population groups is the rapidly growing number of speakers of other languages, increasing from mere 8309 people in 1920, approximately 0.3% of the population, to 329 562 people in 2015, approximately 6 percent of the population, marked by a particularly sharp increase in the last three decades (Statistics Finland, 2002, p. 73, 2016, p. 422). In 2015, the largest self-reported other language groups were native speakers of Russian (72 436 speakers), Estonian (48 087) and Somali (17 871) (Statistics Finland, 2016, p. 431). It is, however, worth acknowledging that only the speakers of Russian made up more than a percentage of the population (1.3 percent). In summary, it is evident that Swedish is slightly declining, currently largely due to the growing population of speakers of other languages. The Finnish speaking population still appears to grow in absolute terms, but it is, nonetheless, also gradually declining proportionally for the same reason. What is particularly noteworthy is how the slightly declining Swedish speaking population is currently already smaller than the rapidly growing population group consisting of speakers of other languages besides Finnish, Swedish and Sámi (Statistics Finland, 2016, p. 422).

It is worth acknowledging that the population of Finland is not evenly distributed throughout the country. In summary, much of the population is situated in major cities in the south, namely in Helsinki, Espoo, Tampere, Vantaa, and Turku, and in the north, namely in Oulu (Statistics Finland, 2016, p. 420). This also means that the majority of speakers of other languages live in urban areas, being largely concentrated around the capital, Helsinki, and the neighboring cities Espoo and Vantaa, in the region of Uusimaa and in Turku in the region of Southwest Finland, the region this thesis focuses on (Statistics Finland, 2016, p. 421), as evident from table 1:

Table 1: Speakers of Finnish, Swedish, Sámi and other languages in four major cities

City	Finnish		Swedish		Sámi		Other languages		Total
Espoo	211252	78%	20216	7%	0	0%	38325	14%	269793
Helsinki	504011	80%	36004	6%	61	0%	88132	14%	628208
Vantaa	175824	82%	5676	3%	20	0%	33085	15%	214605
Turku	167127	85%	10033	5%	13	0%	18781	10%	195954

As evident from the 2015 demographic data (Statistics Finland, 2020) presented in table 1, Turku, the largest city in the region relevant to this thesis and the four articles contained in it, is similar to Helsinki, Espoo and Vantaa, the three major cities in the capital region, in terms of its linguistic composition. It is, however, also worth noting

that these official statistics should be approached with caution, considering that they are based on self-reporting and take only one language into consideration per person (Boyd and Palviainen, 2015, p. 62; Tammenmaa, 2020, p. 9). Simply put, it should always be kept in mind that this demographic data ignores that most of the population can speak more than one language. It is only likely that therefore a great deal of linguistic heterogeneity is ignored. This issue will be further addressed in section 4.3.

The discussion of language and language rights in Finland revolves around what Ihalainen and Saarinen (2015, p. 38) refer to as constitutional bilingualism. The Constitution of Finland (731/1999, 17§) is very explicit on what is considered relevant in Finnish society in this regard, considering that the right to use one's own language in relation to the state is defined as applying only to Finnish or Swedish. Similarly, bound by the constitution, the Language Act (423/2003, 2§) might as well be named the Finnish and Swedish language act, considering that the right to use one's own language in relation to the state applies only to Finnish and Swedish. It is worth noting that the use of other languages is not prohibited, but rather that the right to use other languages is not guaranteed. In other words, it is simply expected that people speak either Finnish or Swedish. Summarizing Ihalainen and Saarinen (2015), this constitutional bilingualism has resulted in a curious absence of discussion regarding any other languages besides the two national languages, Finnish and Swedish, including the formally recognized minority languages, Sámi, Romani, and sign language, unless it concerns or infringes upon the status of these two languages. Simply put, any discussion about language in the Finnish society tends to be handled with deference to what is stated in the constitution, which, in turn, is very hard to change. It takes an overwhelming parliamentary majority, five out of six of all votes, to change the constitution in one electoral period or, more typically, a clear majority, two out of three of all votes, in the following electoral period, as initiated in the previous electoral period. In other words, the deferral of language issues is unlikely to change because altering the constitution is effectively out of the question. It is very unlikely that there will be enough support for such in one electoral period and getting enough support for a change through two electoral periods is difficult because the decision is postponed past the parliamentary elections which may alter the composition in the parliament considerably.

What makes all this particularly strange or peculiar is how the growing number of speakers of other languages, namely immigrant languages, keeps being ignored as indicated by Ihalainen and Saarinen (2015, pp. 43–44). While the debate regarding constitutional bilingualism is hardly a central issue in this thesis, considering that I focus solely on a school in which the medium of instruction is Finnish, it is nonetheless relevant to my thesis in the sense that it tends to prevent any actual discussion regarding the presence of other languages in fear of upsetting the status

quo by infringing upon the constitutional status of the two languages, as argued by Ihalainen and Saarinen (2015, pp. 51–52).

4.2   Education legislation

The provision of education is governed by multiple acts in Finland. As this thesis focuses on a school that provides nine-year-long compulsory basic education and three-year-long voluntary secondary education, only the Basic Education Act (628/1998) and the Upper Secondary Schools Act (629/1998) are relevant to this thesis. Summarizing these acts, municipalities are required to provide compulsory education (ages 6 to 16) to its eligible residents. The municipalities may arrange it themselves, in collaboration with another municipality or contract it to the state or to a registered association or foundation. Non-compulsory secondary education (ages 16 to 18) can be provided by a municipality, a joint municipal authority, the state or a registered association or foundation.

Basic education consists of a 9-grade comprehensive school. The Comprehensive School Act (476/1983, 4§) divided the comprehensive school to two levels: primary level and lower secondary level. The primary level consists of grades 1 to 6 and the lower secondary level consists of grades 7 to 9. Primary education was organized by school districts typically no larger than five kilometers by radius (476/1983, 8§). Lower secondary education was organized by school districts on the basis of a minimum number of students per grade: 90 students per grade by default or a minimum of 40 students per grade in exceptional cases, as mandated in the supplementary Comprehensive School Decree (718/1984). The division to primary and lower secondary levels of basic education is no longer recognized in the current system (Basic Education Act, 628/1998). However, in practice, education is still largely provided in schools in this manner. This is largely due to the existing school infrastructure and the required teacher competencies that divide the teaching staff into two different categories. This division applies in the school examined in this thesis.

The medium of instruction in compulsory education and voluntary secondary education is Finnish, Swedish, a Sámi language, Romani, or sign language, as defined in the education acts. The medium of instruction may, however, be another foreign language on all levels of education, but only if it does not negatively impact learning outcomes and does not infringe upon the linguistic rights enshrined in law (Basic Education Act, 628/1998, 10§; Government Decree, 1435/2001, 8§).

Finland relies on a parallel school system in which education is typically provided in a mutually exclusive manner, either in Finnish or Swedish, as identified in the existing research literature (M. Björklund, 2013, pp. 118–119; From, 2020, pp. 6–9; From and Holm, 2019, p. 197; From and Sahlström, 2017: 466; From and Slotte, 2019). Therefore, while Finland is an officially bilingual state, as discussed

in section 4.1, the school system is not bilingual, despite the claims made in the Strategy for the National Languages of Finland (Tallroth, 2012). Instead, the school system is marked by what Heller (2006, p. 5) refers to as *parallel monolingualism* as education is provided either in Finnish or Swedish. This also applies to bilingual municipalities as the education providers are exempted from having to provide education in schools in both languages. To be more precise, bilingual municipalities do have to provide education in Finnish and Swedish, but not in both languages in one school. There is, however, nothing that prevents the schools that cater to the Finnish speaking majority from providing education in Swedish, or in any other language for that matter, inasmuch it does not negatively affect learning Finnish and the content of the curricula remains the same. In fact, there are schools that cater to the majority population but also provide some of the content specified in the curricula in Swedish, for example as language immersion or as content and language integrated learning (Kangasvieri et al., 2012, p. 23; Pakarinen and S. Björklund, 2018, pp. 5–6). Limitations apply only to recognized minorities, especially to the Swedish speaking population, as emphasized in the Strategy for the National Languages of Finland (Tallroth, 2012, p. 14).

The Basic Education Act (628/1998) and the Upper Secondary Schools Act (629/1998) define the framework for the content of education at the primary and secondary levels. The basic education syllabus (628/1998, 11§) consists of:

> "mother tongue and literature, the second national language, foreign languages, environmental studies, health education, religious education or ethics, history, social studies, mathematics, physics, chemistry, biology, geography, physical education, music, art, crafts, and home economics."

The syllabus for the upper secondary level is similar, but defined a bit more broadly (629/1998, 7§):

> "mother tongue and literature, the second national language, foreign languages, sciences, arts and social sciences, religion or ethics, physical education, art and health education."

Mother tongue is defined as one of two national languages, Finnish or Swedish, Sámi, Roma, sign language or some other language if it is the student's mother tongue (628/1998, 12§; 629/1998, 8§). Highly relevant to the articles included in this thesis, it is evident that both syllabuses clearly emphasize languages. The emphasis is justified on the grounds that the development of language is to be prioritized in education (Government Decree, 1435/2001, 3§). Table 2 summarizes the subject groups and the allocation of lesson hours in basic education (Government Decree, 422/2012, 6§):

Table 2: Allocation of lesson hours (basic education)

School subject	Units (=38h)	Hours	%
Mother tongue	42	1596	19%
Language 1 (compulsory)	16	608	7%
Language 2 (optional)	12	456	5%
Language 3 (compulsory)	6	228	3%
Language 4 (optional)	4	152	2%
Mathematics	32	1216	14%
Environmental / natural sciences	31	1178	14%
Religion / ethics	11	418	5%
History / social sciences	10	380	4%
Music	7	266	3%
Arts	8	304	4%
Crafts	11	418	5%
Physical education	18	684	8%
Home economics	3	114	1%
Guidance counseling	2	76	1%
Optional subjects	13	494	6%
	226	8588	100%

As presented in article IV, it is evident from table 2 language subjects, mother tongue, language 1, 2, 3 and 4, officially designated as A1, A2, B1 and B2 respectively (Government Decree, 422/2012, 6§), are prioritized in basic education. To be more specific, a compulsory second language, designated as A1, is introduced on the third grade and a compulsory third language, designated as B1, is introduced on the sixth grade (ibid.). Additionally, an optional fourth language, designated as A2, can be voluntarily studied starting on the third grade, and an optional fifth language, designated as B2, can be voluntarily studied starting on the sixth grade (ibid.). Alternatively, the compulsory third language may be voluntarily studied as a A2 subject (ibid.). The full extent of basic education is a minimum of 222 units, of which mother tongue is 19 percent, A1-language is 7 percent and B1-language is 3 percent (ibid.). This means that 29 percent of the compulsory education provided in basic education consists of languages.

In upper secondary education the other languages are designated simply as A or B and they are taught as courses during the three-year-period (Government Decree, 942/2014, 9§). Table 3 illustrates the allocation of lesson hours in upper secondary education:

Table 3:   Allocation of lesson hours (upper secondary education)

School subject	Compulsory units (=38h)	Optional units (=38h)
Mother tongue	6	3
Language 1	6	2
Language 2	5	2
Other languages	0	16
Mathematics (basic)	6	2
Mathematics (adv.)	10	3
Biology	2	3
Geography	2	3
Physics	1	7
Chemistry	1	7
Religion / ethics	3	2
Psychology	1	4
Philosophy	1	3
History	4	2
Social sciences	2	2
Physical education	2	3
Music	1 or 2	3
Arts	1 or 2	3
Health education	1	2
Guidance counseling	1	1

As also presented in article IV, similarly to basic education, it is evident from table 3 that the compulsory language subjects are given priority in upper secondary education. The minimum number of courses required in upper secondary education is 75 courses, of which 47 to 51 courses are compulsory (Government Decree, 942/2014, 9§). Mother tongue comprises 8 to 12 percent, an A-language comprises 8 to 11 percent and a B-language comprises 7 to 9 percent of the total minimum required courses (ibid.). This means that the compulsory language subjects make up a minimum of 23 percent of the education provided at the upper secondary level. As upper secondary education allows the students to choose what they study more freely, there is less emphasis on compulsory language subjects than there is in basic education.

The frameworks of education set in legislation are supplemented by the national core curricula of basic education (FNBE, 2014) and general upper secondary education (FNBE, 2015). The current core curricula were adopted in 2016, but the data in this study was collected during the previous core curricula (FNBE, 2003, 2004). Therefore, this study falls under the previous curricula. The core curricula

elaborate the goals and the content of language subjects but make no direct reference to any foreign language as a designated primary language. English is, however, inadvertently given primacy as it is used as the primary example of a foreign language (FNBE, 2003, pp. 100–101, 2004, pp. 138–144).

Relevant to article IV, regarding visual multimodality, it is evident from the syllabuses that writing is given priority over image. This is evident from the emphasis given to language subjects. Some of the subjects, such as mathematics, physics and chemistry (cf. O'Halloran, 2005), make use of both, writing and image, but the use of image is specialized and/or illustrative, serving in a technical or a representative capacity subsidiary to writing, rather than being creative or expressive, as identified in prior research (Guattari, [1979] 2011, pp. 161–162; Guattari and Rolnik, [1986] 2007, p. 138; Kress and van Leeuwen, [1996] 2006, pp. 16–17; Kress and Selander, 2012, p. 268; Lehtonen, 2002, pp. 57–58). Arts is listed third from last in the basic education syllabus and second from last in the upper secondary education syllabus. Crafts is available only in basic education and it is listed as second last in its syllabus. Moreover, it is worth noting that the teaching provided in arts and crafts is not evenly distributed during the nine years of compulsory education and they are largely allocated to the primary level (Government Decree, 1435/2001, 6 §; FNBE, 2004, p. 304). Conversely, the provision of arts and crafts is minimized at the lower and upper secondary levels of education. Furthermore, in stark contrast with basic education, the importance of arts and crafts is hardly even mentioned in the context of upper secondary education (Government Decree, 955/2002, 3–4 §). The modal priority given to writing over image is also further evident from the allocation of lesson hours (Government Decree, 1435/2001, 955/2002; FNBE, 2004, pp. 138–145, 304).

4.3 Language and multimodality in Finland

While it is certain that Finnish is the commonly used language in Finland and that other languages are marginal, the official statistics presented in section 4.1 do not, however, indicate the use of languages (Boyd and Palviainen, 2015, p. 62; Tammenmaa, 2020, p. 9). For example, relevant to the findings of the articles included in this thesis, while the number of people who have reported themselves as native speakers of English is insignificant, the language has gradually become more and more significant in Finland, as discussed by Leppänen et al. (2011, pp. 17–20). Its popularity can be attributed both to global trends, such as English language music, television, films, gaming, and the internet, and to local changes in education policies and attitudes towards English among the individuals. Leppänen et al. (2011, p. 20) note that the choice to subtitle foreign content on TV, as opposed to dubbing, has provided unmediated access and an informal way of learning English. More

contemporarily, the internet has further emphasized this and provided unrestricted access to English.

Considering that the mother tongue mentioned in the syllabuses is in most cases either Finnish or Swedish and the second national language is also Finnish or Swedish, one third of the languages taught as mandatory subjects is chosen by the students. Data on basic education indicates that slightly under 80 percent of all the 180 000 lower secondary students studied two foreign languages between 2010 and 2012 and that over 90 percent of all the 57 000 primary level students opted for English as the A1-language on the third grade between 2008 and 2012 (Kumpulainen, 2014, pp. 43–44). In other words, the typical combination of language subjects consists of Finnish or Swedish as a mother tongue, English as A1-language and Swedish or Finnish as the B1 language. Only approximately one fourth of the students opt for an A2 language, primarily choosing English, Swedish, or German (Kumpulainen 2014, p. 45). Moreover, only less than one fifth of the students opt a B2 language, primarily choosing German or French (Kumpulainen, 2014, p. 46).

In upper secondary education it is most common and a slowly growing trend to study only two foreign languages, with over 45 percent studying only two foreign languages in 2013, followed by a bit under 40 percent studying three foreign languages and a bit over 10 percent studying four foreign languages (Kumpulainen, 2014, p. 98). Nearly all, 99.4 percent of the 30 000 students, studied English as an A-language in 2013 (Kumpulainen, 2014, p. 99). Swedish, Finnish, German and French were studied by 7.6 percent, 6.7 percent, 4.3 percent, and 1.9 percent respectively (ibid.). B1-language is typically either Swedish or Finnish due to the mandatory nature of studying the other national language. B2- and B3 languages are typically German or French, with 8 to 10 percent studying German and 6 to 8 percent studying French as a B2- or B3-language in 2013 (Kumpulainen, 2014, p. 100). Overall, except for English, studying foreign languages as offered in their full extent has declined noticeably, with a 28 percent drop in studying French, German, Russian and Swedish as an A- and B-language from 2003 to 2013 (Kumpulainen, 2014, p. 101).

In summary, Finnish and Swedish are in *de jure* privileged positions as mother tongues in both basic education and upper secondary education. Moreover, both are mandatory language subjects on both levels. English is, however, the *de facto* dominant foreign language. Its position is not enshrined in legislation and the number of its native speakers is insignificant, but it is, nevertheless, the foreign language of choice of nearly all language learners in the Finnish education system. It is, in fact, such a dominant language in Finnish education that the growing trend is considered problematic and detrimental to learning other languages, including Finnish and Swedish (Hakulinen et al., 2009, pp. 76–84). As also mentioned in the introduction,

one of the reasons for the marginalization of other languages in schools is the requirement of a minimum group size in language teaching, which in many cases is not met in a single school, while there may well be a large number of students in multiple schools who wish to study another language besides English (Hakulinen et al., 2009, pp. 79–82). The privileged positions of these three languages, Finnish, Swedish and English, in Finnish society are highly relevant to the findings of this thesis.

In line with existing research pertaining to multimodality and education (cf. Kress, 1997, 2003, 2011; Kress and van Leeuwen, [1996] 2006; Kress and Selander, 2012; Wohlwend, 2009, 2011), Pöllänen (2011) and Räsänen (2008) indicate that writing has always been the valued mode of expression in the Finnish education system. In other words, the Finnish education system has always been *logocentric*. For example, regarding images, unlike reading and writing oriented subjects, visual arts and crafts education has never been considered a priority in the Finnish education system. In the late 1800s and the early 1900s it was considered important to include them in the school curricula, primarily for practical purposes, for preparing and maintaining everyday tools and artifacts, as well as for developing aesthetic sense. While never a priority, their role has been further marginalized in the late 1900s and early 2000s. The rationale for this is that they are no longer deemed relevant in industrially and technologically developed societies. It is worth noting that this should not be taken to indicate that students are not interested in arts and crafts, considering their popularity among students (Kumpulainen, 2014, pp. 49–50), but rather that the system emphasizes other subjects instead. Simply put, these subjects are deemed of little practical value in a contemporary society as mastery in these skills is not considered relevant by the state authorities, regardless of how it may conflict with the interests of the students, as argued by Wohlwend (2011, pp. 248–249). This issue is relevant to the findings of this thesis, especially to those that pertain to agency. This is addressed in article IV.

5   Overview of the research articles

As envisioned during the planning stage of this thesis in early 2015, the four articles included in this thesis are best understood as modules. Each article is therefore self-contained; the articles can be read independently and in any order. However, while this thesis is modular, it is, nonetheless, more than the sum of its parts. The first article provides the reader a toolbox for the quantitative assessment of societies, as also discussed in sections 2.2 and 3. The three other articles utilize certain tools in that toolbox, as discussed in each of these articles to the extent that is relevant to them. While these articles can indeed be read in any order, I recommend reading article I first due to its comprehensive and meticulous discussion of the data annotation scheme, as well as the process of data gathering. I would then proceed reading the articles in the order of presentation as each article can be understood as complementing the previous article. Article II is intended to give a broad overview of the linguistic aspects of the landscape, whereas article III takes a closer look at the key findings of article II. Article IV shifts the focus from language to visual multimodality and reassesses the matter of agency discussed in articles II and III. It is also worth emphasizing that all the articles approach the school as a landscape due to its role in enhancing the disciplinary capabilities of the various materialized discourse present in the landscape, as further discussed in sections 2.1, 2.5 and 3.2.1.

It is worth noting that article I presents more data annotation categories than what is utilized in the following three articles and therefore the analyses and the findings presented in these articles make use of only a part of the potential of the data annotation scheme. It would certainly be possible to present further findings based on this data as all the groundwork has already been done. To be clear, the full annotated set of data has existed since 2015. Limitations of scope and editorial decisions are the primary reasons for not including more variables in the articles and in this thesis. For example, related to modes of semiotization or multimodality, as well as to the matter of agency, material aspects pertaining to durability of the items were initially intended to be assessed in the fourth article, but they ended up not being included in it due to limitations of scope. I had to make room for certain additions to the text, which resulted in excluding the assessment of medium durability.

I realize that some may consider not including all the data annotation categories in the analysis as inadequate in terms of effort and I agree that this is indeed a limitation, or, rather, that my findings are indeed limited to addressing only certain aspects of the school landscape. I understand that this is hardly ideal. However, the analyses included in this thesis function as a larger whole, as a single unit. They complement one another as each module provides different insights to issues that are linked to one another and benefit from being examined in conjunction with one another. I chose to prioritize the aspects of the landscape examined in these articles due to their centrality and connections to one another.

I also intended to apply correspondence analysis (cf. Beh and Lombardo, 2014; Benzécri, 1992; Greenacre, [1993] 2017) which utilizes tabulated data of nominal categories and presents the relations between variables of different categories spatially in two-dimensional space (plane), in a way that makes it easy to understand which categories and their variables are associated with one another and, conversely, which are not. I consider correspondence analysis to be a particularly useful technique because it allows one to think in terms of relation (Bourdieu and Wacquant, 1992, p. 96; Sallaz, 2018, pp. 493–494). I wanted to go beyond what is presented in the articles, to maximize the potential of the statistical analyses, as done by, for example, Lyons (2020). However, correspondence analyses were not included in the articles due to editorial decisions and limitations of scope.

5.1   Overview of article I

Each of the four articles included in this thesis builds on the same conceptual framework discussed in section 2 and the same materials and methods discussed in section 3. The articles differ from one another mainly in terms of their focus. Article I, *The advantages and disadvantages of quantitative methods in schoolscape research* (Savela, 2018b), published in *Linguistics and Education*, elaborates the methods applied in this thesis. In summary, the article introduces a data annotation scheme that consists of 22 coding categories that serve to guide a form of visual content analysis, as also discussed in section 3.2.3. The data annotation scheme was developed in response to the limitations of existing data annotation schemes. I initially attempted to make use of existing data annotation schemes, but they proved to be too limited and/or problematic for my purposes and therefore I opted create a modular data annotation scheme that could be utilized not only by me but also by others. It was my intention from the start to make it possible for others to incorporate parts of it to other data annotation schemes. I sought to do this in order to facilitate further research, so that others may pick and choose what they find useful and make use of those components as they see fit for the purposes of their research projects.

The benefit of my work is that I rigorously tested the data annotation scheme against a set of 6016 units of analysis, going back and forth several times, reworking the scheme, the annotation categories, and their variables if the scheme proved to be dysfunctional. To be clear, when I annotated the data, if instances in the data proved to be problematic, not aligning with my categorization, I stopped the annotation project and reworked the relevant categories and their variables. I then went through the data again, in its entirety, (re)annotating the whole set of data. This was done in order to avoid inconsistent data annotation. I believe this worked well and helped me to better understand the complexities involved, especially regarding unitizing, as discussed in section 3.2.1. This was, of course, highly time consuming, but I believe it had to be done for the sake of consistency. This is in line with the existing best practices of content analysis (Krippendorff, [1980] 2018, p. 91), developing the data annotation scheme by testing it against real data, rather than forcing the data to conform to a pre-established set of categories and variables, as indicated in section 3.2.

The data was gathered by me in a school located in an urban municipality in Southwest Finland. The data gathering took place in the spring of 2015. It lasted approximately ten days and it was conducted in cooperation with the school, in accordance with the Personal Data Act (523/1999) and the principles set by the FABRI (2009), as discussed in greater detail in section 3.3. This set of data was first introduced in this article, serving to support the discussion of the proposed annotation scheme. Consisting of 6016 units of analysis, henceforth referred to as items, all annotated according to the scheme, the data is not, however, analyzed in detail in this article. The article does, however, contain 19 figures, of which 15 illustrate the various elements encountered in the school and the difficulties involved during the development of the data annotation scheme. The four other figures illustrate the potential of quantitative approaches, namely the improved granularity of the analysis made possible by assessing multiple variables simultaneously in relation to one another, as a matter of co-occurrence, as also discussed by Amos and Soukup (2020) and Lyons (2020). While it is acknowledged in this article that quantitative approaches tend to be resource intensive during data gathering and annotation, being highly arduous, the analysis of multiple categories makes it possible render apparent various patterns that emerge in the visual field, as also discussed in sections 2.2. and 3. Quantitative approaches that assess the data relationally can offer unique insight that may not be possible to examine by conducting qualitative analysis, as discussed in section 3. Therefore, as also indicated in its title, the article was written not only to elaborate the methods, including the trials and tribulations that pertain to the process of developing a data annotation scheme, but also to assess advantages and disadvantages of quantitative methods in landscape studies.

In summary, article I functions as a toolbox for subsequent research and the methods discussed in the article are utilized in the subsequently published articles. It functions as a proof of concept. The other articles utilize the methodology to the extent that is relevant and applicable to the research questions of each article. Therefore, certain aspects discussed in the first article are not covered in these three subsequent articles.

5.2 Overview of article II

Article II, third in the order by publication date, They appear missing – An examination of the apparition of language, discourse and agency in a Finnish landscape of education (Savela, 2019), published in Language, Discourse & Society, focuses on discourses of education and language policy in Finland. The data utilized in this article is a subset of the full set of data first presented in the first article. It consists of 3832 items, which covers approximately 64 percent of all the items. The rest of the items do not contain language on them and therefore they are not included in the analysis.

This article provides an overview of the linguistic composition of the landscape of the school, followed by a closer investigation that addresses the roles of different landscape participants. Moreover, the analysis extends to addressing the salience of languages and the participant roles on different levels of education. This was made possible by annotating each item by its location in the school. As noted in the article, it was fortuitous that the school in question was largely spatially partitioned, thus allowing this type of contrastive analysis. These aspects provided the basis for four research questions: "how language discourses materialize in the landscape, how agency discourses materialize in the landscape, how are they connected to one another and how they are grounded on the de jure language and education discourses?" (Savela, 2019, p. 86).

The article provides answers to the set research questions. Firstly, the results of this article indicate that the school is visually dominated by the presence of Finnish, followed by English, while other languages are at best marginally present visually, Swedish being the most prominent of these other languages. Secondly, regarding agency, it is evident that the school staff, namely the teachers, are the active agents in the landscape, whereas the students act in a more passive role. In other words, agency appears to be largely biunivocalized in the school, as discussed in section 2.3. Overall, student participation appears to decline as the students progress from primary to secondary education. Third parties also influence the landscape, but their presence is largely attributable to the use of premade teaching materials. Thirdly, on one hand, considering how the school is known for its linguistically heterogeneous student body, the overall linguistic homogeneity is surprising. On the other hand,

considering how the teachers and school staff are largely responsible for the presence of items issued in the school landscape, the apparent linguistic homogeneity is in line with the existing de jure language and education policies, in which instilling preferred national and linguistic identities is the norm. These findings are in line with recent studies examining teachers' attitudes towards multilingualism in Finnish schools (Alisaari et al., 2019; Tarnanen and Palviainen, 2018). Summarizing the findings of these studies, while most teachers tend to foster positive attitudes towards multilingualism in general and are open to the idea of reflecting that in their learning materials, they are not as supportive of multilingualism in the classroom and many believe it to be their duty to promote a national language, Finnish or Swedish, thus favoring monolingualism. In short, the apparent linguistic homogeneity can largely be attributed to the propagation of certain dominant languages by teachers. Fourthly, summarizing all these aspects, it is evident that de jure and de facto discourses are materialized in the landscape. The overwhelming presence of Finnish is likely the result of the manifestation of de jure discourse of parallel monolingualism which effectively marginalizes the presence other languages. Similarly to Finnish, the marginal presence of Swedish is attributable to its privileged de jure position in the society. The only exception to the norm is English, which enjoys a de facto dominant position in the Finnish education system. In this case its presence appears to be further augmented by the school's English language track, but this aspect is not addressed in detail in this article due to limitations of scope. This aspect is addressed in the following article, article III.

5.3 Overview of article III

Article III, second in the order by publication date, One, two or more? – an examination of the apparition of language and discourse in a Finnish landscape of primary education (Savela, 2018a), published in the International Journal of Bilingual Education and Bilingualism, picks up where the second article left off. The focus of this article is therefore on the presence of Finnish and English in the school landscape. As only primary level classrooms are occupied by specific groups or classes of students, it is not possible to examine the influence of the school's English language track on the secondary levels. Therefore, this article focuses exclusively on the primary level. Due to this reason the data utilized in this article is a subset of the full set of data presented in articles I and II. This subset of data consists of 2910 items, which accounts to approximately 48 percent of all the data. This alone indicates how visually prominent the primary level is in comparison to the lower and upper secondary levels, considering that the full set of data also includes various shared areas used by all levels of education. However, similarly to article II, as the focus of this article is on the linguistic composition of the landscape, items that do

not contain language are excluded from the analysis. Furthermore, as the investigation is narrowed down to classrooms and corridors, the subset of data examined in this article consists of 1328 items, which is approximately 22 percent of all the data.

Article III is constructed around four research questions: "how language discourses materialize in the landscape, how are they materialized in the classrooms and the corridors, how are discourses materialized on the monolingual and bilingual tracks and how is their materialization connected to agency?" (Savela, 2018a, p. 1). In summary, article III is dedicated to taking a closer look at the central issues discussed in article II, focusing on the apparition of English language.

The findings of article III (Savela, 2018a) provide answers to the set research questions and the findings are in line with the findings of article II (Savela, 2019). Firstly, it is evident that Finnish and English are the salient languages in the primary level landscape, followed by Swedish which is only marginally present visually. The presence of Swedish can be attributed to its privileged de jure position in Finland. Secondly, the materialization of the de jure and de facto discourses is more apparent in the classrooms than it is in the corridors. Thirdly, what is particularly interesting about the findings of article III is the stark contrast between the English track and the non-English track primary level classrooms. Similarly to the findings presented in article II, as one might expect, the non-English track classrooms contain mostly Finnish and some English while other languages are marginally present visually. This is not, however, the case in the English track classrooms where English is the dominant language. Finnish is also present on this track, but it is in a secondary position in terms of its visual presence. These findings are not particularly surprising, considering the overall emphasis of English on the English track. What is striking about the English track classrooms, however, is the nearly complete erasure of other languages besides English and Finnish. This is in stark contrast with the non-English track classrooms which contain at least some traces of the presence of speakers of other languages. It appears that Finnish is considered the default local language while English is treated as the school's lingua franca, the language that is supposed to integrate those who do not speak Finnish with those who do speak Finnish. However, this practice of emphasizing English appears to have a detrimental effect on the visual presence of other languages, erasing them from the landscape, as also identified by Szabó (2018, pp. 185–186) in other Finnish schools. This finding also echoes the concerns expressed by Hakulinen et al. (2009, pp. 76–83) that providing more and more education in English will likely hinder learning other languages, as mentioned in section 4.3. Fourthly, as also indicated in article II, the teachers and the school staff are largely responsible for the presence of the visually salient languages in the primary school landscape whereas the students play a more passive role

regarding the landscape. In other words, agency appears to be largely biunivocalized at the primary level of this school.

5.4   Overview of article IV

Article IV, More than writing on the wall – An examination of writing and image in a Finnish primary and secondary level learning environment (Savela, forthcoming), to be published in Pragmatics and Society, re-examines agency in the landscape. The findings of articles II and III indicate that students are passive in terms of their participation in the landscape and that they become even more passive as they progress from the primary level to the secondary levels of education. Conversely, the findings of these articles indicate that the members of the institution, namely the teachers and other members of the school staff, are the principal authors and agents in the school landscape. In other words, agency appears to be largely biunivocalized in the school landscape. However, these articles only investigate items that contain language, thus excluding approximately 36 percent of the data. As noted in the introduction, I initially planned to investigate only the linguistic aspects of the landscape, as manifested on the various items in the landscape. However, as soon as I entered the school premises, it became apparent to me that I might risk simplifying much of the complexity of the landscape by excluding items that do not contain language. Moreover, I realized that not only would I risk simplifying the composition of the landscape, i.e., what items and messages are present in the surroundings, but also the matters pertaining to agency. It seemed to me that students express themselves visually also in other modes besides writing and therefore I opted to include the items that contain image in the data, in addition to the items that include writing. I therefore chose to dedicate an article to investigating these aspects. As the examination of data pertains not only to language, the full set of data, 6016 items, is utilized in this article.

Article IV is constructed around three research questions: "how writing and image are present in the school", "how does the inclusion or exclusion of image affect the findings, especially regarding the involvement of students in the school" and "what educational discourses are materialized in the school"? (Savela, forthcoming).

The article provides answers to these three research questions. Firstly, it is evident that writing is the overall preferred mode of expression and meaning making. However, the results also indicate that there is a shift in the students' use of modes from image to writing that occurs at the secondary levels of education, as evident from the items investigated in this article and as also identified in prior non-landscape specific studies (Kress and van Leeuwen, [1996] 2006, p. 16; Kress and Selander, 2012, p. 268; Lehtonen, 2002, pp. 57–58). This gradual shift is, in turn,

countered by the teachers who shift from writing to image. Moreover, it is also worth noting that the use of image does not merely decline overall. Instead, it rather becomes less creative and expressive and more specialized and illustrative, accompanying writing. Secondly, the results indicate that not only is excluding items that do not contain language problematic, but such exclusion also makes students appear to be more passive landscape participants than they are. To be more specific, ignoring items that do not contain writing excludes only approximately 15 percent of all items. However, relevant to the findings of articles II and III, not taking these items into account results in ignoring 30 percent of items issued by students and 36 percent of items issued by primary level students. Simply put, focusing only on the linguistic aspects, as manifested on the items that contain writing, ignores approximately one third of the items issued by students, thus making it appear as if students are more passive than they actually are. Moreover, focusing solely on writing, especially on language, ignores how students express themselves through image, by, for example, drawing, painting, and crafting. This is particularly the case at the primary level where it is only likely that many students are only capable of expressing themselves in these ways as their writing skills are rather limited. Thirdly, the shifts in modes appear to be largely the result of considering image as an infantile mode of expression, something to be grown out of, whereas writing is considered a sign of maturity, something that signals capacity to express oneself in a grown-up fashion and therefore to be striven for, as argued by Guattari (2009, p. 282) and Kress and van Leeuwen ([1996] 2006, p. 16). This is problematic because, as expressed by Guattari ([1979] 2011, pp. 161–162, 168–169), it involves erasure of creativity, "transforming the child's semiotic coordinates from top to bottom"; as students progress through the school system, their pre-school modes of semiotization are effaced and replaced by a detached mode of writing that then holds primacy over image. Moreover, as further elaborated by Guattari, image becomes modeled after the dominant social categories that value it based on mimesis, how well it represents something (Guattari and Rolnik, [1986] 2007, p. 138). This means that, as already pointed out, it is not that the use of image declines, as such, but rather that it loses its expressiveness when it becomes specialized, serving a technical function, for example in the form of charts, graphs and diagrams that appear alongside written work (Kress and van Leeuwen, [1996] 2006, p. 16). The reasons for this shift can be found in the education discourses, namely in the relevant pieces of legislation and in the curricula, which emphasize the importance of writing oriented subjects whereas image-oriented subjects, such as arts and crafts, are deemed unimportant in a modern postindustrial society, as discussed in section 4.3.

6 Conclusion

In this thesis, my task has been to indicate how landscape functions not as a mere representation but as a construction of reality, as a visual order of things, how it is that people come to understand space and engage with it visually. While others have conducted similar research, and I acknowledge the work done by practitioners of LLS and schoolscape studies, as discussed in sections 1, 2 and 3, I have sought to emphasize the importance of landscape, how, on one hand, people are largely oblivious of it and, more importantly, what it does to them, and, on the other hand, how they themselves, rather paradoxically, come to desire it and hence play a role in (re)producing the existing states of affairs, as discussed in sections 2.4 and 2.5.

Despite its centrality in this thesis, I wish to emphasize that I do not endorse landscape as a concept, as presented in this thesis, because it is a "horror story" (Deleuze and Guattari, [1980] 1987, pp. 168, 190). The problem with it is that it is the product of Cartesian perspectivalism (Jay, 1988), which, in turn, is part of a dominant regime of truth (Foucault, [1977] 1980b, p. 131, [1997] 2003, p. 164). It flattens reality, reducing its complexity, making it appear as if, rather paradoxically, we lived in a painting, as Daniels and Cosgrove (1988, p. 1) suggest. It has this strange quality to it, being a human invention, yet marked by the absence of humans, as perceptively noted by Samuels (1979, p. 52). It has this "deadening effect", erasing all that is lively about space, as expressed by Lorimer (2005, p. 83). It would be more fruitful, as well as liberating, to approach space through what Ingold (1993, p. 157) calls *taskscape* rather than landscape, as an ongoing process marked by events rather than as a seemingly static backdrop marked by objects. In fact, I am an advocate of such a process-oriented view. It is, however, precisely the dominance of the static view that concerns me and why I wanted to address it in this thesis; it is this withdrawal to a safe distance that it affords that makes it highly desirable (Rose, 2006, p. 544), which in turn makes it a particularly effective medium of normalization (Mitchell, 2002c, pp. vii–viii) and central to the (re)production of everyday life (Schein, 1997, p. 676). I am only interested in it because it makes the exercises of power "simultaneously most effective and most invisible" (Braidotti, 2011, p. 4).

To answer the research question of this thesis, it is evident that certain de jure and de facto discourses that pertain to language, semiotic modes and agency are materialized in this landscape of education. Firstly, it is apparent that a de jure discourse of parallel monolingualism and a de facto discourse of internationalism are materialized in the landscape. This is evident from the overwhelming presence of Finnish and English in the landscape, as well as from the marginal presence of Swedish. The presence of Finnish and Swedish can be attributed to a strict language policy, as also evident from the relevant pieces of legislation and curricula pertaining to education, whereas the presence of English is attributable to its position as a lingua franca, as discussed in sections 4.2 and 4.3. What I find particularly interesting is that while Finnish and Swedish are given clear formal priority in the landscape, albeit largely in a mutually exclusive manner, as also established in other studies, they appear to leave at least some room for other languages in the school landscape. This is hardly an interesting finding on its own, but it becomes interesting when it is contrasted with how the increased presence, if not dominance, of English in certain parts of the school appears to leave little room for other languages in the landscape. It would appear that the more there is English in the landscape, the more homogeneous the landscape becomes linguistically, as discussed in sections 4.3. and 5.3. Secondly, it is also apparent that a discourse of logocentrism that presupposes that writing is the proper mode of expression is materialized in the landscape. This is evident from how there is a shift in the use of modes from image to writing that occurs at the secondary levels of education. This is attributable to the relevant pieces of legislation and curricula, as discussed in section 4.3. Thirdly, linked to the materialization of discourses of language and semiotic modes, a discourse of agency is materialized in the school landscape. The results indicate that landscape participants, especially students and teachers, have specific roles that they are expected to play. To be more specific, students are expected to be passive, subordinate recipients of knowledge, whereas teachers are expected to be active, superordinate holders of knowledge who transmit the knowledge to the students. Student activity is evident at the primary level, in all its forms, but this is no longer the case at the secondary levels. In other words, agency appears to biunivocalize as students progress through the system, as discussed in section 2.3.

To be more critical, the materialized discourses that inform the school landscape function to discipline students, to instill desirable identities in them, which, in turn, results in the (re)production of the existing order of things, as argued by Thompson and Cook (2013, p. 330) and further elaborated in sections 2.3 and 2.5. In other words, the constant presence of materialized discourses in the landscape becomes taken for granted, as integral to the landscape. The world appears as self-evident, explainable, and accountable, providing a reassuring foundation, so that people do not have to question who they are and what kind of world they belong to (Rose,

2006, p. 544, Schein, 2009b, p. 820), so that they do not have to confront the nothingness of their being (Sartre, [1943] 1992). Firstly, the presence of Finnish and Swedish comes to be seen as central to the national identity, albeit in a largely mutually exclusive manner, and the presence of English comes to be seen as central to an international identity, whereas other languages are not seen as integral parts of the landscape. This is problematic because it ignores current population trends in Finland, as indicated in section 4.1. Secondly, the presence of image comes to be seen as childish, as something to grow out of, whereas the presence of writing comes to be seen as marking adulthood, as something that the students should strive for. This is also problematic, considering that it stifles creativity, as elaborated in section 4.3, devaluing innovation while valuing imitation, as discussed in section 2.2, resulting in docile bodies, as indicated in section 2.3.

The presence of these materialized discourses creates certain expectations, certain codes of conduct, that the students are expected to meet and do meet in order to qualify as competent members of society, to fit in, to be part of that world, to belong in it. Furthermore, these expectations of proper code of conduct are linked to one another. Establishing writing as the desirable or proper semiotic mode further emphasizes the centrality of Finnish and English as it effaces image as an alternative mode of self-expression. This is further reinforced by the central role of the institution, by how teachers are the ones largely responsible for shaping student identities through the materialized discourses in the school landscape. In short, to paraphrase Deleuze and Guattari ([1980] 1987, p. 177), the students do not so much have an identity as slide into one. Moreover, this occurs largely unbeknownst to the students due to the way landscape is typically seen as a static entity situated in space, a mere surface or a container for various objects that are understood as inert, lacking the capacity to affect people, which, in turn, reinforces their disciplinary capabilities. Therefore, to further paraphrase Deleuze and Guattari ([1980] 1987, p. 180), the students do not choose the landscape as it is the landscape that chooses them.

It is worth noting that the investigated school landscape and the materialized discourses that inform it are what one might expect, considering how tightly regulated and centralized the Finnish school system is, how governmentalized it is, as mentioned in the introduction and further discussed in sections 2.3, 4.2 and 4.3. To paraphrase Dewey (1915, p. 15) and Tarde ([1890] 1903, p. 112), the findings provide us with an excellent landscape photograph of our social condition in its embryonic state. It shows us the face of the nation in the making (Deleuze and Guattari, [1980] 1987, p. 533; Ronai, 1976, pp. 154–156). It not only tells us how things were, but also how things will likely be in the future. It is a record of our actions that have been frozen in time. It reveals "our tastes, our values, our aspirations, and even our fears, in tangible, visible form" as "[a]ll our cultural warts and blemishes are there, and our glories, too; but above all, our ordinary day to day

qualities are exhibited for anybody who wants to find them and knows how to look for them" (Lewis, 1979, p. 12). Of course, as excellent as that photograph may be, like any photograph, it does not capture everything. Something always remains outside the viewfinder. Something always ends up outside the frame. In other words, this study addresses only certain aspects of the school landscape and only certain materialized discourses that inform it. There are countless other discourses that intersect in this node or nexus of practice.

It is also worth noting that while things are as how one might expect them to be, the way they are is not necessarily how they should be. The presence of certain languages, semiotic modes or any materialized discourses should not be taken for granted, no matter how desirable the landscape appears to us. This critical stance should not, however, be understood as any kind of endorsement, one way or another, as I believe that these matters should be left to the members of society to decide. I am not against Finnish or English, nor any other language. Similarly, I am not against writing, nor any other semiotic mode. It would certainly be tempting to be in a position to speak for others, to claim to know how things ought to be, based on one's wealth of knowledge, but, as noted by Foucault, researchers are like anyone else, "themselves agents of this system of power", and thus susceptible to becoming pawns in someone else's game, objects and instruments "in the sphere of 'knowledge,' 'truth,' 'consciousness,' and 'discourse'" (Foucault and Deleuze, [1972] 1977, pp. 206–208).
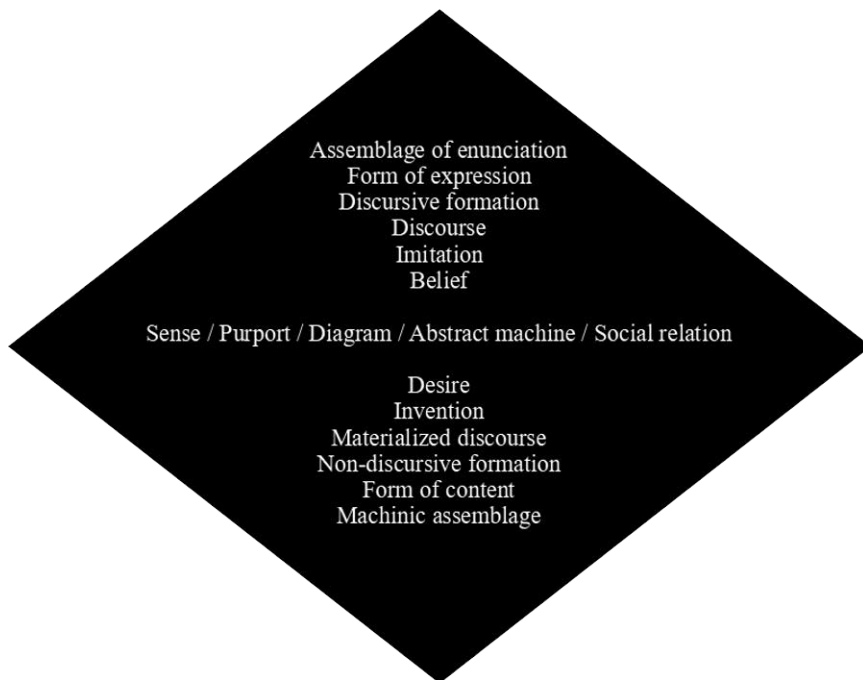
While the results and the findings of this thesis are important, as well as interesting, if not intriguing, to me, they are not as important as the conditions of their apparition. To be more specific, I consider the task of a researcher to be empiricist, not in the sense that one attempts to uncover some hidden original order of things, but in the sense that one seeks to "find the conditions under which something new is produced" (Deleuze and Parnet, [1977] 1987, p. vii), to render visible the invisible, not the visible, the already seen, as what is already seen, the visible, is always subject to change (Klee, 1920, p. 28). It is not that the visible, what is apparent to us in the present, is not important, but rather that it is much more useful to focus on how they might have come to being, how the present states of affairs may have actualized. To be clear, the task is not to understand conditions as a matter of necessity, what had to happen for things to be the way they are now, but as a matter of contingency, what could have occurred for things to come to be the way they appear to us in the present. To me, this is the purpose of discourse analysis, to understand how certain actions become practices, which, in turn come to "systematically form the objects of which they speak" (Foucault, [1969, 1971] 1972, p. 49). This is particularly important to me because it pushes us to think for ourselves. It invites us to ask tough questions pertaining to power relations, such as who is or might be responsible for the existing states of affairs, who gains or might gain from

things being the way they are, who guarantees or legitimates the situation and under what conditions? It shifts the focus from research to education, not merely, no longer, telling how things are, but also providing people tools to understand how things come to be the way they are and, more importantly, how they may also come to be in the future. Therefore, for me, the focus should always be on the collective production of subjectivity, not merely what people do, but how they come to do what they do and how what they do comes to affect what they and others do (Guattari, [1992] 1995, p. 25). To paraphrase Proust ([1927] 1931, pp. 265–266), the primary goal of the researcher no longer ought to be to tell the masses how things are, one study after another, to legitimate oneself, one's colleagues, a school of thought, a field, or a discipline, but to provide people useful tools that they can use to figure things out themselves, to gain access to any kind of discourse in a society. That is the function of education, as mentioned in section 2.3. Therefore, in a way, the goal of the researcher is to make oneself redundant.

Abbreviations

CDA   critical discourse analysis
CDS   critical discourse studies
CLIL   content and language integrated learning
DSLR   digital single lens reflex
LLS   linguistic landscape studies
MDA   mediated discourse analysis
NA   nexus analysis

A graphic summary of diagrammatics

Assemblage of enunciation
Form of expression
Discursive formation
Discourse
Imitation
Belief

Sense / Purport / Diagram / Abstract machine / Social relation

Desire
Invention
Materialized discourse
Non-discursive formation
Form of content
Machinic assemblage

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