Cartographies of Becoming in Education

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A Deleuze-Guattari Perspective

Edited by

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Permission to show this painting on the front cover of the book has been granted by the artist Andrea Eckersley.

ENTRY

"The rhizome pertains to a map that must be produced, constructed, a map that is always detachable, connectable, reversible, modifiable, and has multiple entryways and exits and its own lines of flight" (Deleuze & Guattari, 1987, p. 21).

DIANA MASNY

1. CARTOGRAPHIES OF BECOMING IN EDUCATION

Theory and Practice

INTRODUCTION

Cartographies relate to mappings and mappings relate to the rhizome. Cartographies are captured through the rhizome, "movements *in diverse directions instead of a single path, multiplying its own lines and establishing the plurality of unpredictable connections in the open-ended smooth space of its growth"* (Semetsky, 2008, p. xv). This book has no beginning, no end. It enters in the middle of a project on a plane of immanence and a continuous interplay of concept creation and rhizomic mapping. What Deleuze and Guattari contributed, not only to philosophy but also to life and living, is concept creation. A rhizomatic map with its relationality to geophilosophy highlights segmentary lines that leak and emit lines of flight, in other words, concept creation through territorialization, deterritorialization and reterritorialization. Contributions to cartographies come together in this innovative volume to explore transversality in education.

Deleuze and Guattari were concerned about how the social sciences as well as natural sciences explored problems in terms of closed hierarchical systems, which they refer to as a tree or an arborescent system (tracings). They were interested in open, rhizomatic systems/maps. They could not and would not underestimate the power of arborescent systems/tracings. How to live with the latter? This was their response: "The important point is that the root-tree and canal-rhizome are not two opposed models: the first operates as a transcendent model and tracing, even if it engenders its own escapes; the second operates as an immanent process that overturns the model and outlines a map . . ." (Deleuze & Guattari, 1987, p. 2). Tracing and maps are not a dualism; rather, the relationship of the tracing and the map refers to "paradoxical forces at work together in an assemblage" (Deleuze & Guattari, 1987, p. 12). There exist tree or root structures in rhizomes; conversely, a tree branch or root division may begin to burgeon into a rhizome (Deleuze & Guattari, 1987, p. 15).

The contributors to this book have put the tracing on the map. They come from Australia, Canada, New Zealand, Portugal, and the United States. In structure, this book is a rhizome and contains many entryways. One entry deals with Politicizing Education with contributions from David Lines, Jason Wallin and David Cole. Another entry highlights Affect and Education with

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contributions from Inna Semetsky and Mia Perry. The next entry, Literacies and Becoming, contains contributions from Elizabeth de Freitas and a collaborative text from Maria Lourdes Dionisio, Rui Vieira de Castro and Ana Sofia Arqueiro. What follows is an entry on Teacher-Becomings with contributions from Francis Bangou and Taylor Webb. Finally, an entry, deterritorializing boundaries, by Graham Livesay, and Cameron Duff follows. In keeping with multiple literacies theory (MLT) and its overall conceptualization of multiple literacies (Masny 2010), Knight provides readers with art installations interspersed throughout the book. A postscript by Diana Masny on multiplicities and transcendental empiricism in research is included. Moreover each entry way provides a quote from Deleuze, and Deleuze and Guattari that emits a line of flight, a creative response by the different contributors. While each contribution is set within a quote related, for instance, to affect, most authors in the book would include affect. Since the concept of affect is virtual, it actualizes differently in each chapter.

This collection is transdisciplinary comprised of chapters from diverse fields: education (math, literacies, curriculum studies), teaching, film studies, performance studies (dance, music, visual arts), architecture and health sciences. Each domain has educative value and therefore this book moves away from a restrictive field of education. In other words, education flows through all fields. Therefore this collection of original essays takes up the challenge of deterritorialization by mapping becoming through rhizomic cartographies. Rhizome and becoming cannot be controlled; instead they create unpredictable lines of flight. How might this be taken up?

In education, theory and praxis are intertwined. However, Deleuze (2004) calls for a theory and praxis to be lived in a different way:

> For us, the relationships between theory and praxis are more fragmentary and partial. In the first place, theory is always local… The rule of application is never one of resemblance. In the second place, as soon as a theory takes hold in its own domain, it encounters obstacles, walls, collisions, and these impediments create a need for a different theory to be relayed by the theory to be relayed by another kind of discourse….Praxis is a network of relays from one theoretical point to another, and theory relates one praxis to another. A theory cannot be developed without a wall, and praxis is needed to break through. (p. 206)

> Praxis is a system of relays in an assemblage, in a multiplicity of bits and pieces both theoretical and practical. For us, the intellectual and the theorist have ceased to be a subject, a consciousness, that represents or that is representative…who speaks? Who acts? It's always a multiplicity, even in the person who speaks or acts. We are all *grupuscles*. There is no more representation. There is only action, the action of theory, the action of praxis, in the relations of relays and networks (p.207).

This quote from Deleuze becomes a connection to MLT. In several publications (Masny 2006, 2011, 2012), I have explicated the link of MLT, theory and

practice. MLT generates a toolbox highlighting that a theory has to work and it has to be seen to work. MLT has become an avenue in which the concept of reading has been flipped on its head by deterritorializing reading in accordance with an open ahierarchical system that flows regardless. Each lived process with MLT is a singular event but at the same time expresses multiplicities within. In this book, different authors have made connections to their field and MLT. MLT happens. It is both theory and practice: "... If there is no one to use it, starting with the theorist himself, who as soon as he uses it ceases to be a theorist, then a theory is worthless, or its time has not yet arrived. You don't go back to a theory, you make new ones, you have others to make…. A theory won't be totalized, it multiplies" (Deleuze, 2004, p.208).

POLITICS AND EDUCATION

The chapter by David Lines entitled *Deleuze and music education* is devoted to music and how music teaching and learning could be conceived and practiced in light of rapid changing contexts of urban and digital music life and learning. Deleuze and Guattari (1987) challenged concepts about music education by describing music to be rhizomic. According to Lines, the present system of music learning is modular and insular in that each music subdomain area tends to ignore the broader conditions of its own practice and obscures the transdisciplinary connections that may be present. The problem is in the overall conception: predetermination and perspective of music learning. Today's educated musician is primarily seen as a technician who renders skillfully technical craftsmanship within the confines of genre-specific music pieces. Moreover, rules guiding the formation and production of the music piece has suppressed more fluid forms of music production: improvisation. Such concerns in music education become intensified in "neoliberal educational frameworks that serve to atomise curricula and reduce pedagogies to methodical and linear presentations of new material" (p. 27).

These rigid lines within the rhizome emit lines of flight to become alternative pathways to received ways of thinking. What is important here are the directions of new flight rather than predetermined pathways. The Deleuzian music educator looks forward to the emergent and moving flight paths that come out of music learning experiences: the music event *in situ*. The mapping of a rhizomic music event establishes and documents what vectors of connection constitute the event, that is, the historical vectors that have preceded its formation and the present connections that form its current constitution.

A Deleuzian concept of music also takes into account "intensities". Intensity is virtual and helps explicate moments of force when one force overcomes another force due to its level of intensity. The chapter explores intensities through sound and sound study, an educational force that opens up prospects of transdisciplinarity and affect. Sound study in cinema and digital internet for example have much to offer education as a whole. Within the context of

contemporary music culture and neoliberal educational policy and practice, Deleuze's concepts challenge music teacher thinking and action. The rhizome provokes preconceptions of music education and stimulates new thinking about how it can be thought about and practiced. Cartographies become a response to explore difference with a degree of affirmation and openness that is not always apparent in neoliberal sites of education.

The chapter by Jason Wallin entitled *Get out from behind the lectern: Counter cartographies of the transversal institution* focuses on material experimentations with transversality to propose a new way of "thinking life" with educational institutions. Wallin creates a relationship between "transversal thinkers" who are concerned with the idea that the institution must be remade: Guattari, Oury, Neil, Celestin. While at LaBorde Guattari mobilized a new tool for the material transformation of institutional life: virtual ecology of institutional life. The transversal institution is not simply about decolonizing and deterritorializing the institution. Guattari (1972, 2000, 2009) wanted that the institution undergo a liberatory revolution. The chapter begins with a tool for rethinking the material organization of the school: linking transversality with conceptualizing curriculum theory. Transversality pertains to the ways in which institutional "group-subjects" might be liberated from under repressive or stultifying forms of institutional organization. Group-subjects have a revolutionary potential according to Guattari. They almost-always pertains to the organization, regulation and management of multiplicities. As Aoki (2005) writes, pedagogy pertains more to the formation and conceptualization of assemblages as it does the orthodox scene of student-teacher transference. Wallin provides an account of concepts Guattari created at LaBorde, one being the molar image of institutional life with its "institutional sedimentation of vertical power relations" another being institutional blinkers (p. 37). Guattari advocated transversal unblinkering of institutional group-subjects and the concomitant displacement of authority in the therapeutic relationship. Aoki (2005) raised concerns that the ecology of institutional life is already foreclosed by a series of blinkers that constrict disciplinary thought within highly coded territories of knowledge and production. Transversality functions as a tool for desedimenting the territory of curriculum and instruction (Aoki, 2005). Moreover, Aoki advocates a multiplicity of curriculums "as many as there are teachers and students".

Guattari's reconfiguration of LaBorde would include incorporating radical pedagogy conceptualised by Freinet who would employ transversality as a tool for promoting group-subject proximity to institutional life and remap the institution "by unblinkering the desiring-production of the institutional group-subject" (p. 46). Herein, Wallin creates connections with MLT. Wallin concludes by suggesting that a transversal pedagogy implemented at Laborde orients thought away from "a treatment of 'individuals' in lieu of a schizoanalysis of what institutional assemblages are capable of producing" (p. 48).

In the chapter entitled *Deleuze and the subversion(s) of 'the real': Pragmatics in education*, David R. Cole asks what is the sense of real for Deleuze and how

the concept of the real helps us to understand education. These questions are taken up with data from Sudanese immigrant families in Australia, creating new lives on a new continent and as part of a different society. This study signals a Deleuzian inspired take on ethnography that is "unethnographic". Moreover, the chapter pushes the study beyond applicative dualisms. The concept of the real takes on critical importance for within "the 'field of the real' lies the sometimes dormant forces and factors that determine the possibilities of the truth" (p. 53). In other words, there are "elements within what is happening to the Sudanese families that act as markers or portals to the real of the Sudanese, and these can be reformulated as empirical evidence for claims about how to aid with their education in Australia" (p. 53). The real in a way refers to a multi-layered construct that includes the thoughts of everything that has happened to them (including the imaginary) before they arrived in Australia. The "givenness of their lives is opened up and explored…with the aim of discovering an unknown point in empirical investigation, where the Sudanese-Australian real is emergent and the incipient learning may be understood in terms of multiple literacies and pragmatism in education" (p. 54).

AFFECT AND EDUCATION

Inna Semetsky explores the concept of bricolage created by Deleuze and Guattari (1983) and refers to a schizoanalytic and transgressive mode of production. Their concept became an alternative to the concept of the pathological schizophrenic in the context of a rational dualism. For Deleuze and Guattari a schizophrenic problematises the centrality of Cartesian subject by virtue of participating in the reality of what is produced. Anti-Cartesian subjectivity, a mode of intensity participating in schizoanalysis enables the integration of the unconscious or the unthought into rational thinking at the level of the body. This integrative method which both de- and re-territorializes one's subjectivity is cartography.

Semetsky highlights the importance of *the fold* to confront the dualism between thought and the unthought dimension exemplified in Cartesian substance dualism between body and mind. Learning, for Deleuze, is embedded in the experimentation on ourselves in practice whenever mind becomes extended to the level of the body. This is bodymind learning that encompasses multiple bodily affects at the level of the unthought and the unconscious. Semetsky contends that "multiple parameters of the unconscious implicit in experiential encounters create novel relations in our real experience, because as dynamic forces they are capable of affecting and effecting changes, thus contesting the very identity of subjects on the road to individuation" (p. 79).

The unthought inhabits the plane of immanence and informs our immediate practical actions. Body and mind form a "both-and" assemblage conducive to experimental and experiential, bodymind, learning. The chapter analyses in detail Deleuze's example of swimming (in *Difference and Repetition*). It is in the real-life experiential singularity within an encounter with actual waves, in which the

virtual idea of swimming subsists, that we can experiment with this idea and comprehend its meaning through practical encounters, by means of creating a bodymind assemblage. The creative, transformative, and evaluative element embedded in Bodymind learning is necessarily characterized by new percepts and new affects in practical life. Subjectivity constitutes itself via the cartographic method of mapping a territory of problems and events. Subjectivity depends on our learning from unfolding experience.

Mia Perry addresses the bodymind assemblage through performance creation. Her chapter intersects Deleuze and Guattari's social theory with nomadic thought characterized by the rhizome and MLT in order to think nomadically through an experience of collaboration and improvisation in classroom-based devised theatre creation. Devised theatre can be considered a postmodern or "postdramatic" genre of theatre generally based on subjectivities and circumstances of the artists/students involved, living textualities. Devised theatre refers to a plurality of *processes* of experimentation and sets of creative *strategies*. Perry takes up "the production and performance of devised theatre as an anomalous place of learning (Ellsworth, 2005) with unique affordances in terms of its pedagogical potential" (p. 94). The project deploys an embodied pedagogy and Deleuze and Guattari's theory of nomadic thought. Accordingly, the focus is on the student and participant, body/mind/self in motion (Ellsworth, 2005) in the context of a non-representational perspective of analysis, understanding pedagogy to be lived and experienced by means of forces of affect, sensation and interrelation.

The project unfolded with a group of grade 9 drama students in a public secondary school in Western Canada. Over a year with the class, the qualitative methods in fieldwork consisted of improvisational and systematic elements with a strong awareness of roles (researcher, facilitator, teacher, and director) and multiplicities in the data generation. Perry worked with the drama teacher to develop a program of devised theater. The program consisted of the development of creation tools; spectatorship and performance creation and production. As individuals assemble in relation to others, to ideas, and to experiences, forces emerge that give rise to new action, thought, feeling, and movement. These processes can be described in terms of rhizomatic lines, deterritorialization and reterritorialization. The rhizome allows forces of sensation, interrelation, and affect to emerge at the foreground of the analytical lens. This chapter includes a description and exploration of a structured improvisation process and surrounding discussions. Perry concludes with two issues: the role of body and that of consensus and dissensus in education. The author calls for a non-representational perspective on learning that demands an engagement with the body in conjunction with the mind and self (subjectivities). The experience of the mind/body/self in the process of character development and performance is one of hybridity, synchronicity, and change. The body becomes an effective tool in engaging embodied pedagogies as well as in research and in analysing learning and creative experiences. In the conclusion two issues come forth: the first the

interrelation of the body/mind. The second issue relates to consensus and collaboration. Education thrives on and promotes consensus. “The culture of consensus in education emerges as a striation in classroom space” (p. 105). Consensus becomes the great leveler and “unifies the creative space, quickly creating segmentation around that which is agreed upon” (p. 106). What does consensus produce?

With MLT, reading is a move away from the exclusivity of the printed material. Materiality expresses in different ways. In the series contributed by Linda Knight entitled, Ca/r/tographies of Desire: Knitting as theorizing on productive forces in education, reading, reading the world and self happens through art and art-based education research. Knight’s work is interspersed throughout the book with each entry beginning with the title Knitted Images. Knight provides an account of the complex relationships between different ways of knowing to work through and push MLT (Masny, 2008). Her art, a/r/tography (Irwin & Springgay, 2008), is a process for theorizing and interrogating networks of activity emitted from teaching, researching, creating and focuses on ways of doing. In this book, the readers will be able to read various visual art pieces that reveal themselves through the entire book. There will be knotted cardigans and baby trousseaus: forms of skin-making, that is, a covering and close mapping, a cartography of the body frame. They envelop and when they are taken off are pregnant with becoming, with the movements they flowed through, undertook with the body within them. They are brimming with forces, shiftings, and manipulations. A series of knitted skins: bodies without organs (Deleuze & Guattari, 1987) are recent works that form physical manifestations in the exploration of deleuzguattarian concepts. These are literally bodies without organs but offer residence to the field of “immanence of desire” (Deleuze & Guattari, 1987, p.170). Deleuze and Guattari (1987) discuss the extreme desirings of masochists, drug users, schizophrenics and lovers. The knotted body shell resonates with “intensive principles of organs, with their positive indefinite articles, within a collectivity or multiplicity, inside an assemblage” (p. 182). Knitting takes on embodied practice ad becomes research, investigation, and theorization.

> The knitting of the wool, the looping, crossing, hooking connects to the project rationale and engages in rhizomatic ca/r/tographing of the body without organs. Knitting brings forth thinking about teacher desires, potentiality, and of socio-historical feminine associations of wrapping, enveloping, and nurturing the young. The production of knitted body shells enables a corporeal theorizing on the teacher, and the desirings and constituted forces (such as curriculum, student, classroom, controller, pedagogue) that act as motivations and assemblages of influence. (Linda Knight, personal communication)

LITERACIES AND BECOMING

The entry on *Literacies and Becoming* is mapping a cartography of reading, reading the world and self when MLT intersects with Deleuze and Guattari. Here once more, literacy in the broader scope exceeds what is traditionally considered reading. In the chapter, *Literacies in the workplace: Social conditions, practices, and meanings,* Maria de Lourdes Dionisio, Rui Vieira de Castro and Ana Sofia Arqueiro focus on adult literacy. The discipline of adult literacy continues to exist because of one might argue is related to the dualism promoted through literacy/illiteracy. In Portugal, several ongoing adult education programs are echoing, and producing "adult literacy crisis". The "deficit" of reading and writing skills among adults is often considered a fact that school-like language programs can surmount. It is not unusual that private corporations develop their own educational programs for raising the literacy levels of their workers. In this text, the authors discuss some data from a research project developed at two factories located in the north of Portugal. The project generated evidence about the multiple and often conflicting literacies in which people engage, and invest (Masny, 2010), in their working lives, as well as about the social distribution of different literacies. It also highlighted the purposefulness of the uses of texts by people and the challenges people face when encountering new literacies that aim at structuring social and labor relationships.

This chapter by Elizabeth de Freitas entitled, Mapping *the materiality of mathematical discourse,* intersects the work of Deleuze, Deleuze and Guattari, and Massumi to focus on how content and expression are assembled in classroom "communication". De Freitas presents the tension in mathematics that Deleuze and Guattari describe in terms of "royal" or "major" mathematics and alternative lineages of mathematics, "nomadic" or "minor". In math education, royal mathematics continues to dominate and underpin contemporary approaches to mathematics curriculum. DeFreitas provides a brief review of the tensions with Plato, the materialists, Desargues, Monge and Poncelet. The tensions between axiomatics and destabilizing nomadic mathematics persists. De Frietas sheds light on ways of deterritorializing the rigid/sedemented terrain of mathematics and re-territorializing it as nomadic flow by re-thinking the relationship between language and mathematics. Verbal communication on thinking out has become an important aspect of math education. There is the perspective that a math problem is resolved first in the mind and then an external expression is presented. However, in deFreitas words, the concept of thinking remains, often reducing the concept of thought to a form of inner speech There are also socio-constructivists who maintain that solving and expressing an answer to a math problem is first and foremost a social activity (Vygotsky). However, deFreitas contends that in this perspective there is no "thinking as a radical asignifying creative act, nor for the indisciplines at work in language where the nomadic erupts and pursues a line of flight" (p. 117). In practice, mathematics remains the immaterial conceptual content that is *given* shape and

matter through language-use. Deleuze and Guattari argue against the concept of communication, offering instead the concept of expression (or expressivity) that better captures the materiality of language. This new approach in the study of mathematics classrooms is supported though the analysis of a short video of classroom interaction. DeFreitas argues that mathematical thinking can be reconceived as a highly material activity that is constantly re-assembling the nexus of expression and content. In this way, the chapter pursues what Bogue (2009) describes as one of the important strategies of MLT, that being its focus on the potential of "micro-level negotiations of group interactions" to disrupt institutional constraints (p. vii).

TEACHER-BECOMINGS

Francis Bangou and Taylor Webb describe a becoming and an actualization of teacher education that goes beyond what is to what could be. Francis Bangou's chapter, *Reading ICT, second language education and the self: An agencement*, describes a research project with students becoming teachers and the impact of working with technology in a second language classroom. What happens in the process of becoming teacher in an *agencement* (assemblage) that includes an incorporeal transformation through teacher education and technology. With the increasing use of Information and Communication Technologies (ICT) in education, teacher education programs have provided learning environments where pre-service teachers learn how to teach with digital technology. The field of Second Language Education (SLED) is also adopting ICT in the teaching of second languages. ICT and digital technology have transformed the field. The chapter then maps out a research event: MLT, the study on pre-service teachers and ICT. Bangou initially worked with an earlier version of MLT to explore the notion of technological literacy through a year-long ethnographic study of two second language pre-service teachers who learned how to use ICT to teach Spanish. Since that time, Bangou goes on to describe how MLT and him as part of an assemblage have *become other than* through smooth spaces. Accordingly, this chapter is an *agencement* (Deleuze and Guattari, 1987) of the lines that have been crisscrossing between Deleuze and Guattari, MLT, ICT, (SLED), and the researcher over the last couple of years. In this chapter, MLT (Masny, 2008; Masny, 2011; Masny & Cole, 2009) is the lens with which to describe the experiences of three second language pre-service teachers who learned to integrate ICT into their practice. Moreover, the concept of *agencement*, central to this study, is presented. Then, the methodology will be described and the experiences of the three pre-service teachers will be presented through small stories. The Master of Education (M.Ed.) program where this research took place constituted a regime of *agencements* (Deleuze & Guattari as cited in Macgregor Wise, 2005) where becoming technologically literate happened through reading, reading the world, and self(ves). The analysis provided the impetus to push

further MLT, deterritorialize the teacher education program's technological curriculum and create lines of flight.

Taylor Webb's chapter entitled, '*Nial-a-pend-de-quacy-in': Teacher-becomings and the micropolitics of self-semiotics*, is unusual. It comes out of research of engagement in a *micropolitics of self-semiotics* within the smooth and striated spaces of curriculum policy. Webb argues that professionalization needs to account for teacher-becomings rather than, and only than, teacher-beings. Becoming in this context refers to investment in the teaching body: *subject desirings and desiring subjects*. Webb contends that teachers are constantly in the process of becoming – always in the middle – and that they cannot achieve a presumed state of identity because of the immanence of subject desirings. Subject desirings and desiring subjects are found throughout the work of teaching in curricula and policies. The author has selected examples from research to illustrate how teachers "read" subject desirings, and, subsequently, read desiring subjects. These examples connect with the concepts of multiplicity, rhizome, difference, assemblage, and rhizome. These concepts are central to *becoming*.

In one example, subject desirings produced a "multiplicity of (at least) three teacher-becomings: (a) teacher-in-dependence, (b) teacher-in-adequate, and (c) teacher-in-denial" (p. 166). In relation to the rhizome, teacher-becomings sought smooth spaces of creative autonomy, professionalization, and expert when teachers re-wrote the curriculum policy based on an alternative definitions of being effective and becoming professional. With regard to difference, the micropolitics of becoming attempted to control and suppress difference. Moreover, Webb proposes that the assemblage of *nial-a-pend-de-quacy-in* is a powerful way to understand teacher-becomings. Assemblage assists understanding teacher-becomings "as powerful combinations of the self expressing itself in particular ways and for particular reasons" (p. 174). The chapter concludes with a discussion on how MLT (Multiple Literacies Theory) assists teachers to "read" the desires circulating throughout their work and their selves (Masny, 2006; Masny and Cole, 2009; Masny, 2011).

DETERRITORIALIZING BOUNDARIES

The chapter by Graham Livesey, *Shifting boundaries in environments and organizations*, draws from Deleuze and Guattari's concepts of smooth and striated space, the rhizome and assemblage theory. Readers will view boundaries that are immanent to and becoming with education. The concept of boundary provides potential avenues in mapping cartographies of becoming in education. Deleuze and Guattari's concepts of smooth and striated space, the differences between nomadic and state (urban-agricultural) territorial systems, provide a basis for examining the operation of boundary systems, as does their concept of assemblage with its territorial function. The chapter examines (1) the boundary systems of human modified environments, and the (2) territorial and

organizational aspects of these systems, and, by implication, (3) the way environments have been constructed, and the way that organizations operate; this will culminate with the proposition that (4) a movement towards the boundaryless is desirable.

This chapter enters in the middle with differing ways to delimit the world according to differing modes of survival, in the structuring of human societies, in organizing land, and in the construction of shelter. There is a close functional and ecological relationship between the structure of human organizations and the structure of spatial territorial systems. This can involve the blurring of spatial and organizational boundaries, on a continuum from an effective ecological or organizational alignment to the hardening of boundaries, possibly even structural collapse. Boundaries refer to linear elements in a landscape or organizational system. As relationships between territories in the system change, so does the overall balance in the system. Flows of economic, social, political, and ecological factors are continuously being redirected.

Drawing from Deleuze and Guattari's assemblage theory and the discipline of landscape ecology, the functions of a boundary are a habitat, a zone that can support a variety of organisms; a filter that establishes how adjacent territories and organizations interact; a conduit that regulates the flows of materials, organisms, energy, information; a source that gives off things, a process of deterritorialization and reterritorialization as part of an assemblage and a sink that absorbs things. The chapter exits with a proposal for boundaryless conditions in order to work with complexity, ambiguity, continually changing circumstances, and new modes of functioning. This concept of the boundaryless organization is reminiscent of the organization of nomadic cultures and animal packs, as conceptualized by Deleuze and Guattari.

Meanwhile the chapter by Cameron Duff, *Learning to be included*, proposes a pedagogy of signs and events grounded in an ethology that Deleuze derives from Spinoza in which affect plays a primordial role in how bodies relate to each other. Such an "affective pedagogy" should in turn, create a novel ethics of the sign whereby the becomings that Deleuze (1994) regards as central to all life may be accelerated or promoted through learning. Deleuze (1994) considers learning to be a rupture or shock in which a body, whether human, animal or vegetal, opens up to forces of difference and becoming. Learning occurs on a line of becoming as a body is transformed in the affects, percepts and concepts it may establish relations with. As Duff asserts, learning is less cognitive and more how bodies learn as their capacities for affecting and being affected are transformed by the array of entities they encounter. Learning is a process of becoming sensitive to signs and events; learning how to be affected by them, and to affect them. This chapter endeavours to "express a literacy of signs and events in the course of exploring the mechanisms by which bodies learn to territorialise place, amid the processes by which places territorialise bodies" (p. 177). A Deleuzian literacy of signs and events should help to establish an"ethico-ethology" of place capable of explaining the becomings that transform bodies and places alike. Through an

analysis of qualitative data among individuals recovering from a mental illness, Duff contends that recovery is a process, an open extended event, by which the recovering body becomes sensitive to an array of signs emitted in diverse internal, intermediary and external milieus. The always unfinished event of recovery links diverse human and nonhuman signs, bodies and events in the joint expression of an enhanced capacity to affect (and be affected by) other bodies and signs. One of the most important of these capacities in the context of a body's recovery from mental illness is the capacity to affect place in the expression of belonging to, or feeling included in, the socius.

INTERMEZZO

This entry consists of a contribution by Linda Knight entitled Knitted Images: *Cartographies*.

POSTSCRIPT

In the postscript by Diana Masny, *becoming thousand little sexes*: *this is not my father's paradigm* is an interesting title inspired from Deleuze and Guattari (1987) and the second half from an article by Patti Lather (Lather, 2004). The context for this contribution relates to experiences in publishing so-called empirical data working with Deleuze, Deleuze and Guattari and transcendental empiricism: rhizoanalysis. Throughout the years, evaluations received from peer-reviewed journals and edited volumes have created a rupture concerning how evaluations function and what they produce. This chapter is a deterritorialization, that is, an event mapping educational research with cartographies of becoming. This rhizomatic chapter has multiple entries. The first entry is multiple, Transcendental empiricism: immanence, palpation and representation. The next entry introduces the concept of the rhizome, a non-metaphor. The *rhizome* entry creates links to multiplicities; entry for the rhizome is composed of multiple lines/roots. In addition, the entry on multiplicities is designed to draw out the conventional dualism, deterritorialize the concept and reterritorialize on a plane of AND. And the next entry highlights the theory and praxis of MLT. Prior to deterritorializing the concept of methodology, a received view of methodology is briefly reviewed: objectives, research questions, theory, method (data collection), data analysis (interpretation of findings), and conclusion. In conventional reporting of a study, it is important to establish its significance/relevance. An important aspect of this article is that there are multiple approaches to rhizoanalysis. The rhizoanalysis is presented here is one involving creation and experimentation within the assemblage at this time. In addition, this chapter stands as an alternate way to do research, one that does not function in relation to "my father's paradigm". The next entry becomes an exit, an *intermezzo* that opens up educational research and exceeds anything lived, a becoming-research event. Throughout the chapter, readers will find reviewer inserts, that is,

paraphrases or indirect passages of reviewer comments that are part of the assemblage. While these reviews are authentic, they are not attributed to a particular person, journal or book. The reviewers are familiar with the work of Deleuze, Deleuze and Guattari.

What of the "thousand little sexes"? Deleuze and Guattari (1987) state: "…love itself is a war machine endowed with strange and somewhat terrifying powers. Sexuality is the production of a thousand sexes, which are so many uncontrollable becomings…" (p.277). Becomings conjugate with smooth space. This chapter and this volume map becomings in education, a deterritorialization of the father paradigm-dualism-OR. What is interesting, remarkable and important are untimely and uncontrollable thousand lines of flight emitted through the rhizome.

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LINDA KNIGHT

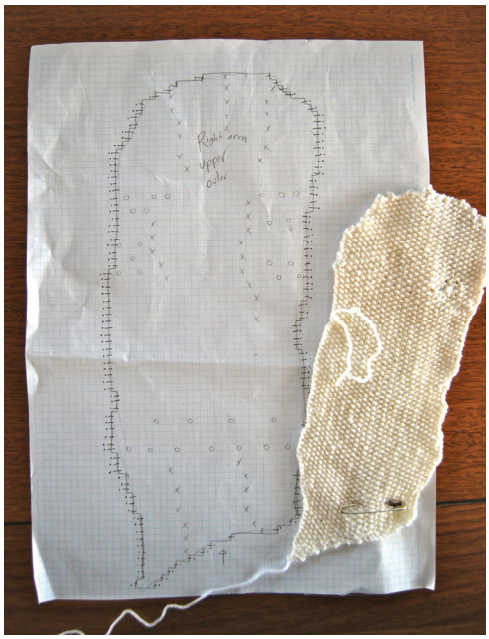
2. KNITTED IMAGES

Corporeal Theorising

Feeling the wool and needles and constructing the knitting is very different to looking at knitting or thinking about knitting. Creating with the material slows everything down enough to enable significant connection with the process.

Knitting as a mode for researching involves corporeal activity/philosophy that foregrounds a physical rationality, and this offers critical investigation of knowledge conventions that hierarchize intellectual activity as something that seeks to justify or clarify via a cerebral mode of presenting reasonable and rational arguments.

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 17–19.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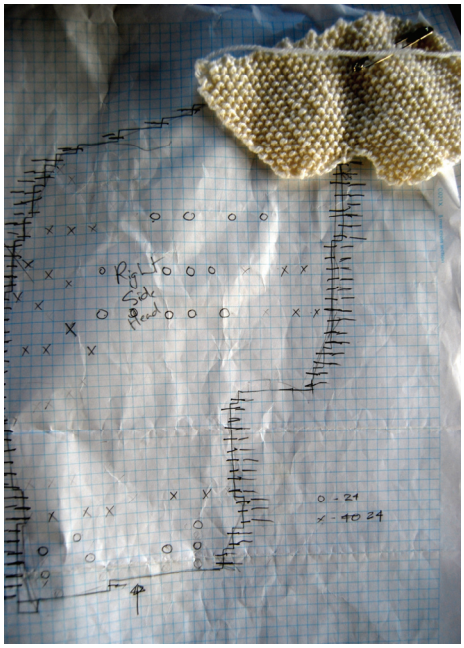
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right leg
front

ENTRY: POLITICIZING EDUCATION

"It is so difficult to say how someone learns: there is an innate or acquired practical familiarity with signs, which means that there is something amorous – but also something fatal – about all education." (Deleuze, 1968/1994, p.23).

DAVID LINES

3. DELEUZE AND MUSIC EDUCATION

Machines for Change

INTRODUCTION

The philosophical oeuvre of Gilles Deleuze and his co-author Felix Guattari provides an interesting and provocative set of ideas that challenge prevailing thinking about music education. Deleuze and Guattari's writing on music is perhaps best embodied in their seminal text *A Thousand Plateaus: Capitalism and Schizophrenia* (1987). In this work music is described as a "rhizome", or weed, "that has always sent out lines of flight, like so many transformational multiplicities" (Deleuze & Guattari, 1987, pp. 11–12). The rhizome is a type of plant that spreads out over new ground forming a matrix of shoots and runners across the ground. Each new growth in the rhizome plant establishes a new direction of movement, transforming the ground cover with a new "line of flight" (ibid.). The rhizome provokes a different kind of thinking about education in and through music. It helps us rethink our prevailing conceptions of music and education. The rhizome provokes our preconceptions of music education and stimulates new thinking about how it can be thought about and practiced. In short, it is a 'machine' for thinking about change. This chapter explores this new kind of thinking inspired by Deleuze and the kind of disciplinary change such thinking provokes in music education.

In recent years the concept and practice of music has been the subject of inquiry in Deleuzian scholarship (Buchanan & Swiboda, (2004). In music education, the field of inquiry is now developing with Deleuzian thinking from both music and education writing coming together in provocative revisionary treatments of knowledge and practice. Leppänen (2011) reconceptualises the meanings of music engagement of young children in playschool environments. She uses Deleuze to rethink the child as an inventor who immerses herself in different becomings in music that is "apprehended as a participatory multimodal space" (ibid. p. 480). Gould (2007) uses Deleuze to re-envisage the positionality of minoritarian groups (sexual preference, ethnicity) in music education contexts that form new expressions of resistance and nonlinear becoming. Lines (2008) uses Deleuzian concepts to explore and critique the use of creativity in education, especially in neoliberal contexts, and to suggest innovative concepts of educational practice based on music improvisation. These and other

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 23–33.

bourgeoning studies are beginning to find Deleuzian expression in music education thinking and practice.

DICIPLINARY CONTEXTS OF MUSIC EDUCATION

Music education is a field that has well-established ideas about what constitutes effective learning in and through music. These ideas are embodied in music education research, teaching practices and the world-views of music teachers. Views of effective and successful music education practice are also connected to particular conceptions of music itself as a traditional and historical art-form embedded in the fabric of western society. Western music has a strong history of learning going back to the beginnings of the modern university and compelling traditions of composing and performing music pieces. The present day field of music education is vast and encompasses a wide range of contexts such as early childhood centres, schools, universities, community groups, institutional orchestras, private instrumental training, informal popular music settings, digital music communities and so on. Despite the fact that each music education context has its own unique conditions and musical expectations, music education thinking tends to be dominated by persistent and reactive ways of thinking that are based on certain conceptions of music, music pieces and musicians. The Deleuzian concepts explored in this chapter provide challenging alternative pathways to these persistent ways of thinking.

Schwarz, Kassabian and Siegel (1997, p1.) note:

> The study of music is ancient, but the disciplined study of music dates back only some two centuries…In the course of the 20th century, musicology, ethnomusicology, theory, and composition have become separate disciplines, each to be mastered, taught, and perpetuated by their own professional societies.

As a field of study, institutional music education has in modern times been insular and introspective, in and of itself, remaining as it were untainted by the interests and provocations of other educational domains. The study of music has been primarily concerned with the demands of music itself as "tonal moving forms" (Hanslick, 1986) or "humanly organised sound" (Blacking, 1973) concentrating on both formalist and human-centred expressions of music study like performing, composing, and music scholarship. Within this has been further separation resulting in processes of rationalisation—a kind of inner 'sorting and ordering' of different subdomains of study. Music education has become very fractured in this way, perhaps in part due to the perceived need for concentrated study on specific aspects required in each subdomain. Along with the fields of composition and performance these subdomains are identified today with labels such as musicology (tending towards western, historical music study), ethnomusicology (non-western music study), music education (pedagogical concerns in music) and more genre-specific subdomains like jazz studies, poplar

music studies, rock studies and so on. While these separate forms of study are more obvious in tertiary music education, vestiges of them remain in primary and secondary school music education through the influences of teacher graduates working in those areas.

The problem with the present system of modular and insular music learning is that each music subdomain area tends to ignore the broader conditions of its own practice—and obscure the transdisciplinary connections that may be present. The end result of this is a very inward looking form of study that is confined to the mastery of certain music-centred goals and objectives. This kind of pedagogy can be highly attuned to functionality and pragmatic to the point of being machine-like in its delivery. The narrowing of the concept of music education to the technical pragmatics of the classroom can mean it loses its own natural interactive space with its own subject. In this educational environment a form of nihilism (Bowman, 1995) may become manifest, where the perceived values of music education become devalued and completely drained.

A key concept pivotal to modern music education is the idea of the music 'piece' or composed work. The piece (or 'track' as it is known in recorded music) is a central object of interest and focus for both the musician and educator. The idea of music pieces presupposes some degree of authorship (the composer), namely the person or group who conceives of the arranged selection of musical notes. Music pieces are often notated or coded in some way so as to preserve their specific detail and organization. They are also performed and recorded so that their explicit detail can be reproduced for an audience of listeners. The dominance of the concept of the music piece is readily apparent in music education[1]. Music educators work diligently and obediently towards achieving high-quality reproductions of pieces played and sung accurately by their students. The need for quality music reproduction also produces demands for students to acquire performance skills. Many pieces demand high-level physical and musical abilities for playing and singing music. Similarly composition students of all kinds (in different genres) work hard to find new and innovative arrangements and assemblages of notes as they bring forward original compositions. Different compositions tend to fall into specific genre patterns and historical periods. Under the prevailing ways of thinking in music education, the existing repertories of music provide a benchmark for learning about composing, performing and understanding music. Interestingly the rules guiding the formation and production of the music piece has suppressed more fluid forms of music production like improvisation practices, which have become more popular in recent years.

The problem with the dominant focus of music pieces is that in everyday thinking, music becomes first and foremost an object for public display. The emphasis in terms of study becomes chiefly concerned with creating, producing and appreciating each piece. In such circumstances the temporal flow of the music experience becomes less important than the weightier focus on the musical object—the piece—that is composed, performed, and appreciated (or not

appreciated). As an object of study the music piece also becomes an object of inquiry, something that is studied most often in its notated form as an intricate system of note relationships and patterning. In its performed state it can be reflected on and evaluated for its emotional and formal qualities as an example of a fully formed, complete, authored work. These educational foci have been the mainstay of music analysis and aesthetics studies in western musicological contexts for decades.

A related pivotal idea in modern music education is the notion of the specialized skillful music performer. This is primarily the very individualized idea of the skillful craftsperson that spends years perfecting his or her craft. The emphasis here is on the developing individual musician. The required level of expertise demands hours of dedicated time working on this mastery—and this involves time not spent on other learning activities. The emphasis on the development of highly tuned technical skills in music is akin to that of sports training where repetitive drills build expertise and physical responsiveness. The development of technical skill forms a prime focus for many music educators who take their students through training regimes designed to perfect their technical playing and singing skills.

These dominant discourses and patterns of behavior inform the training of music students in many educational contexts. They lead to well-played music pieces and skillful efforts of well-trained musicians; we enjoy performances at school and in professional concerts and we buy hi-fi recordings of the music. The music school's emphasis on perfecting the craft of music making is understandable and defendable given that the reproduction of well-played and well-sung pieces requires a suitable amount of dedicated, systematic training. The problem of this unilateral approach lies not in the activity itself, but in the overall conception, predetermination and perspective of music learning. The emphasis on music pieces and skillful master-performers in music education is overstated to the degree that more nuanced understandings of music education are often left behind, forgotten, or even ignored. Today's educated musician is primarily seen as a technician, a skillful renderer of technical craftsmanship within the confines of genre-specific music pieces. The modern music technician learns pieces skillfully and then performs them to selective audiences. Under such circumstances there is little potential for crossover from genre to genre or audience to audience. As a result specialized technicians of music end up playing to selected audiences who have high expectations about what they are going to hear.

The domains and subdomains of music have flourished in and around the dominant ways of thinking that have pervaded music learning. Music students have been molded and shaped by the ruling disciplinary frameworks of the methodologies and ideals of institutional music education. Music students have been subject to this molding within a broader paradigm of modernism in education and the arts. These music students learn to play by the rules of their musical education systems. They submit to the dominant discourses of

individualism, performativity[2], aesthetic high art standards and technical-functionality in music production.

Such concerns within the discipline of music education become intensified in neoliberal educational frameworks that serve to atomise curricula and reduce pedagogies to methodical and linear presentations of new material. Students learn through these methods obediently complying with the forces of credentialism and risk management. According to Peters (2005, p. 123), the notion of a type of entrepreneurial self pervades the thinking and practices of neoliberal sites of education where the individual becomes a key player in an underlying philosophy of consumerism and life-long protectionism.

For many career music educators, the goal of rendering and facilitating quality learner performances and beautiful or innovative learner-compositions continues to determine their priorities as teachers. Despite this, there may be an imbalance between what is done and the reasons for the doing. In the extreme, while student performances are usually quite laudable, an overreliance on 'excellence' at the expense of 'significance' can have a weakening and disowning effect on those involved. In other words, well-performed pieces can be delivered in unethical circumstances where student performers are detached from the musical and cultural meaning of the musical episodes with which they are a part. Further, neoliberal educational policies and standards can push music education classes into repetitive task-modeling with atomistic assessment methods and within severe time restraints fuelled by school league tables and the related need for good examination grades. In such educational settings common in secondary and tertiary education, learning in music can become reduced to performative tasks—in getting work completed for assessment purposes and in responding to tightly framed criteria. In this sense, music can be a subject in education where 'the tail can wag the dog' as it were. These pressures impact on music teachers and call for innovative ways of thinking about music learning. Deleuze's concepts assist in the revaluation of music teacher thinking and action within the context of contemporary music culture and neoliberal educational policy and practice.

MUSIC AND DELEUZIAN CONCEPTS

As discussed in the introduction of the chapter, Deleuze and Guattari's (1987) concept of the rhizome refers to the weed-like rhizome plant that grows in different directions across a garden depending on the circumstances of it's structure, form and environment. The rhizome suggests a different view of music education than what is commonly presented in western culture. Rather than seeing 'music knowledge' as tree-like—what Deleuze calls aborescent—with a firm root structure, solid trunk and branches and leaves (as in disciplinary, institutional music education which draws its source from prevailing mentalities of music), the rhizome offers a contrasting stance on knowledge. A disciplined, rooted and rationally ordered music education system is one kind of thought system that may impact on a given music learning situation, whereas a

rhizomatic pedagogy will embrace the different and emergent 'shoots' or characteristics that come forward in a given musical experience. As mentioned, rhizomatic knowledge is recognized by its "lines of flight" (Deleuze & Guattari, 1987, p. 11), that is, by the directions of 'intensity' or 'sensation' that come forth out from a music event. What is important here are the directions of new flight rather than predetermined pathways of curricular flight. The Deleuzian music educator looks forward to the emergent and moving flight paths that come out of music learning experiences. This is one of the main ideas behind Deleuze's rhizomatic provocation—to focus on the emergent new rather than the systematic old. Taking on the idea of the rhizome in music education means crafting a whole new vision of what is taking place in the music event.

Rhizomes have "neither beginning nor end, but always a middle (milieu) from which it grows and which it overspills" (Deleuze & Guattari, 1987, p. 21). Always in the middle, the Deleuzian music educator is aware of the historical past and the prospective future in relation to the immediate musical events they are immersed in. The emphasis here is on the receptivity of the musician-teacher to the changing historical conditions that work in synergy with musical affect. This way of thinking recognizes music more as a cultural machine of change than as a performance of musical 'objects' or pieces. It relates to an attitude or disposition that is about knowing music as a historical vector and about looking for new vectors of change; of looking for the growth and areas of 'overspilling.' This is a pedagogical disposition 'of the moment', where the music educator tunes into the changing music-learning landscape and undertakes pedagogical action in response to their attunement. The rhizomatic music educator identifies particularities and becomings in a music-learning happening and acts accordingly. This requires a certain kind of 'active' ethical disposition.[3]

Music unfolds in time and exemplifies to us the movement and fluidity of the musical event. The music piece then, as we know it, becomes an event that occurs at a given time, in a given environment. The rhizome can be thought of as a matrix of possibilities or a connection of a "thousand plateaus" (Deleuze and Guattari, 1987) unfolding in both singular and collective themes. In this sense a music piece is not an autonomous 'original' experience but is indebted to the historical vectors that have preceded its formation and the present connections that form its current constitution. These vectors and connecting features make music *musical*-they bring out the interesting differences in musical moments that cause us to take notice.

The mapping of a rhizomatic music happening carries with it the notion of territory. From each music event, a temporary musical "territory" (Deleuze and Guattari, 1987, p. 316) draws out specific configuration of affect. Deleuze and Guattari write creatively about this, citing the expressive songs of birds as instances of territorialisation (p. 314). They also identify the processes of deterritorialisation and reterritorialisation in the movements of territories. The emphasis is on the shifting nuances of musical connection. The function of deterritorialisation is the "movement by which 'one' [territorial element] leaves

the territory" (p. 508). Reterritorialisation is when the line of flight leaves the territory altogether transmuting and building another territory. There is autonomy and detachment in expression (Bogue, 1997). "Becoming expressive" (Deleuze and Guattari, 1987, p. 316) intensifies the line of deterritorialisation leading to newer changes and developments. A bird could be said to become expressive and deterritorialised when its initial territorial bird song is transmuted and begins to take on an expressive function with new tone qualities in a line of flight away from the initial territorial function. With these Deleuzian notions in mind, one can envisage a concept of music without borders. In fact, what constitutes music thought in this way is its fluidity and translucence; its capacity to engage, process and transform its vectors of sound-induced meaning. This understanding of music has resonance for music education and liberates it from the inherent dualism: learning on the one hand and music on the other.

Returning to the previous discussion on music education we can see that a specific territorial concept of music has been in play in western music—the formal territory of the music piece. The formal configuration of the piece in modernist music is seen as being specifically pertaining to the systematic configurations of pitches, rhythms and harmonies. A music territory in the Deleuzian sense is something quite different and requires some conceptual adjustment. Music in this new sense is much more than the formal configurations of musical notes, it is much more expansive than that. Rather, the Deleuzian music territory is momentary and temporal and always moving into paths of deterritorialisation and reterritorialisation. A good way to understand this is to consider the *temporal musical moment* as the main point of educational focus. Further, musical moments establish relational alliances—between elements that make up the whole event. To understand this fully one needs to move beyond the formal configurations of music and establish and document what vectors of connection constitute the event.

A useful example is that of the community choir. Recently there has been a resurgence of interest in unaccompanied group singing mainly among adult singers who feel the need to participate in musical activities in social settings. For many community choirs, the emphasis and enjoyment of the music experience comes from not only note learning (ie. specific music pieces sung by the group) but from the social connections and sharing opportunities afforded by the choir. The musical territory of the choir includes the sounded melodies, rhythms and harmonies of the choir pieces, but also takes into account the motivational, communal, emotional and ritualistic aspects of choir practices and performances (eg. sharing wine together and performing at the funeral of a choir member's friend). The territory also includes the physical demands of choir events, the mental learning patterns of rehearsals and the historical meanings embedded in choir pieces, be they gospel pieces, South African pieces, popular or commercial pieces and so on. The shades and nuances of each interactive moment constitute the configured territories and the changes to those territories

and bring the participant into a fuller understanding of the dynamism of the choir.

A Deleuzian concept of music will also take into account his notion of "intensities". They are what Deleuze calls the changing "modes of intensities" (Deleuze, 1995, p. 99) that help us "go beyond knowledge and resist power" (ibid.). Intensity is a virtual idea that helps explain moments of force when one force overcomes another force due to its level of intensity. As an ephemeral art, music has much synergy with this notion given that music as sound is unseen and capable of enacting on a situation and changing it by means of suggestive force or affect. Intensities also have no specific identity as such and thus break down any sense of disciplinary or historical characteristics that may inhibit an understanding of an educational field like music (for instance 'music' has a strong association with the idea of the 'music piece').

The idea of 'sound' or 'sound-arts' is perhaps a simpler way to think about music as modes of intensities. A focus on sound has certain advantages over more established and conventional educational investigations in historical music studies. One of the main advantages is the way sound study crosses disciplinary boundaries due to its more 'general' focus than specific studies in music. The interdisciplinary nature of sound, as a concept, thus provides more opportunities for alliances, links and connections to be discovered beyond the metaphysical or technical narratives that can plague established music disciplines. The key point here is to discover the potential of 'sound study' as an educational force that opens up prospects of interdisciplinarity and affect. Rather than focusing primarily on music in terms of subjects and objects, the study of sounds as modes intensities assists a less anthropomorphic conception of the music learning experience.

Sound study has much to offer education as a whole, notwithstanding its affinity with the places and spaces that predetermined disciplinarity never selects or finds. Sound has become a medium of immense significance given its presence in cinema and digital internet platforms such as youTube on the internet. Whereas "sound allowed cinema to refer to other, more indeterminate spaces…within the visible space of the screen" (Connor, 2000), sound in education offers opportunities for the exploration of imagination and nuance in thought and perception. The "radical heterogeneity of sound" (ibid.) that is exemplified in Deleuze's provocation of 'intensities' opens up opportunities to explore difference with a degree of affirmation and openness that is not always apparent in neoliberal sites of educational performativity. Sound, as "diffuse and intermittent bodiliness" (ibid.) has a budding inclination for elasticity and mutation; it offers the potential for different perspectives and identities to emerge in transient and changeable events that are commonplace today.

CONCLUSION

In Deleuze's book *Nietzsche and Philosophy* he discusses, in one section, Nietzsche's views on the nature of art. He says:

> Art is the opposite of a 'disinterested' operation: it does not heal, calm, sublimate or pay off, it does not 'suspend' desire, instinct or will. On the contrary, art is a 'stimulant of the will to power', something that excites willing'. The critical sense of this principle is obvious: it exposes every reactive conception of art. (Deleuze, 1983, p.102)

Like Nietzsche, Deleuze has an interest in art as an active cultural force—as something that invents "new possibilities of life" (Deleuze, 1983, p. 103). As Deleuze notes, this is the opposite of what one might term as disinterested as aesthetic theory might hold. Deleuze holds a particular view of art and he is not reticent in critiquing commonplace 'reactive' conceptions of art that can serve to inhibit the stimulating and powerful attribute of art that affects life's moments. As an art form with a traditional history of art-making, music offers the prospect of stimulating new possibilities of life. Reactive music education—forms of music study that serve to shut down or systemize new learning possibilities—has been a dominant discursive block in traditional music. Deleuze's provocative and stimulating concepts offer fresh 'active' insights into what could be a more culturally resonant kind of music education, a music education that seeks out the connectivity between sound learning and other forms of learning.

Here in the statement above, art is not a detached object hanging on a wall ready for contemplation, or a composer's score yet to be realised in a musical performance. Rather, art is thought about in a particular and special and functional way. Deleuze's kind of art acts as a 'stimulant' or trigger—as something that is able to mobilise and action movement and change. According to Deleuze, art is that which comes forth and changes the world from which it arises—it forcefully challenges that which is normal or everyday. By embracing art as a stimulant of energies and forces, Deleuze exposes what he terms as 'reactive' culture, that is, cultural forms which respond conventionally to other more active, stimulating forces.

Deleuzian concepts discussed in this chapter provoke changes in thinking about music education beyond the disciplinary contexts common in music study today. They act as machines of change for the thinking musician and music educator. Concepts like the rhizome, territory and intensities force the reader to reconsider fundamental views about the nature and value of music. They assist the music educator in helping them to understand how to manage and work more imaginatively with music in diverse pedagogical contexts, such as urban diverse communities and virtual internet communities. These ideas seem to be more in tune with a forward thinking music education that is responsive to changing contemporary conditions of music and sound in the present day.

NOTES

[1] See *Music Matters* by David Elliott (1995)

[2] Performativity is used here to describe the efficiency of inputs and outputs as defined by J.F. Lyotard in the Postmodern Condition (1984).

[3] See Semetsky & May (2008), Deleuze, ethical education and the unconscious in Nomadic education: Variations on a theme by Deleuze and Guattari.

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JASON WALLIN

4. GET OUT FROM BEHIND THE LECTERN

Counter-Cartographies of the Transversal Institution

Deviating Currere

As a tool for rethinking the material organization of the school, the concept of transversality might be introduced by way of a specific problematic linked to the conceptualization of *currere* in curriculum theory. Following the reterritorialization of the concept as a tool for resingularizing life in schools (Pinar, 1974), Pinar and Grumet (1976) mobilize *currere* against the specific problem of the subject's becoming within the institution. What curriculum theory should attempt to do, Pinar and Grumet argue, but "transfer [its] attention..to the ways in which a student uses… and moves through [institutional forms]" (p. 2). Following this challenge, Toward a Poor Curriculum mobilizes *currere* as an analytic tool for thinking 'the course to be run', or rather, for negotiating the institutional background that both informs upon and is productively informed by the institutional subject.

The problem of how the subject negotiates institutional formations renders *currere* more than autobiographical. That is, in distinction to *currere's* autobiographical grounding and emphasis on individual psychodynamics, its germinal conceptualization commences a way of thinking qualities of exchange and connection between the subject and the institutional milieu with which it becomes. Put differently, the problem against which *currere* is mobilized in Toward a Poor Curriculum might not be exclusive to the way in which a bracketed subject orients themselves to the symbolic laws of the institution (Pinar and Grumet, 1973). Instead, what might be relaunched in Pinar and Grumet's conceptual reterritorialization of *currere* is its function as a tool for apprehending the ways in which institutional organizations affect subjective perceptions, habits and mobilities. As Guattari (2009a) develops, the institution is not merely a background to subjective action. As students know well, the effects of institutional organization inform upon potential behaviours and becomings (Genosko, 2002). While ostensibly moot, this understanding would entail thinking the connection between a runner and their course (*currere*) as one that avoids devolving upon the experience of the individual. Rather, to run the course (*currere*) is already a matter of constituting an assemblage, hence producing a different kind of onto-ecology or counter-cartography for thinking institutional life. Such an emphasis on counter-cartography, or rather, alter-

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 35–52.

cartography, is a key characteristic of Multiple Literacies Theory (MLT), which shifts the educational terrain by rendering collective desire into a productive pedagogical force for the transformation of ossified organizational and conceptual dynamics (Masny and Cole, 2009; Masny, 2012). MLT promulgates an approach to pedagogy that productively deviates from the idea that the individual constitutes the basic unit of education. Rather, it begins with the Deleuzeguattarian idea that classroom life is always-already a matter of collective becomings.

To rethink currere as a tool for analyzing the function(s) of the institution marks a potential entry point into transversal thinking. Delinked from the analysis of personal psychology, transversality pertains to the ways in which institutional 'group-subjects' (a formation developed later) might be liberated from under repressive or stultifying forms of institutional organization. This conceptualization follows from Guattari's (2009b) militant institutional activism in which the group and not the individual would become the focal point for institutional transformation. This is not to say that in Guattari's focus on group formations, the individual is jettisoned (Bryx and Reynolds, 2012). Rather, "the [individual] functions, as Genosko aptly explains, as a liberating mirror through which individuals produce new singularities resulting from intersubjective relations, collective affects and enunciation, explorations of desires and passions, among others" (p. 296). Today, Guattari's analytic emphasis on the revolutionary potential of group-subjects maintains its import for educational thought insofar as schooling almost-always pertains to the organization, regulation and management of multiplicities. As Aoki (2005) writes, pedagogy pertains more to the formation and conceptualization of assemblages as it does the orthodox scene of student-teacher transference. Here, an underanalyzed aspect of Aoki's (2005) thought experiment on how science might be taught as a humanity pertains to the setting in which such thinking might be most vigorously commenced. That is, Aoki's experimental rethinking of science pedagogy is not operationalized within the school board room, but rather, through the carnivalesque and singular affects of Bourbon Street. As Aoki suggests through the incorporation of this background component, *currere* is already imbricated within the form of institutional organization. Following, the organization of life in the image of such institutional forms must be rethought if curriculum is to be liberated from its overdetermination.

The Institution Made me Ill

Guattari's work with Jean Oury at the La Borde psychiatric clinic would reveal a key problematic against which transversality would be composed. For Guattari, it was not simply the case that the 'mentally ill' were being cured at institutional clinics. Rather, what Guattari's work within the psychiatric institution would

reveal was the more pervasive problematic of illness becoming an effect of the institution itself. Within the traditional psychiatric setting, Guattari observed, patients "[lost] their characteristics, becoming deaf and blind to all social communication" (Guattari, 2009a, p. 177). Working against such horrific institutional effects, Guattari would begin to articulate the ways in which the institution had failed to treat the patient and further, the ways in which it had effected the production and acceleration of patient neurosis. In Guattarian terms, a key factor to the production of institutional illness would figure in the institutional sedimentation of vertical power relations. That is, Guattari would detect within the psychiatric organization the hierarchical arrangement and bureaucratic isolation of 'specialist' roles ultimately informing upon the alienation of institutional subjects. In this 'molar' image of institutional life born from the vertical production of power relations, the function of doctors, nurses, cooks, patients, and others would become non-proximal or rather, confined to their 'specialist functions' within the institutional order (Deleuze & Guattari, 1987). This non-proximal sedimentation of the institution would become a key feature of institutional alienation through which subjects would become confined and isolated to their stratified and regulated positions. Amongst psychotic patients, Guattari (2009a) observed, the verticalization of subject roles produced paranoia, misunderstanding, and feelings of isolation from institutional life. Under such conditions, patients regressed into non-communicative and sometimes violent states (Guattari, 2009a). In turn, staff armored themselves against the depressive detachment of their patients while protecting themselves from their own sense of alienation within the institutional order. This territorialization would establish new forms of reactivity and isolationism reifying the problem of verticality. That is, the repetition of obligatory and largely predetermined institutional roles within the segmentary structure of the organization not only ensconced stereotypes and entrenched institutional subjects within 'specialist', non-proximal compartments, but further, produced a reactive scenario of identitarian territorialization "worse than resistance to analysis" for its absolute indifference to becoming (Guattari, 1973, p. 79). Coupled with the organizational "segregation of inmates…locked rooms, severely limited freedoms, [and] intense surveillance", the institution would become less oriented to treatment than its absolute obstruction (Genosko, 2002, p. 68).

The stratification of institutional life Guattari witnessed in the psychiatric institution was not limited the sedimentation of molar roles and the non-proximal or alienated segmentation of institutional life. Manifesting in face-to-face therapy, the institutional focus on transference rethought the patient in relation to her/his capacity to assume and incorporate the superegoic components of the analyst. Put differently, the model of transference informing the doctor-patient relationship would produce a hierarchized exchange of psychical components through which the desire of the patient would become captured and reenunciated via the analyst as the subject-supposed-to-know (Guattari, 2009a). In Guattarian

terms, this orthodox image of institutional transference is born through the territorialization of the therapeutic scene upon the authority of the analyst. Producing a dispensation toward the "elitization of analysts", Guattari (2009b) would critique transference for overemphasizing the logos of the therapist and its subsequent sublimation of patient pathos under the analysts' enunciation (p. 42). Exemplifying this transferential capture-apparatus, Deleuze and Guattari (1987) recount Freud's clinical work with Sergei Pankejeff (Wolf Man), whose articulation of a dream in which he is pursued by wolves is recoded upon the Oedipal, or familial (mommy-daddy-me) mytheme. Rather than acknowledging the non-human intensities or unique social assemblage that populates Pankejeff's dream of a wolf-pack, Freud reterritorializes the enunciation upon the familial order, hence delimiting the patient's enunciation by colonizing it within a signifying regime regulated by the analyst. This superegoic overcoding does not amount to a cure. Rather, as Guattari would remark on Freud's treatment of Little Hans, signs of pathological fear would emerge only after the commencement of face-to-face treatment (Guattari, 1972). The policing force of the superego had effectively made the patient worse.

For Guattari, the superego remains an institutional problematic. More specifically, Guattari's composition of transversality as a tool for revolutionizing the institution is oriented to nothing less than the decolonization of desiring-production from under the regulatory injunctions of the superego, or rather, the institution's introjection by superegoic policing (Genosko, 2004, p. 66). While Guattari's development of an institutional counter-cartography would be actualized through his militant interventions at La Borde clinic, he would witness similar depressive symptoms inhering the function of the prison, the factory, and the school. Within each of these institutional structures, Guattari detected symptomologies extensive of vertical stratification, the bureaucratization of educational experts, and a general cutting-off of group-subjects from the broader social fabric. As a corollary to the symptoms Guattari attributed to the verticalization of the psychiatric institution, contemporary reports issued by the mental heath advisory of Britain's' National Union of Teachers suggest that educators are facing the highest rates of suicidal ideation, fear of surveillance and sense of powerlessness in the modern history of the profession (NUT Health and Safety Unit, 2008). In the United States, The National Commission on Teaching and America's Future (NCTAF) have similarly reported that a combination of abysmal working conditions and alienating institutional dynamics have lead to an unsustainable scenario in which one-third of all teachers new to the profession voluntarily leave within their first five years of practice (NCTAF, 2012). While these statistics point to a complex socio-political imbroglio, they concomitantly suggest ways in which the organization of the educational institution functions to produce stultifying affects and forms of illness distinct from the rhetoric of 'bad' or 'unfit teachers' which has hitherto masked this growing problematic.

Unfree School

The revolutionary educational thinking of A.S. Neill (1992) would point to the effects of such regulatory systems upon the psychical development of children and youth. In his experimental work at Summerhill, Neill argued that the organization of schools around the primacy of the boss, the maximization of knowledge acquisition, and the insertion of the body into habitual routines failed to alleviate the psychical and emotional damage produced by institutional life. Following Wilhelm Reich's psychoanalysis of group dynamics, Neill would argue that the institution functioned to produce the conditions of repression optimal for subjective self-enslavement and the production of neurotic and unfree subject-territories. For Neill, Reich's (1970) question of how one could get to the point of willing their enslavement (More taxes! Less bread!) points not to ignorance, but the contraction of desiring-production with highly coded subjective arrangements and enunciative potentials (Deleuze & Guattari, 1983, p. 29). Neill would point to such overdetermination through the implicit psychical dependency education places on the authority of 'bosses'. That is, insofar as education is organized under an institutional superego, the potential for student autonomy and autonomous manifestations within the school would be functionally crippled. Neill would advance this critique by citing education's overwhelming focus on knowledge as a vehicle for restricting the school's capacity to instantiate new subjective and enunciative formations. Schools, Neill would insist, are organized for the regulation of difference within narrowly defined or 'blinkered' constrictions of potential. Such emphasis not only functions to delimit the referential universes available to institutional subjects, but further, inculcates thought and action along highly habitualized circuits of production. Against this institutional background, Neill would concomitantly probe the failure of institutional organizations to acknowledge their repressive power effects upon the lives of the institutionalized. These conditions would constitute an untenable problematic against which Neill would begin the experimental task of rethinking the school in a manner capable of releasing blocked or otherwise overregulated institutional energies. In a reference bearing fidelity to Deleuze and Guattari's entreaty on the powers of the schizo over the repressed desires of the neurotic, Neill (1992) provoked: "I would rather see a happy street-sweeper than a neurotic Prime Minister" (p. 10). As Guattari would similarly remark, Neill would see as a central problematic of schooling the 'blinkering', or more specifically, the narrowing of institutional life according to the stratified edicts of both the National Curriculum and the vertical overdetermination of the institutional-object itself. Herein, Neill's diagram of the pre-world war II educational paradigm would fulminate on an image of the school-as-barracks, the teacher as superegoic drill-Sargent, and the institutional-object as a mechanism for containing, ordering, and regulating the desire of the student (Foucault, 1975). "Not only are prisoners treated like children" Deleuze

writes, "but children are treated like prisoners…[they] are submitted to an infantilization that is alien to them" (cited in Foucault, 1977, p. 210).

The stratified image of institutional life against which Neill would rethink the function of the school finds its presupposition in the early theoretical works of Bobbitt (1924) and Tyler (1949), in whose Fordian image the student is always-already the product of State thought. Preoccupied with the organization of educational experience and the conformity of student behaviors to pre-established norms, the canon espoused by early curriculum rationalists would begin by answering the question of what a school might do by installing teleological aims connecting thought and action to pre-established norms, orders, and subjective formations (Bobbitt, 1924; Tyler, 1949). Such modelization would not only inform the cognitive or epistemological transmission of institutional contents, but facets of affect, percept, and volition informing upon the material reality of student and teacher subject-groups (Guattari, 2009a). "It may be no exaggeration" Neill writes, "to say that all children live in a life-disapproving atmosphere [in which they become] prone to obey authority, [fear] criticism, and [become] almost fanatical in [their] desire to become normal, conventional, and correct" (p. 95). Herein, Neill alludes to the institutional production of "seriality" articulated by Sartre, for whom institutional habits and neurotic forms of repetition were symptomatic of the ways in which vertical organization functioned to segment group potentials (Guattari, 2009b, p. 180). That is, the serial, or otherwise ritualized image of quotidian life produced by the regulated segmentation of the institution delimited and repressed the potential for varied group arrangements by 'blinkering' group-subjects into practico-inert formations (Guattari, 2009b). The 'illnesses' Neill detected within the organizational cartography of the orthodox school would similarly allude to the problem of 'blinkering' as a cutting off of education from a virtual ecology through which it might be materially rethought (Guattari, 1995).

Transversal Maneuvers

Genosko (2002) defines "[t]ransversality [as] the tool used to open hitherto closed logics and hierarchies" (p. 78). In Guattari's hands, transversality becomes an tool for liberating the expressive potentials of institutional life. More specifically, Guattari operationalizes transversality toward the desedimentation of subject roles and the universalization of institutional semiotics informing upon institutional subjectivizing processes. At La Borde, the verticalization of subjects posed a particular problematic insofar as it functionally alienated the patient from the social fabric of the institution. As Guattari would argue, this extreme 'blinkering' of both doctors and patients into crystallized roles would effectively undo the attempt at patient rehabilitation. In its place, Guattari would witness a general mistrust of institutional staff, a despondency born from the patient's alienation from the policies of the clinic, and in extreme circumstances, the regression of patients and emergence of new neurosis. Mobilizing transversal

thinking against the overstratified routinization of the clinical model, Guattari would rethink the institution by drawing clinical staff into direct and non-hierarchical relationship with patients. Waging a critique of the institution from within, Guattari and Oury would help produce a transversal cartography dubbed 'the grid' (la grille), a rolling system of work rotation in which medical and non-medical clinical personnel and patients would work in heterogeneous groups to perform clinical duties. 'The grid' at La Borde would draw new group-subject cartographies by modulating universes of reference.

Within the rolling rotation schedule of the Labordian grid, group-subjects would alternate between manual and intellectual labor. A group-subject might at one point perform medical care duties while at another, assume responsibilities for housekeeping or maintenance. At certain times, a group-subject might be involved in the facilitation of clinical workshops while at another, function to organize art and theatrical activities (Dosse, 2011). Within the grid, patients would work alongside clinical staff and hitherto 'untouchable' doctors at tasks for which neither possessed 'specific' expertise. In this vein, 'the grid' became an experiment in assessing the permeability of space through which patients, doctors and other clinical staff became productively delinked from their bureaucratic segmentation within the clinic's organization. This transversal remapping of the institution would dilate the potentials for movement amongst patients, some of whom would come to assume administrative duties in the daily decision making of the clinic. Herein, the transversal relations produced by the work rotation schedule produced a militant critique of professional roles and qualifications sedimented within the vertical institution. For example, a particular rotation in the grid would see patients assuming responsibility for the distribution of medications, hence demystifying the role of clinical staff and disalienating the patient from the fabric of the organization (Dosse, 2011). Further to this effect, Guattari was instrumental in the establishment of a patient's club where non-medical personnel, clinical staff, and patients could mix (Dosse, 2011). The patient's club at La Borde would be more than a transversal meeting space, however. It would establish its own forms of transversal relation to the clinic's newspaper, *La Borde Éclair*, hence producing a new forum for the enunciations of the club's unique group-subject.

Object Modification and the Group-Subject

Guattari's militant revolution of the clinic would induce the transformation of the institutional-object. By operationalizing the transversal potentials of the institution, Guattari would counter-actualize those isolating and compulsive habits intimate to the disempowerment of clinical staff and patients. As Oury challenged, the clinic should not resemble a "shoe factory" ordered by way of specialist roles, rigid forms of management, and routinized modes of production (cited in Dosse, 2010, p. 45). To liberate life from such forms of habituation, Guattari would relaunch the mediating objects of the institution into new modes

of material arrangement. Drawing from Winnicott's analysis of institutional pedagogy, Guattari would refocus treatment at La Borde upon the collective, or rather, upon the operationalization of a space for collective creativity and the concomitant release of institutional energies from under the varied effects of verticalization (Genosko, 2002). Rather than relying upon the authority of the analyst to 'reorient' patients to the Symbolic order, treatment at La Borde would proceed by conceptualizing the subject as always-already a group phenomenon (Guattari, 2009b). Simply, the subject is always-already a 'group' effect. No longer thought as an egology (personological and egoic), Guattari would relaunch subjectivity along ecological lines capable of thinking the group-subject as an ecological assemblage born from differences of group association, connection, and alliance (Guattari, 2000).

Eschewing the psychological image of the egoic whole over subjective 'part-components', Guattari (2000) would commence a mode of therapeutic action sensitive to the heterogeneous ecology of the subject and those institutional objects that palpate the subject's becoming. As the experimental revolution of La Borde clinic would demonstrate, such ecological thinking would be commenced via the transversal unblinkering of institutional group-subjects and the concomitant displacement of authority in the therapeutic relationship. As Guattari argues, the dyad model of transference particular to clinical treatment not only suppresses transversality by reducing it to a two-part (superego-ego) system, but establishes the conditions for the patient's rehabilitation upon a potentially destructive and retraumatizing signifying regime alienating them from the fabric of social life. Against this, transversality aims to instantiate new territories or autonomous social refrains oriented to a modulation of the group-subject's association to daily life (Guattari & Rolnik, 2008). Following, the patient's reterritorialization at Le Borde would be commenced within an open space for creative enunciation immanent to the non-hierarchical tasks of 'the grid' and indefinite space of the patient's club. Yet, La Borde's therapeutic ecology would extend its emphasis on heterogeneity even further. Mobilizing transversality as a material weapon, Guattari and Oury would recreate La Borde as a baroque institutional space "always in search of new themes and variations in order to confer its seal of singularity…[and] permanent, internal re-creation" (Guattari, 2009a, p. 182).

Resingularization I: Aoki

To redeploy Oury's challenge for education necessitates rethinking the institution from under the image of the 'shoe factory'. Such a task becomes crucial insofar as education constitutes a "true [factory] where labor power and the socius as a whole is manufactured" (Guattari, 2009b, p. 47). Of course, the image of the school-as-factory maintains contemporarily through the standardization of institutional life, its a priori arrangement of subjects and regulation of transversal potentials via grade-grouping, achievement tracking,

and the alienation of students from both the mediating object of the curriculum and the institutional superego, whose rules and values they are meant to incorporate. Corollary to the overdetermination of institutional organization, much contemporary curriculum thought continues to derive from the image of verticalization Guattari found detrimental to group-subject autonomy and health.

Drawing from Deleuze and Guattari's (1987) conceptualization of molarity, Aoki (2005) argues that curriculum thought inheres an implicate archi-tecture, or rather, an arborescent schema through which it becomes easily adapted to instrumentality, epistemic territorialization and superegoic injunction. This is to say that for Aoki, the ecology of institutional life is already foreclosed by a series of blinkers that constrict disciplinary thought within highly coded territories of knowledge and production. It is in this way that Aoki's thought experiment on how the sciences might be taught as a humanity necessitates accessing a virtual ecology unthought by the arboreal or otherwise hierarchical schematization of curriculum and instruction. Aoki's thought experiment is not simply novel, but rather, linked to the problematic of student dropout rates from Canadian post-secondary science faculties. Corollary to the symptoms Guattari recognized within the verticalization of the clinic, dropouts articulated their non-proximity to curriculum as a major factor in their decision, citing that the work demanded by the institution was "irrelevant to…human crisis in these times" (p. 200). Further, the dropouts highlighted by Aoki pointed directly to the highly 'blinkered' organization of the institution, citing that the image of life advanced within institutional space overemphasized instrumental skill acquisition and the routinization of experimental method.

Aoki's thought experiment aims to rethink the mediating objects of pedagogical thought along similar lines, drawing the question of how the sciences might be taught in relation to a heterogeneous ecology populated by unforeseen disciplinary alliances and a-signifying references. As Aoki challenges: "How would it be if we brought together a scientist, a novelist, and a bottle of scotch at a café on Bourbon Street?" (p. 201). While Aoki eschews the transversal assemblage of science, literature, alcohol, and Bourbon Street as a joke, this belies the fact that this composition begins to articulate the conditions under which thought and action might be freed. Specifically, Aoki mobilizes a lesson from Le Borde by producing a transversal exchange between the 'expert' scientist and the literary fabulist. Moreover, while Aoki avoids specifying the intent behind the incorporation of alcohol into the transversal exchange, one could imagine that its function is oriented to a general decrease of superegoic inhibition and concomitantly, an increase in flows of exchange. While mentioned previously, Aoki's focus on the background, or rather, the mediating setting upon which to recommence the question of how science might be taught is instructive. That is, through the selection of Bourbon Street, Aoki incidentally suggests the necessity of a carnivalesque semiotics no longer caught within ossified patterns of meaning and interpretation. In this vein, Aoki's thought-assemblage detects a virtual ecology maximizing the coefficients of transversal

exchange across heterogeneous territories. As Deleuze and Guattari (1983) advocate, a detour through other disciplines, styles of thinking, and group-subject assemblages is necessary in order to clear up those 'false problems' borne from closed territories of thought. It is here that Aoki's approach to counter-actualizing the pedagogical image of science education bears fidelity to Multiple Literacies Theory (MLT). As Masny and Cole (2009) articulate, MLT's focus pertains to desedimenting habits of thought and action in education through the material production of innovatory assemblages and practices. Forging new circuits of enunciatory expression distinct from the overcoded concept of 'educational literacies', MLT aims to promulgate a new literary ecology through which the subject and its relation to the world might be thought anew.

Aoki's concern is less one of producing a specific image of science education than of creating the conditions for how it might be thought as a singularity. Herein, transversality functions as a tool for desedimenting the territory of curriculum and instruction, producing in lieu of its sedimented overdetermination (how the life of the institution ought to go) an unanticipated nuptials for a discipline yet to come. Ultimately, the tool of transversality functions as an implicit reference throughout Aoki's curricular scholarship insofar as his challenge entails a radical deterritorialization of the arborescent or vertical legacy inhering institutional curriculum and subsequently, the detection of a virtual ecology for thinking the lived-curriculum as a baroque creation. Hence, where the bureaucratic curriculum-as-plan is destratified through its transversal invasion by the group-subject desires of a singularity (a class, for example), what remains is not the curriculum, but for Aoki, a multiplicity of curriculums "as many as there are teachers and students" (p. 426). Via the transversal unblinkering of the curriculum and instruction archi-texture, Aoki palpates a virtual ecology for educational thought delinked from subsisting territories and hence, the presumption of what subjectivities and modes of enunciatory production are possible in the first place.

Resingualization II: Freinet

Guattari's transversal reconfiguration of *La Borde* would ultimately point to the rarity of singularities. As Guattari would challenge, what potentials exists to counter-actualize the clinic, the prison, or the school against schemes of "auto-centered" disciplinary power, the "phenomena of practical and theoretical domination", or the production of "subjugated groups" into highly coded vertical formations (Sauvagnargues, 2011, p. 174)? Against this image of desingularized or universalized life, Guattari initiates the radical task of redirecting the institution toward its permanent molecular revolution, or rather, a permanent reinvention aimed at freeing group-subject assemblages from oppressive forms of routinization and habit (Guattari, 2009a). Against the freezing of the institution, Guattari's militant organization, the Federation of Study Groups in

Institutional Research (FGERI), would produce active allegiances with primary school teachers from the Freynet movement. Already actively engaged in rethinking the institutional along the lines of pedagogical psychotherapy, proponents of Freinetian education along with the FGERI helped to uncover the failure of institutions to make their organization a focus of analysis and material transformation. As the FGERI would detect, institutional power effects would be obfuscated through the 'individualization' of the subject, its diagnosis, and subsequent 'treatment' within a dyadic model of transference. Herein, the FGERI would task itself with overcoming the encasernée scolaire (school-as-barracks) and its segmentation of group-subjects into strictly ordered roles and functions (Genosko, 2009). In this vein, the project of the FGERI would be oriented to the analysis of institutional assemblages and their effects on subjectivity.

Both the FGERI and Oury's Group for Therapeutic Education (Groupe d'éducation thérapeutics, GET) would draw upon the radical pedagogy of Célestin Freinet in their material revolution of institutional organization and recommencement of institutional group-psychotherapy. As an institutional militant and agitator, Freinet's molecular struggle against formal educational methods would eschew the universalization of education and its alienation of the institutional subject from the social fabric of the institution. Toward this material revolution of the institution, Freinet would nascently employ transversality as a tool for rehabiliting group-subject proximity to institutional life while collapsing the student-teacher dyad and its presumption of a superego for guiding student identificatory processes. Freinet's intervention would come in three conjoined formations.

To begin, Freinet would incorporate the use of a school journal, or rather, an enunciatory vehicle for group-subject interest and commentary on issues of local and regional concern. Occurring every other day, the interscholastic exchange of the journal would reach upwards of twenty different schools and social groups (Acker, 2007). Through this transversal exchange, Freinet aimed to adjust the general dissociation of schools and students by opening the potentials for following each others' lives and forming collective movements relative to shared experience and desire. The second transversal vehicle in Freinet's pedagogy would be operationalized via the incorporation of a printing press. The function of the press would be two-fold, enabling the mass production and exchange of the school journal while concomitantly reterritorializing the group-subject as a collective formation. Herein, the press functions as a circuit for the creation of highly singular group formations particular to group-subject desire. In this vein, Freinet resisted the territorialization of the classroom printery as a mechanism for the 'official' work of the institution. This was accomplished through a third innovation of creating of a cooperative student council whose task it was to oversee the journal in a manner adequate to the singularity of the group-subject. Herein, Freinet's institutional revolution would extend to transcendent knowledge, supplementing the 'school journal' and its enunciation of group-

subject desire in place of 'official' textbooks (Acker, 2007). That is, rather than being derived transcendently, Freinet would rethink institutional life through the transversal potential of the classroom press as a mediating object for the permanent revolution of educational contents.

Freinet would abandon preordained lessons in lieu of rendering group-subject enunciation into a transversal curriculum. The function of this transversalization is clear: Freinet's adjustment of institutional blinkering is connected to the task of overturning an impersonal curriculum and the ossification of student production under the regulatory gaze of the institutional superego. Indeed, what becomes evident in the counter-actualizing image of pedagogical life created by Freinet is its focus on creating a "collectivity sensitive to heterogeneous components as well as local conditions that would otherwise be steamrolled if one arrived with prefabricated interpretive grids" (Genosko, 2008, p. 66). Through the transversal force of the classroom printery, Freinet reorients schooling to the singular events informing upon the group-subject. In part, Freinet's transversal remapping of the institution commenced by unblinkering the desiring-production of the institutional group-subject operationalizes a new educational politics. Replacing "official schoolbooks [and classes] with student-produced material", Freinet overturns the education of children and youth as it is imagined by the elite (p. 83).

Practicing a form of institutional schizoanalysis, Freinet would rethink the task of education as one oriented to both the analysis of life in schools and the creation of new group-subject potentials for the liberation of life from under the stultifying power of verticalization. Mobilizing the school journal, local printery, and cooperative council on matters of editing and publication, Freinet would promulgate a pedagogical singularity oriented to the affirmation of collective autoproduction and the counter-actualization of institutional anguish and hopelessness. Herein, Freinet would affirm the "technical and political choice" of the school printery as a "molecular revolutionary activity" for the creation, possession, and communication of collective enunciation freed from transcendent models and a priori superegoic imperatives (p. 68). What is most original about Freinet's use of the printing press "is its role in mediation" and further, its creation of "a transversalizing space in which material hierarchy is restructured...and existing institutional structures at all levels from the classroom through the school board…are called into question" (pp. 67–68). Yet, Freinet's production of a 'transversal' educational space is more than critical insofar as it actively produces new forms of social arrangement and processes for subjectivity delinked from an image of how pedagogical life *ought to go*. Where Multiple Literacies Theory (MLT) functions by detecting and affirming affective flows of desire in the classroom, it bears fidelity to the radical institutional revolution at the heart of Freinet's work. That is, akin to Freinet, MLT affirms that flows of social desire are always-already operative within the classroom and further, that desire constitutes a productive and connective force in learning literacies (Masny, 2006; Masny, 2010). Connecting desiring-flows to enunciatory vehicles

of production, MLT aims to palpate desire into the social organization the classroom, effectively reterritorializing the life of the classroom into a singularity distinct from education *in general* (Masny and Cole, 2009; Cole, 2009).

Resingularization III: Oury

How might a group be moved out of serial being? (Genosko, 2002). As Genosko articulates, this concern is intimate to Guattari's interest in transversality and its potential to remedy the organization of the group-subject according to external, or otherwise superegoic power. That is, the liberation of the institutional group-subject necessitates analyzing the conditions of group unification in the first place. Where the unification of the group-subject would be accomplished through the instantiation of an external organizing metric, Guattari (2009b) would detect the production of practico-inert forms of being or what he would dub 'subjected groups'. At La Borde, such practico-inert formations would inform upon the clinic's nurses insofar as their roles were ossified according the "psychopharmacological imperatives of the institution" through which the function of their clinical role would be routinized and structured independent of other group functions and institutional spaces (Genosko, 2002, p. 84). While functionally unified, the nursing staff at La Borde would be subjugated under the edicts of their role presupposed by drug manufacturers, diagnostic taxonomies and orthodox university training. In part, what would be required to deterritorialize the serial role of nurses at La Borde would be the instantiation of a "common praxis" borne through both the work rotation (la grille) and reconfigured relationship to patients (Genosko, 2002). At other points, the transversal desedimentation of the nurses' practico-inert group formation would be accomplished through the transformation of the institutional backdrop. Rather than distributing medications in the infirmary, nurses moved their practices to new clinical sites such as the dining hall (Genosko, 2002). By altering their relationships to clinical space, Guattari detected a transformation in group-subjectivity. Minimally, the nurses at La Borde began to transform the assemblage of practices into which they had been locked, hence commencing a more experimental and varied approach to their clinical practice and group-self-definition.

The liquidation of seriality at La Borde would be affected through a transversal approach to pedagogy. Where Guattari saw in the university the creation of conditions for the overidentification of residents with the medical hierarchy, La Borde's work rotation schedule would pedagogically intervene by placing residents alongside their teachers in both medical and non-medical tasks (Genosko, 2009). Breaking apart the territories of transferential reference produced in the university, La Borde's transversal pedagogy would produce new conditions for relation, dialogue, and behaviour. In thinking a transversal pedagogy of the institution, both Jean and Fernand Oury would draw upon the institutional militancy of Freinet to emphasize the import of a mediating object

between analyst and analysand or otherwise, its corollary in the teacher student dyad. For Freinet, Oury, and Guattari however, it should be said that the mediating institutional object is always one that is more than an object. For example, in Freinet's incorporation of the classroom printery, Oury's reorientation of pedagogy in terms of 'labour tasks', or Guattari's militant support of Radio Alice, the object would constitute a circuit for a new social assemblage oriented to auto-production and the instantiation of new group-subjectivities. It is on this point that the transversal pedagogy of La Borde orients thought away from a treatment of 'individuals' in lieu of a schizoanalysis of what institutional assemblages are capable of producing.

It is such an orientation that inheres the militant work of Fernand Oury and his criticism that the founding of modern education is premised upon the botched conceptualization of the student as a passive receptor of the institutional superego with which it is impelled to identify. A contemporary of Freinet and brother of La Borde founder Jean Oury, Fernand Oury would compose a form of 'institutional pedagogy' oriented to the material revolution of institutional organization. In an innovation that would subsequently form a 'core' aspect of A.S. Neill's Summerhill 'free-school', Oury would draw upon Freinet's notion of cooperative student council (counsil de cooperative). Distinct from contemporary notions of classroom democracy founded upon anonymity and bureaucratic constraint, Oury's particular conceptualization of the cooperative council focused upon the enunciation of student feedback pertaining to classroom life (Genosko, 2009). Non-anonymously, the class would advance, refine, and defend issues proximal to the fabric of their group-subject experience. Put differently, Fernand Oury's 'institutional pedagogy' would rehabilitate the severed relationship of students from the fabric of the institution by tethering the enunciations of the cooperative council to tangible transformations of institutional life (Guattari, 2000). In this vein, Fernand Oury would relink institutional pedagogy to its experimental potential to modulate the organization from within. Transversally, the school would be opened to its immanent molecular revolution.

Guattari would encounter Fernand Oury at the age of 15 as a member of the youth hostelling movement (Guattari, 2009a). This encounter would spark Guattari's militant activism insofar as the youth hostelling movement would bear upon the production of collective autonomy and group-self-definition apart from superegoic injunction. Comprising a para-scholastic education, the youth hostelling movement shifted the backdrop of pedagogical experience upon a quasi-nomadic heterogeneity born from the experience of collective caravan travel. Such heterogeneous experience would subsequently be drawn back into relationship with the school. That is, Fernand Oury would rethink 'institutional pedagogy' as a transversal space between the youth hostelling movement of post-war France and the function of the school as a space for auto-production and group enunciation. In this vein, Oury's transversal approach to education would produce a connection between the social fabric and the life of the school.

Counterposed to the contemporary cutting-off of the school from collective social action and politics, Oury's 'institutional pedagogy' jettisoned the false demarcation of social space as something peripheral to the school, mobilizing para-scholastic activity as a school curriculum and classroom life as a site for the enunciatory production of new social formations. Herein, both Fernand Oury's 'institutional pedagogy' and Jean Oury's material experimentations with the organization of the clinic were commencing a rhizome (n-1) by subtracting an external organizing principle in affirmation of a heterogeneous multiplicity (Deleuze and Guattari, 1987).

Following Singularities

It is Aoki (2005) who suggests that the task of education should not only entail the affirmation of the singular, but further, the active composition of singularities. This, of course, has nothing to do with the 'individual' or the elevation of the neo-liberal self-styled subject as an aspirational model. Rather, Aoki's focus on singularity advocates for the practical analysis of social assemblages for the maximal liberation of life from under subjective and enunciatory constraint. Where Guattari points to the contemporary sclerosis of the singular within institutional life, it is through schizoanalysis or rather, the practico-material analysis of what social assemblages produce and are capable of producing that opportunities for transversal exchange or molecular revolution might be detected (Sauvagnargues, 2011). This is one of the key challenges advanced in Roy's (2004) *Teachers in Nomadic Spaces*, where the conventional organization of the school relative to the "possessive individual" and the specification of its role is transversally relinked to the "pack" formation denied in Pankejeff's (Wolf Man) dream (p. 109). Akin to Guattari's analysis of the clinic, Roy's detects in school life the necessary articulation of a virtual ecology or qualitative multiplicity for expression and reference. Where this virtual ecology is severed, Roy articulates, teachers and students encounter a kind of institutional "insanity" marked by a symptomatic adherence to fixed positions and the presumption of personal ownership over scholastic knowledge, skills, and attitudes (p. 110). Mobilizing transversal thought against this institutional myopia, Roy articulates the case of a high school where students design and offer semester-long courses in areas of collective interest and further, where forms of collective mentorship emphasize listening to students without grafting their enunciations into preexisting interpretive grids. To paraphrase Deleuze (cited in Foucault, 1977), if one were to heed the protests and questions of a [kindergarten] student, the educational complex would be revolutionized. Where life in schools is deintensified through arboreal ossification, Roy contends, the institutional must be relaunched through its virtual ecology, or rather, its molecular potential for counter-actualization. In lieu of the molar 'individual' and its neuroticized attachment to the institutional superego, Roy advances a 'transversal pedagogy' through the heterogeneous and connective potential of the

pack, swarm, or open system where concepts are brought into relation with circumstances rather than essences (Watson, 2009). Continually overturning centralizing powers, masters of authority, and the conditions for fascism born through the habituation of thought and action, 'transversal pedagogy' challenges education to get out from behind the desk, to form "new lines of allegiance" and "new spaces of freedom" (Guattari and Negri, 2010, p. 116).

The task of creating such a school is, of course, not an easy one. As Guattari writes, La Borde would continually face the challenge of overly territorial staff, the overidentification of doctors with the medical hierarchy, and the continual threat that transversal group-subjects would become subjected under external metrics of organization (Guattari, 2009b). Habits of individuality borne from university training continued to inform the self-willed isolation of staff into practico-inert roles, while in-fighting threatened to dissolve transversal "packs" and the heterogeneous universes of reference produced therein. Even the transversal desedimentation of the institutional structure would not, in itself, amount to liberation. As Deleuze and Guattari (1987) warn, "[n]ever believe that a smooth space will suffice to save us" (p. 500). Even at La Borde, the formation of groupuscles and micro-fascisms would continually challenge the therapeutic project. Against these territorial edifices however, Guattari would follow Oury's challenge that 'institutional pedagogy' should remain vigilant over its desiring-machines, or rather, the arrangement of institutional organs of production and anti-production. Here, Guattari emerges as a revolutionary counter-cartographer of the finest order, mobilizing an ethics of experimentation for remachining the productive potential of institutional life. Drawing upon the tool of transversality, Guattari advocates a way of operationalizing a revolution of organizational life through the careful reinvention of institutional ontology. Drawing life from behind the analyst's couch and teacher's desk, Guattari's militant ethics posits new ways of living sensitive to the virtual ecology entwined to the actual. Indeed, we do not yet know what an institutional body can do. As Guattari demonstrates, the creation of the institution is a matter for practical experimentation - it must first be made. This is to recommence eco-pedagogy as a mode of material expression for the task of institutional revolution.

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DAVID R. COLE

5. DELEUZE AND THE SUBVERSION(S) OF 'THE REAL'

Pragmatics in Education

INTRODUCTION

This paper puts Deleuze to work in education. The field of educational studies is open to new ways of understanding and conceptualising knowledge, such as those that we derive from Deleuze, to the extent that this new knowledge can be used for educative purposes. However, this statement of educative intent means that humanism and morality could immediately take us away from the focus of investigation (see Denzin, 2003); because new knowledge in education is subject to the duality of questions about application. The point of this study is to push the empirical nature of the work done to the limit, and beyond applicative dualisms; in order to understand what is happening to two Sudanese families in Australia, as they start their new lives on a new continent and as part of a different society. In this writing, two Sudanese families are examined for their notion of the real as a part of their everyday lives in Australia. I have located the notion of the real as being of critical importance to this process of examination, as within the 'field of the real' lies the sometimes dormant forces and factors that determine the possibilities of the truth. As Jeffery Bell (2011) has argued: "For Deleuze, the real is to be associated with processes that constitute the givenness of objects rather than with the constituted, identifiable objects and categories themselves," (p. 4). This statement means that there are elements within what is happening to the Sudanese families that act as markers or portals to the real of the Sudanese, and these can be reformulated as empirical evidence for claims about how to help with their education in Australia. The real, in this sense, is not the perspective or viewpoint of the Sudanese in Australia, but a multi-layered construct that includes the thoughts of everything that has happened to them before they arrived in Australia. One might cogently argue that to state the empirical facts of the dislocation, refugee status and resettlement of the Sudanese according to the humanitarian programme in Australia is an expression of lack. The truth of 'the real' for the Sudanese families from a Deleuzian perspective lies in their thought processes and multiple creation(s) of new, unstable mechanisms for coping with displacement. The field of inquiry is open and

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 53–69.

includes the anomalous, exceptional or extraordinary, which may or may not be directly expressed in words and artefacts. This study signals a Deleuzian inspired take on ethnography that is 'unethnographic' in the sense that the Sudanese families are not considered to be marginalised or 'ethnographic others' to the mainstream, or representative of a purely qualitative study of Sudanese family life in Australia. Rather, the givenness of their lives is opened up and explored through this work, with the aim of discovering an unknown point in empirical investigation, where the Sudanese-Australian real is emergent and the incipient learning may be understood in terms of multiple literacies and pragmatism in education.

DELEUZE AND 'THE REAL'

What is real for Deleuze, and why is it important?[1] Critics of Deleuze have targeted the notion of the real in Deleuze as being a weak point in his philosophy (e.g. Žižek, 2004). The argument is that Deleuze's promulgation of the real in *Anti-Oedipus*, which was at heart a dissection and dissolution of Lacan's emergence of the Real due to a symbolic lack; sets the unconscious up as being consummately productive, and it could be argued that this move reduces reality to productive desire through human wanting. On one side of the critique of Deleuzian production in the unconscious is the proposition that his philosophy misrepresents the darker aspects of reality, especially those made real due to depression, madness, suicide, nihilism, etc.; because to understand these mental and social conditions precisely require 'a lack' and not a vitalistic idealism (see Brassier, 2007, p. 201); and secondly, that the Deleuzian approach is unable to truly think nature, due to the chaotic preponderance of desire which potentially obscures and libidinalises the complex forces of nature, even those concerned with decay and death (see Grant, 2006) or with the extinction of the human race. To answer these important counterarguments to the real of and in Deleuze, one must first go back to the period in his life where 'the real' was a vital player in his thinking, and where he was grappling with its implications. I have identified this period as being between the publication of the *Logic of Sense* and the joint release with Félix Guattari of *Anti-Oedipus,* because this period signifies a time when he was working closely with Lacan, Freud and psychoanalytic interpretations of reality, and it was also the beginning of his 'grand synthesis' with Guattari.

Deleuze in the *Logic of Sense* is searching for the real through a psychoanalytic 'curtain' that had been drawn by Freud, Lacan and Melanie Klein. One's desires as a young child, which lead to growth and development in the psyche, are coopted and controlled by Oedipus according to Freudian psychoanalysis. The Freudian analyst engages the patient in a narrative

monologue whereby the Real emerges from the entanglement of adult and child oedipalised sexualities and fantasy, until the therapeutically healed 'ego' is able to emerge as whole and reborn; free from the initial psychic impingement and impact of oedipal desire. Yet how do we know when this has happened? What if the psychoanalyst becomes superimposed as the parent, and therefore coopts and extends oedipal desire through analysis? How do we know the truth of the patient's monologue in the first place? Lacan set about refining and focusing the Freudian story about the Real, in that he made 'the Real' a player in his structural analysis of the psyche. In fact, Lacan (1966) called the link between one's desire and any articulation of this reality — the Real; to emphasise its importance and to provide a symbolic marker in the 'order of things'. For Lacan, Oedipus is not *a real* impingement on psychic development, but it is a symbolic artefact of living and desiring through language, whereby the mind has produced a piece of dramatic attachment, embedding the Real as a lack in life, a fantasy, a "object petit a"[2].

Lacan's influence can be felt throughout the *Logic of Sense* and *Anti-Oedipus* as a symbolic and imaginary Oedipus is present in both texts, though subject to the processes of nonsense and defamiliarisation by Deleuze. Lacan's Real took psychoanalytic practice away from the closure and potential tension of the analyst-analysand relationship, and merged the psychoanalytic articulations of the Real with symbolic renditions in public and social life (see Lacan, 1966). Social critics of capitalism such as the early Žižek (1989) have used Lacan in terms of explaining how the self under capitalism develops a symbolic and ideological order that is crippled and reduced by alienation, isolation and 'the fetish'. The Real from Lacan serves in Žižek's analysis as a means to explain how desire is manipulated and aggrandised by the processes of capitalism and 'the market'— essentially to sell products. Deleuze and Guattari (1984) do something similar in *Anti-Oedipus*, though they go further than Lacan and Žižek; in that 'the real' of desiring-machines and schizo-analysis inverts and rechannels capitalist desire through synthesis, in order to deal with capitalism's othering effects[3]. Capitalism according to the real in *Anti-Oedipus*, does not fundamentally incur a symbolic or linguistic lack in desiring (the Lacanian Real); which could be located between the things one wants and the things that one is able to get; but is part of a synthesis by which one may understand becoming in the world. This is because according to Deleuze and Guattari (1984) the apartness and confusion that capitalism incurs may be traced back to the first developments and power structures in primitive societies. The real of capitalism was already apparent in human society (Deleuze and Guattari, 1984), and has been lodged in collective practises through the flows and material facts of history, and the drives that these activities have created. Yet to get to this point, Deleuze needed to work carefully through the Real of psychoanalysis and the death drive as presented by Freud and Melanie Klein.

The non-conformist, anti-herd real of *Anti-Oedipus* comes about after examining the play of forces in the 'death drive', seen, for example, in their construction of the Body-without-Organs[4]. The real of the *Logic of Sense* is a paradoxical series of events that comes about as an accumulation of experience and as a means to understanding how sense emerges under the influence of synthesis. Key to this understanding is the 'death drive' and how it ultimately overrides Oedipus both as an external influence (Freud) and as a symbolic Other (Lacan). The death drive has a formative part to play in Deleuze's formulation of the real as it is fundamentally connected to one's notion of life and the in-between play of forces that life entails (see Deleuze, 1994; 2005). Deleuze is here referencing Nietzsche, as a means to construct a philosophy of the future that outmanoeuvres Oedipus, and to present a positive rendition of the functioning of the drives (including death). Deleuze (1994) constructs thinking as a 'virtual real', not as a reflection or copy of reality or in the actual, but as a means to creatively inventing the world through the unconscious, and by following the lines of power that pass through it (see Cole, 2011). This philosophy of life critically includes reference to Spinoza and Bergson, as the subject is redesignated through pre-personal affect and biological vitalism. I believe that the realist criticisms of Deleuze's philosophy as being unable to explain the darker aspects of reality, as have been previously articulated by the philosophies of Schelling (see Brown, 1972) or Schopenhauer (2007); are unsustainable as Deleuze's philosophy of life critically includes death, decay, extermination, hopelessness and madness. Furthermore, the point that reality is reduced to chaotic human desire, simple affirmation or 'yeah-saying' by Deleuze is also far from the truth, as the proliferation of weird machines, strange referents and peculiar scientists in his writings does not produce a picture of 'happy-clapping' normative adherence. On the contrary, one begins a search for anomaly when one engages fully with Deleuze. The real lies at the edges of consciousness, as one grasps the influences of desire on perception, or begins to understand how practices have been conditioned and controlled for many years before one's body has experienced particular affects. The real for Deleuze is akin to moving to a foreign country and realising the overlay of new experiences as a singularity: i.e. one's difference becoming other and reproducing itself without volition.

DELEUZE AND THE INVESTIGATIONS OF THE REAL

What are the consequences of 'Deleuze's real' for empirical studies? In *Difference & Repetition* Deleuze characterised his philosophy as transcendental empiricism. This means that the real is out there in the world, beyond human consciousness, yet also subject to the strange contortions and distortions that human thinking can produce. This is the 'virtual real', wherein thinking can

include the sometimes fraught machinations of the memory, the imagination, affection and the playing with time and space of the creative unconscious (cf. Deleuze, 1994). For example, if one is examining bacteria and its place in the world, one is able to deploy the 'virtual real' as a means to extending empirical observations to explain the unpredictable ways in which bacteria is able to reproduce and relate to its outside. Deleuze's philosophy opens up scientific thinking, and produces resonance between precise observation and documentation, and the modes of writing executed by, for example, Proust or Joyce. According to Deleuze (1994), one is able to deploy calculus to differentiate and to explain the processes of individuation that exist in the world, and at the same time represent these modes of difference and change as being unstable from within, or as creating inner caverns wherein secrets may be withheld or half-truths come to light as fuzzy, unclear units of thought. An example of such a 'virtual real', empirical experimentation and articulation; is H.G. Wells', *The Island of Dr Moreau*.

> At last the song ended. I saw the Ape Man's face shining with perspiration, and my eyes being now accustomed to the darkness, I saw more distinctly the figure in the corner from which the voice came. It was the size of a man, but seemed covered with a dull grey hair almost like a Skye terrier. What was it? What were they all? Imagine yourself surrounded by all the most horrible cripples and maniacs it is possible to conceive, and you may understand a little of my feelings with these grotesque caricatures of humanity about me. (Wells, 1896, p. 66)

This description allows us to get close to the 'virtual real' in thought and that is available for empirical investigation. The 'virtual real' is ultimately a state of absolute otherness, and is accompanied by fear, withdrawal and the requisite questioning of assumptions about reality. In contrast to the description of Deleuze's thought as being primarily based on affirmation (see Massumi, 2002) or the efficaciouness and artificial extension of human desire; the 'virtual real' as described in this investigation, is when one is confronted face-on by a reality that is alien, strange and impossible to fully embrace. To a certain extent, this involves a type of manoeuvring in reality, to make sure one comes to the real as an outsider, so that one does not reproduce normative assumptions or familial perceptions of reality that are relayed through an 'average consciousness' or 'everyday banality'. One could say that the use of the 'virtual real' is a means to disentangle the influences of state science in terms of phenomenology and the assumptions of psychological thought that have come to dominate investigations of the real, especially in the humanities and education (cf. Woolfolk & Margetts, 2007). Putting oneself outside of psychological and phenomenological paradigms for the investigation of the real is a risky move, yet one that could prove to be invaluable to understanding the study of Sudanese migrants with refugee backgrounds in Australia.

Such an understanding about the Sudanese-Australians comes about because the 'virtual real' designates a means to examining forces and relationships that bisect, designate and run through the real. In contrast to actor network theory (e.g., Latour, 2005), i.e. agentic relationality, or any form of social constructivism in the humanities or the arts; the 'virtual real' is a form of 'terrainic' thought process, demanding that, as Manuel DeLanda has said, we: "think like rocks" (see DeLanda, 2002, p.1) or beyond human agency[5]. One could say this is a slow investigation of the real, allowing for and encouraging a thoughtful sedimentation of the ways in which the real is immanent and pantheistic for the Sudanese in Australia; i.e. the 'virtual real' of the Sudanese is in everything they experience and attests to many Gods. In other words, we are searching for the geo-plastic forces that are embedded in the creation of a new vision for society by the introduction of the Sudanese-Australians. The meaning that one might take from these forces can be particularly bent and misshapen, and not respond to any form of equilibrium or constancy within the real. In contrast to Jean Baudrillard's construction of the real through contemporary media networks and in forces such as the silent majorities (2007); the 'virtual real' is not a plainly nihilistic rendition of reality, or a form of relativism or chaos theory writ large through social intervention. However, the absolute loss of meaning is not excluded from the 'virtual real', as the study of empirical evidence may prove this to be the case, and the bottom-up pertinences of chaos theory are largely adhered to in and through the 'virtual real'. It could be stated that the' virtual real' is akin to being able to put on glasses to see the truth of quantum mechanics and how it acts in the world. One might argue that such a process requires the cognitive ability to understand quantum mechanics in the first place, and this could act as a form of subjectivation within the investigations of the real. Yet this is a part of the slow revelations of the real from a Deleuzian philosophical position (requiring difference). The layers of the real have to be peeled away before any core concerns and drives can be understood. 'Thinking like rocks' means that the focuses and linkages and intensive concentrations of the study are paramount, especially if one wants the 'virtual real' of the Sudanese to crystallise clearly.

SUDANESE IMMIGRANT FAMILIES: 2 CASE STUDIES[6]

The two Sudanese families (A & B) in this study have come to Australia over the past ten years. The families have travelled from the far south (A) of Sudan, and the central highlands (B), and these two places are separated by thousands of kilometres, yet they have settled approximately thirty kilometres apart in the western Sydney districts of Penrith and Prospect. The project has involved filmed observations in English adult classrooms, interviews with the adult

Sudanese English learners, interviews in the houses with the family members, and giving the participants 'flip cameras' so that they can make short films about their everyday lives in Australia. The project lasted eight months, with the families working with the researchers[7] to enable insights into their lives in Australia and particularly with respect to their experiences in education. In the first family (A), the male (Nallowa) has joined his wife and seven children two years ago; he is an Arabic and Dinka speaker, and is learning English at the local adult education centre (TAFE). In family (B) the couple, Ema and Serena, has come to Australia three years ago, and they are both learning English at the local TAFE centre. Family (B) has nine children, with the eldest still in Egypt. Family (A) were much more forthcoming and ready to help with the research, which was mostly due to the fact that Nallowa encouraged interaction between the researchers and the family, as he saw advantage in taking part. Nallowa wore suits to the adult English classrooms as we were filming and told the family members what to do in the house when we visited. To understand the 'virtual real' from his perspective, I would like to take a phrase from the interview transcripts and dwell on it so that the synthetic connections may become apparent in the construction of a Sudanese-Australian reality.

Nallowa said in the second interview: " Now I ah ah, because I'm like to say in in ah, Africa you don't have ah, a country now, Africa you have two river," (Interview transcript). Nallowa discussed the issues of drought in the interview and how the populations must live close to water in order to survive; but beyond this survivalist point, is the deeper relationship that the Sudanese refugees have with the land and how they conceptualise space. Something that was especially noticeable about working with the Sudanese in Australia was how they meet and congregate at the intersections of streets and buildings. Sudanese youth gather in groups in Blacktown at night in the small squares between commercial buildings and around the railway station exits. Nallowa was usually late for appointments, yet when he did turn up; his arrival was always unexpected and a surprise. The 'virtual real' for Nallowa and the Sudanese youth did not include timetabled schedules and designated queuing spots, but rather followed flows and points of confluence; whereby the map of the place or time were altered to fit in with the 'virtual real'. The connections and relationships that the Sudanese-Australians are developing as part of the Sudanese-Australian real depend on their mapping processes of the terrain, and how the Sudanese refugees are forming new ways of working in 'the real'. This aspect of the research has less to do with consciousness, as it has to do with the journeys that the Sudanese have embarked upon and are still living through in terms of their new realities in Australia.

Both families (A & B) had stayed for an extended period of time in Egypt before coming to Australia. The Sudanese use Egypt as a transit location to apply for refugee status and to wait for the chance to be resituated in another country.

The participants in the research articulated their main reason for wanting to leave the Sudan as being the war, which has led to starvation and instability in their local regions. The memories and sense of the flight from war via Egypt and to Australia, sits inside the 'virtual real' of the Sudanese families as a destabilising and displacement agent with respect to conforming to the sedentary, middle class and capitalist values in Australia (see Harris, 2011). Working in the manner of the Deleuzian real, means that the large scale influences of war, the transplantation to and from Egypt and the humanitarian resettlement in Australia, are as likely to affect and transform their situation, as any latterly imposed discrimination, alienation or otherness experienced in the form of everyday encounters in western Sydney. This is because the 'virtual real' depends on a formulation of time derived from Bergson (2008) that stays with the agents, not as subjectivation; but as a connection with unconscious and social forces that play with drives, motivation and affect. The trauma of the displacements, family separations, disjunctions and coming to terms with their new situation has not been without its inhuman and surreal moments, described by the participants in terms of joblessness, English classes and being embroiled with bureaucratic systems of housing, benefits and health. The reality of the Sudanese-Australian lives is characterised by the ways in which trauma, displacement and disconnection is affecting them generally and is often played out beyond expression.

The Sudanese boys in the study particularly contributed to the impression of 'mute disparity'. The boys' 'virtual real' consists of playing sport, attending school, dressing up and going out with their friends, and dealing with their masculinity via media images of teenage male heroes framed and produced in the USA. Beyond this reality, lies the deeper and more dangerous memory and thought of being a young Sudanese male in the war; wherein child soldiers are common (see AHRC, 2010). This research project found no evidence of child soldier conscription, yet what was striking was that the boys would not express themselves as openly or enthusiastically as the girls. This gender divide in articulation was consistent between families (A & B) and relates to the manners in which Sudanese males and females are succeeding (and failing) in the Australian education system (see Cassity & Gow, 2005). The gendered 'virtual real' of this study is due in part to the fact that the boys were questioning the reality that confronted them in Australia, and were often finding it unexciting and banal. The allure of consumerism, educational success and the 'petit bourgeoisie' is diminished if one has the embedded memory or thought of war, however much that memory may be mediated by displacement or supported by family life (cf. Brown, Miller & Mitchell, 2006). The eighteen year old, eldest teenage male in Australia in family (B) was especially susceptible to such thoughts, and barely took part or expressed any opinions in the research project interviews. The boy's father had been absent from their Nubian, mountain home

for several years before the family had gone to Egypt, and during this time he could have been either recruited or taken part in military operations. The youth would not talk about such events, as he was unwilling or unable to divulge such information, yet the atmosphere of a child soldier hung around him like the unnatural framing of some supernatural, unearthly force.

The Sudanese-Australian boys are strong-willed, attracted to American gangster rap, sports, designer clothes and gold plated jewellery. Outside of school, and beyond articulation in the research interviews of this project; the boys are lively and fun, forming close-knit groups who like to go out and inhabit the streets with their own sense of space as has been noted above. In contrast, the girls would willingly express random desires to the researchers such as wanting to become sportswomen, actresses or pop stars. The girls were able to converse about their developing Sudanese-Australian identity, what they thought of school and Australian life. These findings of the case studies point to the gender division within the Sudanese-Australian 'virtual real'. On one side, the girls were forward, animated and lively, and able to use their submerged, 'virtual real' Sudanese-African aspects of their identity to their advantage in the new location. Contrariwise, the boys were dwelling in the Sudanese-African 'virtual real', which accumulates an image of manhood from Africa, and that doesn't correspond to the prototypical Australian male. The gender-divide in the empirical field of investigation of this study is principally a question of desire, and this may be profitably approached through the Deleuzian real. This real offers through-lines and new ways of looking at the development of Sudanese-Australian identity. The' virtual real' is not a set cognitive ability or patterning of thought (see Cole, 2011); rather, the 'virtual real' signals the ways in which the Sudanese males are able to express themselves, currently outside of institutional situations. These habits and abilities are henceforth folded into understandings of Sudanese-Australian learning and adaptive potentials in terms of multiple literacies.

The observations and videotaping in the English language classes, gave rise to the clear point that the Sudanese adults were in the main struggling with learning English. Nallowa (family A) is a fluent Arabic and Dinka speaker, who has previously studied English in Kenya. In family B, Ema (male) and Serena (female) were both learning English at TAFE. Serena especially needed special attention with her English exercises, her teacher usually staying behind to help her catch up and understand what she was meant to be doing. The fact is that the older (over 40), Sudanese refugees will pass through their adult classes without becoming fully literate in English. This means that their job opportunities will be curtailed in mainstream Australian life. Ema asked me how he could get a better job than his current cleaning position. Nallowa considered his involvement in the project and his relationship with me very hopefully, and as a means to bettering the position of himself and his family. Nallowa showed the researchers

traditional, embroidered materials that the women had prepared, perhaps with the hope that we might buy them. Both families (A & B) go to church and were involved with church communities. Christianity had an important place in their lives, as it brought them together with other members of the Sudanese Diaspora. The Sudanese-Australians have extensive support networks, and their houses are meeting places and crossroads for relatives and friends. In one of the flip-cam videos, a wake was filmed, wherein family members and relatives congregated in the house for several days. The men sat in the garage and played games. The women attended to each other's hairstyles in the front room, adding extra hair and beads for adornment.

The Sudanese-Australian 'virtual real' consists of a highly sociable bricolage. Neither loneliness nor isolation seems to figure in their world. Equally, the place of study and reflection does not have a place in the Sudanese-Australian 'virtual real'. The Sudanese-Australian homes contain large sofas and padded chairs, TVs, religious imagery on the walls and flashy audio stereo systems, and do not have the ordered apartness of separate areas for discrete functionality. There are no books on display or within easy reach of the children. Rather, the 'virtual real' of the Sudanese-Australians reinstitutes tribal and village spaces in their homes, without the mapping of petit bourgeoisie capitalism or the reification of the home amongst the oedipalised English middle classes (cf. Vickers & McCarthy, 2010). However, the atmosphere of such places is not an unhappy one, with the constant movement of young children threading with the chatter of African conversation, TV sounds and low music. The 'virtual real' of the Sudanese-Australians depends greatly on the ways in which the children are emergent from these family homes with an African flavour. The children want to get jobs, earn money, buy cars and have attractive clothes. The indications are that they will achieve such goals, as they leave their parents behind in terms of their linguistic abilities in English, understanding mainstream Australian mores and their resultant chances of securing employment. How much they will recreate their African heritage in their subsequent homes is a matter of speculation. The Sudanese children will retain strong Sudanese-African connections because the Diaspora from Africa has created powerful and supportive social networks through dedicated communality. These forces will play out in the 'virtual real', as the seductions of commerciality, ownership, capitalism and sedimentation within Australian society jostle with Sudanese-African identity.

Figure 1. Collage of frames taken from participant made flip-cam films (de-identified images of participants used with permission)

PRAGMATICS IN EDUCATION: MLT

What do these case studies and the application of the Deleuzian real help practitioners to do in education? The first point is that this paper is not an example of state imposed multiculturalism, or a result of solely considering questions about social justice with respect to the Sudanese-Australians. The understanding of the 'virtual real' of the Sudanese-Australians is a deliberate strategy to circumvent the dualism of educational application as described above. This application of the Deleuzian 'virtual real' takes the facts of the case studies of the Sudanese in Australia, with the aim of extending such a virtually emergent reality to bend and shape pockets of Australian society. This study and its consequences are not a type of social constructivism, phenomenology or educational psychology as has been discussed; rather, this study aims to take the current functioning of the Australian education system, and alter its track given the 'virtual real' from the Sudanese-Australian perspective. Such an alteration means that pragmatic measures should be adopted that include the 'virtual real' of the Sudanese-Australians; this pragmatism has been described as a form of 'shimmering web' with respect to the Deleuzian notion of affect and how it applies to the humanities, arts and science (see Gregg & Seigworth, 2010). This web could also be figured as a lens or glass through which new possibilities in education can be seen which take away the normative blueprints for development as they currently exist. This point has been previously taken up by qualitative researchers in education, who have used Deleuzian theory to break up the everyday banality of doing video research in the classroom:

> The need for new thought seems especially urgent in research concerning children, buried as they are under the weight of psychological and educational narratives that frame them into generality and string them out along the predictable plot of 'normal' development. Children who offer resistance, whether intentionally or not, to the disciplinary embrace of this emplotment risk becoming invisible or deviant. Research frequently fails to interfere with this everyday banality of the normal child and thus unwittingly colludes with the production of exclusion, disadvantage and a stunted set of possible futures for children. (MacLure et al., 2010, p. 544)

The new thought that can be used in this study is called Multiple Literacies Theory or MLT (Masny & Cole, 2009). MLT is an example of a Deleuzian inspired literacy theory, which acts parallel and complementary to the 'virtual real' as a form of unhinging that works to release multiple and minor literacies from their iron castings inside of, for example, English language development or the 'refugee self'. The Sudanese refugees, perhaps with the exception of the oral abilities of the young girls, were clearly struggling with most aspect of traditional English literacy. This section henceforth describes the pragmatic, minor and multiple literacies that would help to extend the Sudanese-Australian 'virtual real' into the mainstream of education:

1. Peer and youth literacies. The Sudanese-Australians respond well to kinship and group bonds being preserved as much as possible. In mainstream educational practice, children are traditionally assessed, streamed and divided into year, subject and class groupings. The Sudanese-Australians thrive in social arenas where they can listen to peers and older members of their community speak about educative or social matters. For example, a year 7 Sudanese-Australian student would respond well to being taught Mathematics by a year 10 Sudanese-Australian student or at least having him or her there for peer support and knowledge.
2. The literacy of synthetic time. The clockwork mosaic of discrete knowledge areas to study one at a time and after each other, and the confusing multitude of subjects in the secondary context, is a hindrance to the development of the Sudanese-Australian 'virtual real'. Rather, the Sudanese students could be taught for extended periods of unequal length and duration to encourage the synthesis of time, whereby their knowledge acquiring apparatuses are switched on and they are attuned to learning according to the 'virtual real'. The introduction of the literacy of synthetic time requires a new timetable for the Sudanese-Australians to be introduced into schooling, with longer and interconnected subject and study periods (see Cole, 2011).
3. War literacies. The reality of war must not be watered down, sublimated or diluted in the context of schooling the Sudanese-Australians. Rather, the' virtual real' of the Sudanese would be stimulated and engaged by understanding what war means and being able to articulate ideas connected to war, and not only how they have impinged upon Australian life and its people. This type of literacy cannot be isolated or designated as being merely relevant to the subject of Australian history, but extended further into the curriculum.
4. Oral literacies. Spoken language must take precedent with the Sudanese-Australians and the use of their 'virtual real'. The imposition of literate moves too quickly and too universally, i.e. the deployment of educational practice involving reading and writing with the Sudanese-Australians, will take the study focus away from their oral abilities and the use of such a pivot, and the sense of community that orality has embedded within it. Oral literacies coincide with the need for code switching in the classroom (see Milroy & Muysken, 1995); in the case of this study, between Dinka, Nubian, Arabic and English, so that knowledge and conceptual development may be supported between languages.

5. Tribal literacies. The tribalism of the Sudanese-Australians refugees cannot be overlooked, but used effectively as part of their learning practices. This set of literacies, that would benefit the 'virtual real' of the Sudanese-Australians because of the socialisation processes in Sudan; which requires educators and students to reintroduce a pre-modern space into the teaching and learning arena, whereby neither capitalist nor industrialised education is incumbent on the forms of sociality that are apparent in learning.
6. Physical literacies. The sustained use of abstract knowledge in the classroom will hinder the progress of the Sudanese-Australians in the mainstream. This literacy is important because the ways in which their 'virtual real' is constructed necessitates the physical reality of what is being discussed or studied to be paramount. Education can be a physical, indeed, visceral experience for the engagement and development of the Sudanese-Australian 'virtual real'. This literacy means the acting out and physical activation of knowledge, ideas and concepts in and out of the classroom.

CONCLUSION

It would be hard to imagine that Deleuze could have envisaged the use of his conception of the real to help Sudanese-Australian students and their learning adaptation(s). However, the fit between philosophical conception and the application of his philosophy to an 'other' in the Australian education mainstream is compelling. Such a relationship has been mapped in this paper and this mapping is robust because Deleuze (1990) was concerned with questions of realism and how psychoanalysis can be taken away from the confines of a self-serving practice, limited to constructing a 'theology of the self'. Rather, we may take from Deleuze an ontology of becoming that works on a pragmatic, political and scientific level. In this study, the careful observation and research work with the Sudanese-Australians has not led to verifiable categories of qualitative data, or sets of analysable phenomena, but a conception of the 'virtual real' that points to necessary changes in the educational system through MLT. These changes would have to be made if the Sudanese-Australians are to succeed in Australia, and not be consigned to a peripheral sphere in the mainstream and the consequent welfare dependence and placement in public housing. Recent studies of African communities in Australia have indicated that young Sudanese (under 25) are especially prone to become involved with crime and the infringement of Australian law (see AHRC, 2010). The introduction of the six forms of multiple literacies as mentioned above into mainstream secondary and primary education as a practice; would be a starting point to address the worrying tendency towards crime that the Sudanese-Australians are currently demonstrating. This is because the deployment of these multiple literacies would help the Sudanese to construct

a substantive counter-narrative to the mainstream in Australia of their own. Such a change in the fortunes of the Sudanese-Australians, would benefit the whole of Australian society, and make real the possibility of a true multiculturalism as 'multiple culturalism' and a subversion of the current real of Australian educative life — which is often still dominated by a white, colonial past.

NOTES

[1] I have termed Deleuze's real with a lower case, and the psychoanalytic term with a capital R. This distinguishes the way in which Deleuze was concerned to take away from the naming and diagnosing effects of psychoanalysis.

[2] There is not enough space to completely do justice to Lacan's Real in this writing. The Real is a vital part of Lacan's psychic structure, along with the Imaginary Order and the Symbolic Order; which creates tensions in the self that leads to psychoanalytic phenomenon such as loss and attachment. The point here is not to exhaustively describe Lacan's Real, but to use it as a bridge to the real in Deleuze and the 'virtual real' of this study.

[3] I have named 'the real' from Deleuze & Guattari's *Anti Oedipus* as such due to its non-lack. The Real from Lacan signifies an object projecting lack, relatable to 'the Other'.

[4] Deleuze & Guattari (1984) took Freud's death drive very seriously in *Anti-Oedipus*. In many ways the real that emerges from this book is unthinkable without Freud's death drive. However, Deleuze proposes a quite distinct conception of the death drive from Freud; as it is "the last form of the problematic, the source of problems and questions" and as the "non-being where every affirmation is nourished" (Deleuze, 1994, p. 112). This means that death cannot "appear in the objective model of an indifferent inanimate matter to which the living would 'return'; it is present in the living in the form of a subjective and differenciated experience endowed with its prototype. It is not a material state; on the contrary, having renounced all matter, it corresponds to a pure form - the empty form of time," (ibid.).

[5] Delanda's contention is that Deleuze's philosophical thought experiments and concept creation, may be reconciled with scientific inquiry in that they produce a type of extended realism that includes irrational and unpredictable results and conclusions.

[6] This study was funded by the SSHRC (Canada) International Opportunity Grant - *Immigrant Families and Multiple Literacies: Policy, Classroom and Community Connections Across Australia and Canada*. Full ethics permissions were obtained for this study and all names and pictures have been de-identified.

[7] The research was carried out by Professor Diana Masny (University of Ottawa), Associate Professor David R Cole (University of Western Sydney) and a research assistant.

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ENTRY: AFFECT AND EDUCATION

"Affects aren't feelings, they're becomings that spill over beyond whoever lives through them (thereby becoming someone else)" (Deleuze, 1990/1995, p.137).

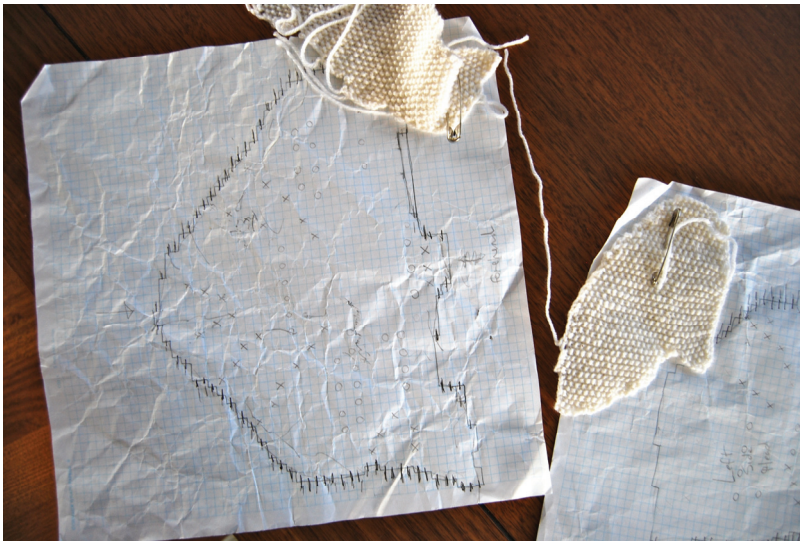
LINDA KNIGHT

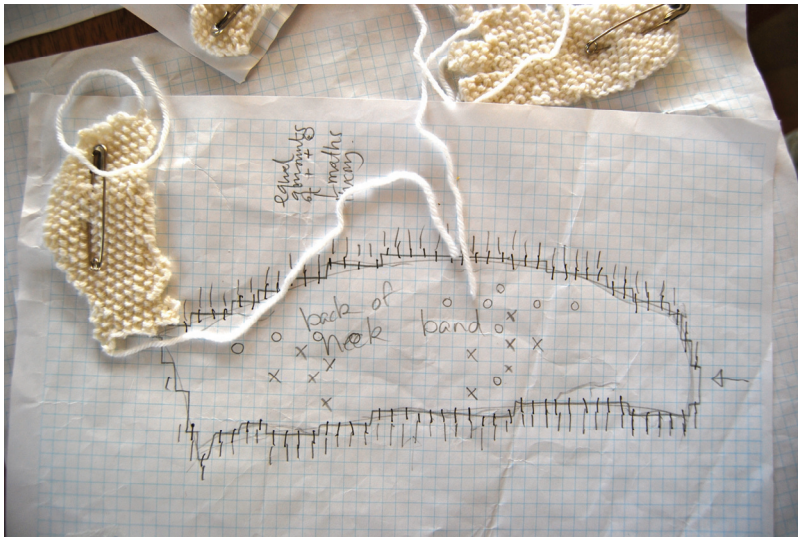
6. KNITTED IMAGES

Specimens

Knitting, as a conduit for multiple literacies takes on embodied practice and becomes research, investigation, theorization, and brings about physical and metaphysical theorizing on Deleuzian and Guattarian (1980/1987) concepts of the rhizome: the looping and constructing of the knitted planes prompt thoughts about the project that seem just 'beyond the level of consciousness' (Semetsky 2007, p. 200).

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 73–75.

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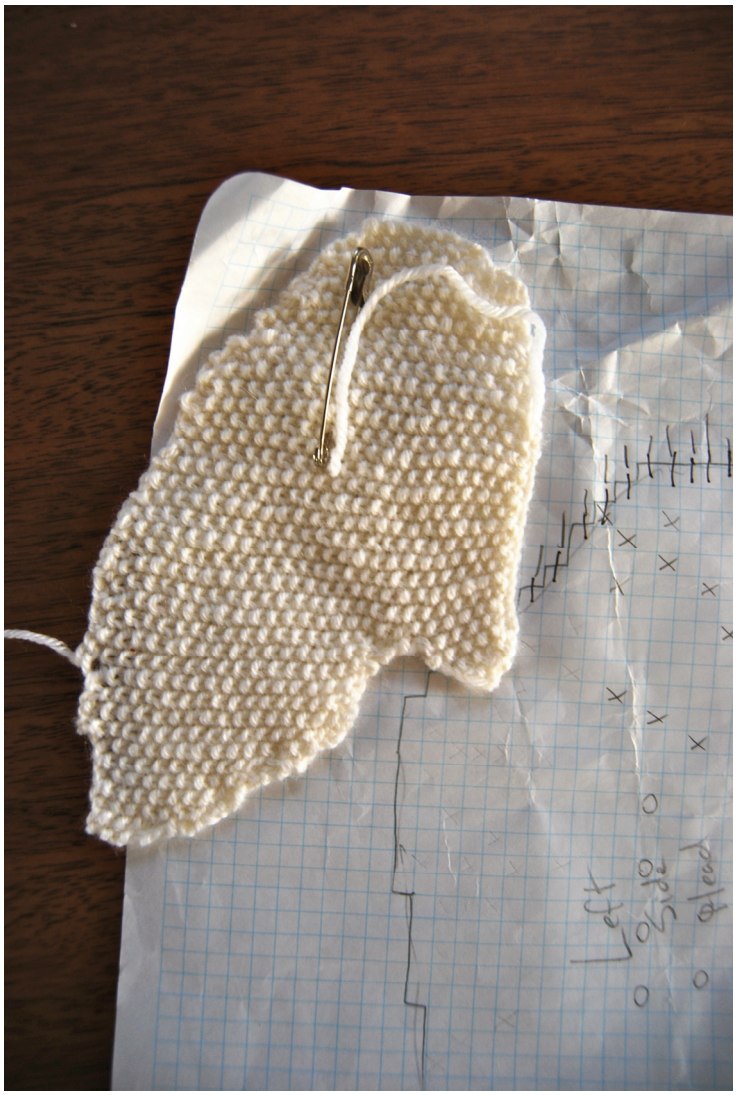

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INNA SEMETSKY

7. LEARNING WITH BODYMIND

Constructing the Cartographies of the Unthought

Addressing the significant role of post-formal, cultural, education in the process of identity-formation, Joe Kincheloe (2005, 2008) conceptualized bricolage as drawing from multiple theoretical and methodological resources, including hermeneutics, phenomenology, and narratology, while retaining the rigor of the best critical thought. For Kincheloe, *doing bricolage* involves marginalized practices and the development of transgressive conceptual tools as well as exploring the breadth and wealth of typically underestimated human cognitive capacities. The term bricolage originally belongs to Claude Lévi-Strauss (1966) who posited it in the context of structuralism defined as the search for the underlying patterns of thought in all forms of human activity.

Gilles Deleuze and Félix Guattari (1983) referred to bricolage as a "schizoanalytic" and transgressive mode of production. While research in education continues to be informed largely by a dualistic paradigm with its separation between subject and object, educational theory informed by Deleuze's philosophy makes such dualism highly problematical, especially with regard to the *a priori* self-conscious Cogito grounded in the certain and indubitable "I think". In this chapter, such a transgressive mode is applied to the problematic of the production of subjectivity as the process of becoming, in which consciousness and the unconscious – or unthought – dimension are mutually enfolded.

Deleuze and Guattari relate participation in the reality of what is produced to the figure of the schizophrenic, that is, a person whose condition is considered pathological in the context of a rational discourse which posits a dualistic separation of subjects from objects, and the method of which is detached objective observation. But a schizophrenic lives within the very interface with the natural world because of his intense connection to the unconscious. His subjectivity is a mode of intensity, which is capable of expressing itself in its present actuality neither by means of progressive climbing toward the ultimate truth or the highest moral ideal, nor by "looking for origins, even lost or deleted ones, but setting out to catch things where they were at work, in the middle: breaking things open, breaking words open" (Deleuze, 1995, p. 86). As a method which is at once "critical and clinical" (Deleuze, 1997), schizoanalysis enables the integration of the unconscious or the unthought into rational thinking in the process of collecting together the "fractured I of a dissolved Cogito" (Deleuze,

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 77–91.

1994a, p. 194). An important parameter of such integration is the notion of the fold.

Deleuze conceptualized the fold as "the inside *of* the outside" (Deleuze, 1988a, p. 97) wherein the "outside is not a fixed limit but a moving matter animated by … movements, folds and foldings that together make up an inside" (Ibid.). The fold serves as a powerful metaphor for overcoming the dualism between rational and non-rational – or conceptual and aconceptual – thinking, or any of the binary opposites for that matter exemplified in Cartesian substance dualism between mind and matter. The deep layer of inner knowledge buried in the unconscious mind expresses itself amidst the folds of experience comprising dynamic matter permeated by fluid forces that form "a field … wedded to nonmetric, acentered, rhizomatic multiplicities" (Deleuze & Guattari, 1987, p. 381). Thus the process of subject-formation in the context of post-formal education is a function of the differential dynamics of unfolding and cannot be reduced to a pre-existent identity.

"Being as fold" (Deleuze, 1988a, p. 110) exceeds the conscious conceptual representations of common sense but focuses on the "interiorization of the outside. It is not a reproduction of the Same, but a repetition of the Different. It is not the emanation of an 'I' but something that places in immanence an always other" (Deleuze, 1988a, p. 98). The complex conceptualization of the repetition of the different might seem to be a contradiction in terms if not for the epistemic role of the unconscious existing over and above the intentional, phenomenological consciousness or the ego-consciousness of psychoanalysis. Following Nietzsche, Deleuze replaces Apollonian rationality and the centrality of the Self with the processes of individuation as becoming-other, becoming-Dionysus.

Because the production of subjectivity includes the realm of the unconscious, it is specifically "the cartographies of the unconscious [that] would have to become indispensable complements to the current systems of rationality of … all … regions of knowledge and human activity" (Guattari, original French, in Bosteels, 1998), among which education is paramount!

For Deleuze, rational Cartesian consciousness as the sole constituent of thought is insufficient because what is yet unthought is equally capable of producing practical effects at the level of human experience. Deleuze considered "*an unconscious of thought* just as profound as *the unknown of the body*" (Deleuze, 1988a, p. 19; italics Deleuze's). The quality of profundity is significant and relates schizoanalysis to analytical or depth psychology informed not by Freud but by Jung (cf. Kerslake, 2007; Semetsky, 2011; Semetsky & Delpech-Ramey, 2012). The unconscious is a multiplicity that exceeds the scope of traditional psychoanalytic thought, which reduces everything to a single master-signifier, the Oedipal complex. Over and above personal consciousness that has been repressed, it is conceptualized by Deleuze and Guattari as anti-Oedipal and irreducible to familial dramas. Reminiscent of the Jungian *collective*

unconscious, it is "a productive machine … at once social and desiring" (Deleuze, 1995, p. 144).

Jung's dynamic process of the individuation of the Self as the goal of the analysis of the unconscious is akin to Deleuze's notion of becoming-other as a process of learning by virtue of immersing oneself in intense bodily encounters with uncanny and yet unthought of experiences that can produce a shock to conscious thinking. Rather than attempting to learn by being instructed to do so, for Deleuze to learn means "to constitute this space of an encounter with signs, in which the distinctive points renew themselves in each other, and repetition takes shape while disguising itself" (Deleuze, 1994a, p. 23). We apprehend experience not by grounding empirical particulars in abstract universals but by experimentation, by extending mind to the level of the body when a novel concept becomes created in practice

> as object of an encounter, as a here-and-now, … from which emerge inexhaustibly ever new, differently distributed 'heres' and 'nows'. … I make, remake and unmake my concepts along a moving horizon, from an always decentered center, from an always displaced periphery which repeats and differentiates them (Deleuze, 1994a, pp. xx–xxi).

It is not our isolated and non-extended Cogitos but the multiple parameters of the unconscious implicit in experiential encounters that create novel relations in our real experience, because as dynamic forces they are capable of affecting and effecting changes, thus contesting the very identity of subjects on the road to individuation. The unconscious perceptions are implicated as subliminal, or micro-, perceptions (Deleuze, 1993); as such, they become part of the cartographic microanalysis – schizoanalysis – of establishing "an unconscious psychic mechanism that engenders the perceived in consciousness" (Deleuze, 1993, p. 95).

Deleuze's method for putting the fractured pieces of the dissolved "I" together, that is, integrating the unconscious into consciousness, is empirical, as embedded in the multiple contexts, situations and events representing the wealth of human experiences; yet it is radically transcendental because the foundations of empirical principles are left outside our common faculties of perception so that we have to transcend them in practice. It is at the interstice between body and mind amidst the aforementioned movements, folds and foldings that we become capable of perceiving the seemingly imperceptible.

Deleuze wants to achieve the means to "show the imperceptible" (Deleuze, 1995, p. 45), that is, become capable of bridging the gap between the sensible and the intelligible, matter and mind. His method of transcendental empiricism affirms "the double in the doubling process" (Deleuze, 1988a, p. 98). "Doubling" is taken in the sense of unfolding that presupposes a necessary existence of the extra – outside – dimension, without which the concept of fold is meaningless. This extra (outside) dimension becomes internalized, enfolded. Therefore the

"other in me" (Deleuze, 1988a, p. 98) is always implicit in the unconscious, in the unthought, the subtle language of which is to be made explicit so as to effectuate the process of becoming-*other*.

The imperceptible and as yet unthought affects are shown in practice at the level of the body as the visible, perceptible, sensible and material; rather than being simply "thought" at the level of the rational mind. Perceiving something essentially imperceptible is made possible by laying down the plane of immanence. This is how Deleuze and Guattari defined the plane of immanence which, for them, was not limited to just a rational mind or immediate conceptual understanding:

> Precisely because the plane of immanence…does not immediately take effects with concepts, it implies a sort of groping experimentation and its layout resorts to measures that are not very respectable, rational, or reasonable. These measures belong to the order of dreams, of pathological processes, esoteric experiences, drunkenness, and excess. We head for the horizon, on the plane of immanence, and we return with bloodshot eyes, yet they are the eyes of the mind (Deleuze & Guattari, 1994, p. 41).

The eyes of the mind can see with this extra, as if sixth, sense, which demonstrates "the genesis of intuition in intelligence" (Deleuze, 1991, p. 111) as the implicit presence of the unthought and the unconscious in cognitive thinking. Together they form what semiotician Floyd Merrell calls "bodymind" as an integrated mode of thought that enables one to *live* to *learn*, and to *learn* to *live* (Merrell, 2002).

The construction of the plane of "immanence [which] is the unconscious itself" (Deleuze, 1988b, p. 29) implies the affective awakening of the inner eye (Noddings & Shore, 1984) as opposed to the cold, dispassionate and unblinking gaze of the conscious Cogito. Affects are not subjective feelings but "becomings that spill over beyond whoever lives through them (thereby becoming someone else)" (Deleuze, 1995, p. 127): becoming-other. Becoming-other is described as "an extreme contiguity within a coupling of two sensations without resemblance or, on the contrary, in the distance of a light that captures both of them in a single reflection. … It is a zone…of indiscernibility…. This is what is called an *affect*" (Deleuze & Guattari, 1994, p. 173). Deleuze and Guattari say that "affects … traverse [one's universe of being]… like the beam of light that draws a hidden universe out of the shadow" (1994, p. 66); this hidden, invisible, universe becoming known – as if visible to the inner eye – in the form of deep knowledge (cf. Semetsky, 2011), even if as yet unthought of consciously, that informs our immediate practical actions. Indeed, according to Lévi-Strauss's (1966) definition, bricolage reflects spontaneous human action grounded in the characteristic patterns of mythological – that is, non-rational but what he called savage – thinking.

Deleuze purports to show the imperceptible by means of cartography which lays down a visible "map" of the invisible "territory", thereby creating the

conjunction in our actual practical experience between what are customarily considered the dualistic opposites ("without resemblance") of matter and mind, *psyche* and *physis*. The conjunction *and* is the principal characteristic of the logic of multiplicities behind the dynamics of becoming described by a process in which any given multiplicity "changes in nature as it expands its connections" (Deleuze & Guattari, 1987, p. 8). Subjectivity, as embedded in the process of becoming, differs from the traditional notion of the self looked at, and rationally appealed to, from the macroperspective of theory; instead Deleuze recognizes the micropolitical dimension of culture as a contextual, circumstantial and problematic site where subjects are situated and produced. Hence subjectivity is always already "a being-multiple" (Deleuze & Parnet, 1987, p. viii), that is, not an individual but a relational entity.

The exteriority of relations puts into action the experimental and experiential logic of multiplicities, which is not "subordinate to the verb to be.… Substitute the AND for IS. A *and* B. The AND is…the path of all relations, which makes relations shoot outside their terms" (Deleuze & Parnet, 1987, p. 57). It is the conjunction *and* that enables a relation between the opposites and connects them in a rhizomatic network, thereby defying the dualistic split of *either* sensible *or* intelligible, *either* rational thought *or* lived experience, *either* cognition *or* emotion, *either* material *or* spiritual. Rather than being "either-or" separate categories, body and mind form a "both-and" integrated pair conducive to experimental and experiential, *bodymind*, learning.

Rhizome is a biological metaphor used by Deleuze and Guattari to describe a model of thinking irreducible to the single stable foundation represented by Cogito as a principle for certainty of theoretical knowledge. As embedded in practice, a rhizomatic network constitutes the relational dynamics that comprises multiple transversal lines leading to the creation of novel meanings for experience. Yet, because the rhizome's life proceeds underground, its growth appears imperceptible or invisible to our ordinary sense-perception. It is intuition or insight that reaches out "to the deepest things, the 'arcana'" (Deleuze, 1990, p. 322) implicated in the folds of being.

Says Deleuze, "I undo the folds…that pass through every one of my thresholds…'the twenty-two folds' that surround me and separate me from the deep" (Deleuze, 1993, p. 93). Quoting Henri Michaux, he says that children are born with the twenty-two folds which are to be unfolded. Only then can human life become complete, fulfilled, individuated. The conscious "intentionality of being is surpassed by the fold of Being, Being as fold" (Deleuze, 1988a, p. 110) in which the unconscious or unthought is implicated. It is due to an experiential, embodied, unfolding as the explication of the unconscious (*le pli* in French means the fold) that "the individual [becomes] able to transcend his form and his syntactical link with a world" (Deleuze, 1994a, p. 178).

The syntactical link produced by verbal language expressing propositional thought that describes objects in the world does not include *Sens*, which in French means both meaning and direction, or our *ethos* as practical self-creation

and self-education irreducible to formal schooling under instruction. This impoverished syntactic link is transformed into a meaningful connection enabled not by verbal expressions of the conscious mind alone but by a different regime of signs reflecting the depth of the unconscious that may elicit spontaneous action within unexpected, bordering on uncanny, experiences as affective encounters. It is an assemblage of relations that are capable of constructing the unpredictable experiential world, which unfolds in an uncanny manner, resembling a bricolage as

> a Harlequin's jacket or patchwork, made up of solid parts and voids, blocs and ruptures, attractions and divisions, nuances and bluntnesses, conjunctions and separations, alternations and interweavings, additions which never reach a total and subtractions whose remainder is never fixed.… This geography of relations is particularly important…. one must make the encounter with relations penetrate and corrupt everything, undermine being.... The AND as extra-being, inter-being (Deleuze & Parnet, 1987, pp. 55–57).

It is both mind AND body connected with each other through the geography of relations that form the practical cartography that ensures bodymind learning. It is not solely the power of our consciousness but the multiple and varying effects of the unconscious that create novel patterns in our real-life experience. They represent the problematic instances embedded in spontaneous bodily actions. In our experiential encounters such problems appear at first only as subliminal or subconscious (as yet imperceptible or micro-perceptible) elements that cannot be immediately recognized but need schizoanalysis that employs the cartographic method.

Deleuze reconstructs a powerful story, based on the classic example used by Leibniz (that reflects his idea of the sea as a system of differential relations), of a novice athlete who learns to swim through a becoming: herself in the water within intense bodily encounters with waves. The swimmer struggles because she is facing the unknown and unthought that includes her not-yet-knowing-how-to swim, and the swimmer's movement does not resemble the movement of the wave. Nor would it imitate the instructor's movements given not in the water but on the shore. Learning happens when a body actualizes in practice the multiplicity of its virtual potentialities.

Learning cannot be based on an *a priori* representation; this would be the reproduction of the same, denounced by Deleuze. Instead Deleuze emphasizes the "sensory-motivity" (1994a, p. 23) of the genuine learner, exemplified in the image of the athlete, who tries to co-ordinate her own sensor-motor activity with an intense, and opposing, force of water, as if evaluating her present mode of existence – sink or swim! Such an evaluation is an effect of the encounter with the unknown, therefore as yet unthinkable. The swimmer becomes an apprentice immersed in the practice of swimming. Deleuze insists that

> we learn nothing from those who say: 'Do as I do'. Our only teachers are those who tell us to 'do with me', and are able to emit signs to be developed in heterogeneity rather than propose gestures for us to reproduce.… When a body combines some of its own distinctive points with those of a wave, it espouses the principle of a repetition which is no longer that of the Same, but involves the Other – involves difference, from one wave and one gesture to another, and carries that difference through the repetitive space thereby constituted. To learn is indeed to constitute this space of an encounter with signs (Deleuze, 1994a, p. 23).

It is in the real-life experiential singularity within an encounter with actual waves, in which the virtual idea of swimming subsists, that we can experiment with this idea and comprehend its meaning not by means of a theoretical contemplation but through practical encounters, by means of bodymind learning. Experience is thus paramount for learning, for creating new modes of existence. Such informal pedagogy "would have to analyze the conditions of creation as factors of always singular moments" (Deleuze & Guattari, 1994, p. 12). Becoming-other is established via "diversity, multiplicity [and] the destruction of identity" (Deleuze, 1995, p. 44) so that the integrated Self can be created. Individuation presupposes breaking out of old habits and into new territories.

Yet our old habits die hard, and individuation depends on "the harshest exercise in depersonalization" (Deleuze, 1995, p. 6) within the transformational pragmatics that originates "among a broken chain of affects" (Deleuze & Guattari, 1987, p. 9) enfolded in life experiences. Subtle affects and sensations inhabiting the unconscious have "the irreducibly synthetic character" (Deleuze, 2003, p. 33). The synthetic, and not solely analytic, quality of schizoanalysis is oriented to the creative emergence of new meanings. The unfolding of the unconscious in the process of individuation presents "life as a work of art" (Deleuze, 1995, p. 94) that we actively create. The swimming example presents the sea as the epitome of the unconscious Nature, a literal presentation of fluid uncontrollable forces that produce a shock to thought and make this new experience a struggle for a novice athlete.

Thinking, for Deleuze, is "not just a theoretical matter. It [is] to do with vital problems. To do with life itself" (Deleuze, 1995, p. 105). This life that embodies vital problems is a life as pure immanence (Deleuze, 2001) concealed in its virtual mode of existence in the transcendental field of the collective unconscious. We can (re)create such a life in our actual practice under the condition of bodymind learning which can "bring this assemblage of the unconscious to the light of day, …select the whispering voices, …gather the tribes and secret idioms from which I extract something I call my Self (*Moi*)" (Deleuze & Guattari, 1987, p. 84). Such an emergent Self (who has learned to swim and not to sink!) is the practical outcome of holistic, bodymind, education situated in nomadic spaces (cf. Semetsky, 2008b).

Nomad is a mobile, dynamic element; according to Deleuze, nomads are always "becoming ... they transmute and reappear" (Deleuze, 1995, p. 153) by consistently becoming-other. The integration of the unconscious into consciousness necessarily leads to the "intensification of life" (Deleuze & Guattari, 1994, p. 74) by virtue of the affective "experimentation on ourselves [that] is our only identity, our single chance for all the combinations which inhabit us" (Deleuze & Parnet, 1987, p. 11). This experimentation constitutes post-formal bodymind learning. We can become "filled with immanence" (Deleuze, 1997, p. 137) therefore necessarily fulfilled by *Sens* – meaning and direction – that we ourselves create in our embodied experiences.

For Deleuze, learning is "infinite [and] of a different nature to knowledge" (Deleuze, 1994a, p. 192): it is a creative process of assigning meanings and values to experience, partaking as such of self-creation and transforming one's identity. Individuation cannot proceed without a means to both express and transform oneself, and Deleuze and Guattari (1987) referred to *metamorphosis* with regard to Jung's theory of the transformation of the libido as spiritual or psychic energy irreducible to Freud's limited definition of the libido as a sex drive. Deleuze considered transformation, or change in nature, to be a precondition for becoming-other.

It is multiple interpretations and revaluations of experience by means of which "we rediscover singular processes of learning" (Deleuze, 1994a, p. 25) and become creative and fruitful in our endeavors. We become able to bring novelty to life; only thus our life "reconquers an immanent power of creation" (Deleuze & Guattari, 1994, p. 140). Novelty comes into being, or becomes, along lines of flight. Novelty is created in experience when some potential, as yet "non-localizable connections" (Deleuze, 1994a, p. 83), such as the connection between body and mind, between a swimmer and the sea, meet each other along the lines of rhizomatic becomings.

The creative, transformative, and evaluative element embedded in experiential learning defies the reductive approach to education as merely formal schooling. Post-formal education embedded in real life has an ethical dimension as its intrinsic value. This type of education is genuinely ethical because it "does ... challenge deeply held beliefs or ways of life" (Noddings, 2006, p. 1). Bodymind learning is necessarily characterized by "new percepts and new affects" (Deleuze, 1995, p. 164) created in our experience, in practical life. Deleuze's philosophy presents concepts, meanings and values as future-oriented and yet-to-become when we ourselves create them in the process of learning from experience, from the depths of the collective unconscious.

Our ideas are often so enveloped or enfolded "in the soul that we can't always unfold or develop them" (Deleuze, 1993, p. 49) by means of our cognitive tools alone, unless experience itself becomes saturated with affective, almost numinous, conditions for their unfolding, because this deep inner or Gnostic (Semetsky, 2011) "knowledge is known only where it is folded" (Deleuze, 1993, p. 49). It is cartography that can "map" the multiple parameters of the

unconscious. Yet it does not reproduce a pre-existent "territory" limited to conscious Cogito but engenders a newly integrated subjectivity.

Everything, according to Deleuze, has "its geography, its cartography, its diagram. What's interesting, even in a person, are the lines that make them up, or they make up, or take, or create.… What we call a 'map', or sometimes a 'diagram' is a set of various interacting lines (thus the lines in a hand are a map)" (Deleuze, 1995, p. 33). Such "topological and specifically cartographic" (Bosteels, 1998, p. 146) being (or, rather, becoming) is to be evaluated not in terms of the rigid value-judgments pronounced by Cogito but by means of spatial metaphors such as cartography or geophilosophy (Deleuze & Guattari, 1994) as the locus of situations and events. Subjectivity constitutes itself via the cartographic method; it engenders itself through multiple connections by mapping both "the psychic and the social" (Bosteels, 1998, p. 150), that is, the dimensions constituting the fold of both inside and outside: the inside *of* the outside.

A map or a diagram, in its function of linking discursive (conscious) and non-discursive (unconscious, bodily) modes of expression, acts as an unorthodox connection, the purpose of which is to "pursue the different series, to travel along the different levels, and cross all thresholds; instead of simply displaying phenomena or statements in their vertical or horizontal dimensions, one must form a transversal or mobile diagonal line" (Deleuze, 1988a, p. 22). The line of flight between binary opposites establishes "a bridge, a transversality" (Guattari, 1995, p. 23). These creative lines of becoming defy the universality of dualistic thinking; the latter becomes subsumed by transversality which establishes the conjunction *and* between Cartesian isolated substances.

It is in this respect that philosophy gives way to cartography. Linear reasoning is replaced by the processes of becoming, enfolding and unfolding. The supposedly substantial stable self – the rational and static, finally beyond-doubt, *subject* of the Cartesian method, yet forever separated from the equally static world of *objects* – is transformed into a machinic multiplicity in the dynamic process of organic relations between "the semiotic machine, the referred object and the enunciative subject" (Guattari, original French, in Bosteels, 1998, p. 167). There is no return to the subject, to the old self, but invention and creation of new possibilities of life by means of going beyond the play of forces. The world is an enfolded network of relation; as such we

> can endure it, so that everything doesn't confront us at once. … 'Children are born with twenty-two folds. These have to be unfolded. Then a man's life is complete'[1].… It's not enough for force to be exerted on other forces or to suffer the effects of other forces, it has to be exerted upon itself too.… There's no subject, but a production of subjectivity: subjectivity has to be produced, when its time arrives.… The time comes once we've worked through knowledge and power; it's that work that forces us to frame the

> new question, it couldn't have been framed before" (Deleuze, 1995, pp. 112–114).

It is the specific "*power to affect itself, an affect of self on self*" (Deleuze, 1988a, p. 101; Deleuze's italics) that not only leads to a production of subjectivity but also ensures the emergence of the Self at a new level. What is *implicated* in a fold is not only *explicated* but also, in the process of becoming-other, involves *complication*. At this level there is neither room for the old set of concepts or values, nor are eternal ones stored there. Deleuze's philosophy partakes of creative art and

> always speaks of values that are to come.… [T]he artist and philosopher do not conjure things out of thin air, even if their conceptions and productions appear as utterly fantastical. Their compositions are only possible because they are able to connect, to tap into the virtual and immanent processes of machinic becoming (there are no points on the map, only lines), even if such a connection and tapping into are the most difficult things to lay hold of and demonstrate.… One can only seek to show the power, the affectivity, the …alienated character of thought. One…is drawn to the land of the always near-future, …readings the signs, …and decoding the secrets of intelligent alien life within and without us" (Ansell-Pearson, 1997, p. 4).

The aforementioned tapping into the virtual means the possibility of it becoming-actual. Because "subjectification is an artistic activity" (Deleuze, 1995, pp. 112–114) oriented to self-creation and is a function of connecting, "tapping", and mapping, it cannot be *a priori* intentional or volitional but depends on our learning from unfolding experience that includes the unthought and the unconscious. We become able to frame a new question precisely because of becoming-other by becoming conscious of the unthought and the unconscious.

Through the cartographies of the unthought a specific problem – that, as Deleuze points out, "couldn't have been framed before" – is brought to our awareness. Deleuze's post-structuralism presents a hidden (unthought-of) "structure [as] part of objects themselves [hence] allowing its positivity and its specificity to be grasped in the act of *learning*" (Deleuze, 1994a, p. 64; Deleuze's italics). Learning to live and living to learn is the form of post-formal ethical education that takes us to future territories that are implicated in the virtual field of multiple becomings.

The actualization of virtual potentialities is "always a genuine creation" (Deleuze, 1994a, p. 212). We learn not by virtue of being instructed, but because of our engagement with, and our embodiment in, the objective world, so that learning is equated with creation, with creating new meanings for our experiences. We do not learn "from those who say: 'Do as I do'" (Deleuze, 1994a, p. 23); instead we learn by unfolding the experiential folds of the unconscious in our practical experiences, thereby creating our Selves as whole integrated personalities by means of a genuinely artistic activity that can draw

"a hidden universe out of the shadow" (Deleuze & Guattari, 1994, p. 66). This hidden universe of knowledge becomes explicated and brought to light through the shadows of the unconscious whenever an intensified learning experience, that always involves the other, creates in us the power of thinking the unthinkable.

The process of discovering our real, yet always dynamic, identity is a process of meaning-making and is a function of living and learning. Therefore the unconscious is the necessary – and quite often, as Deleuze would say, *dark* – precursor for learning, for individuation, for becoming-other. Deleuze's philosophy of transcendental empiricism, which is "patterned after Bergson's intuition" (Boundas, 1996, p. 87), is equivalent to bodymind learning, to integrating the unconscious into consciousness. As "the presentation of the unconscious, [and] not the representation of consciousness" (Deleuze, 1994a, p. 192), it is intuition that constructs the plane of immanence aiming "to bring into being that which does not yet exist" (Deleuze, 1994a, p. 147) but only subsists in its virtual mode. It is in practical experience that we become capable of traversing a "fundamental distinction between subrepresentative, unconscious and aconceptual ideas/intensities and the conscious conceptual representation of common sense" (Bogue, 1989, p. 5).

The play of affects may reach "a point of excess and unloosening" (Deleuze & Guattari, 1987, p. 134). At this crucial turning point there are two options: a subject must "either annihilate itself in a black hole or change planes. Destratify, open up to a new function, a diagrammatic function" (Deleuze & Guattari, 1987, p. 134), such a diagram or a map being an intrinsic element of cartographic microanalysis. In the example of swimming, a novice athlete struggles so as not to sink – hence annihilate – but so as to destratify her very being by becoming-other. Destratification involves the unfolding of experiential folds so as to construct a map of an unknown territory, analogous to the philosophical *outside* as the conglomerate of natural affective forces.

Incidentally, Jung, defying Freud's reducing the unconscious to just its personal dimension, commented that Freud "was blind toward the paradox and ambiguity of the contents of the unconscious, and did not know that everything which arises out of the unconscious has…an inside and an outside" (Jung, 1963, p. 153) – quite in accord with Deleuze's (non)philosophy. It is the realm of as yet unthinkable that constitutes the outside leading to a swimmer's de- and re-territorialization whenever she becomes able to traverse her own spatio-temporal boundaries by "plunging…into the depth of Nature, or of the Unconscious" (Deleuze & Parnet, 1987, p. 91).

The bodymind learning combines "the objects of an aleatory outside [that] impress themselves in the form of 'ideas' upon the body, which infolds the effects of those objects in the form of thoughts" (Wolfe, 1998, p. 120). The outside has its own pragmatics, and in this cartography a swimmer creates her as yet unknown territory anew by integrating the unconscious into consciousness, by learning how to swim in practice. Indeed, a theoretical "know that" is of little

assistance to a novice athlete in her practical experience of struggling with the waves. The breakthrough is established by a line of flight that "upsets being" (Deleuze, 1995, p. 44); yet it connects body and mind so that "things come to pass and becomings evolve" (1995, p. 45). One is not consciously passing through the line of flight; just the opposite, Deleuze insists that "something [is] passing through you" (Deleuze, 1995, p. 141) and the conjunction *and* is established in practice, acting as such as a distributed marker of a new breakthrough, "a new threshold, a new direction of the zigzagging line, a new course for the border" (1995, p. 45).

A swimmer is a *bricoleur* embedded in lived experience who must act as the first explorer to discover new territories, try new strategies, and open new avenues while restructuring her mode of existence. A *bricoleur* who "thinks" through affects and percepts demonstrates "the possibility of the impossible" (Deleuze & Guattari, 1994, p. 60) in her embodied experience, thereby putting into practice "the supreme act of philosophy: not so much to think *the* plane of immanence as to show that it is there, unthought in every plane, and to think it in this way as the outside and inside of thought, as the non-external outside and the non-internal inside – that which cannot be thought and yet must be thought" (Deleuze & Guattari, 1994, pp. 59–60).

It is on the basis of the reality of the outside, of the unthought and the unconscious, that all existence, including ourselves, is produced. The outside has its own style as a means to communicate, to bring into existence that of which we were scarcely aware. The intensity of experience is such that it "brings together… the stutter, the tremolo, or the vibrato and imparts upon words the resonance of the affect under consideration" (Deleuze, 1994b, p. 24). A swimmer both affects and is herself affected; such resonance marking the passage between the experiential states of the body, which is defined by Deleuze, following Spinoza, as both physical and mental, corporeal and incorporeal; *bodymind* in short! Accordingly, the body's power is being changed.

Deleuze specifies the body's power as the capacity to multiply and intensify connections. The Deleuzian philosophy is "not a question of intellectual understanding…but of intensity, resonance, musical harmony" (Deleuze, 1995, p. 86). It is guided by the "logic of affects" (Guattari, 1995, p. 9) that was employed by a swimmer unconsciously when she tried to coordinate her own movements with the movements of the waves. There is no other logic than one immanent to life and survival! Its rationale is pragmatic (Semetsky, 2006) and the thinking it produces over the background of affects is experimental and experiential. Existing in "essential and positive relation to non-philosophy" (Deleuze, 1995, p. 140), it is such a creative logic of education (Semetsky, 2008a) that can establish a dialogue between Apollo and Dionysus, between consciousness and the unconscious.

While acknowledging Lacan's critique of Jung because of the general hostility of structuralism towards "the methods of the imaginary" (Deleuze, 1968/1998, p. 269), Deleuze, similar to Jung, presents structures as "unconscious, [and]

necessarily overlaid by their products or effects" (p. 270). For Deleuze, anything can possess a structure insofar as this "thing" maintains even a *silent discourse*. Nature "speaks" albeit silently, and we can perceive these imperceptible "voices" at the level of the body in the form of affects; thus enter into a dialogue with nature by creating a bodymind assemblage that combines "two inseparable planes in reciprocal presupposition" (Deleuze & Guattari, 1987, p. 109).

That is how the swimmer learns! The swimmer and the sea are defined "by their mutual solidarity, and neither of them can be identified otherwise" (Deleuze & Guattari, 1987, p. 45) while engaged in bodymind learning and becoming able to "free life from where it's trapped" (Deleuze, 1995, p. 141) by creating new meanings and concepts "for unknown lands" (Deleuze, 1995, p. 103) and yet unthought of situations. Whenever the real-life forces are "seized *in actu* [and] liberated from substances that function as their support and vehicle, [they] do seem better candidates for a diagrammatic mapping out of becoming" (Boundas, 1994, p. 105) and constructing cartographies in experience.

The unthought and the unconscious are embedded in an "Outside [which is] more distant than any exterior, [and] is 'twisted', 'folded', and 'doubled' by an Inside that is deeper than any interior, and alone creates the possibility of the derived relation between the interior and exterior" (Deleuze, 1988a, p. 110). This relation forms a unified bodymind assemblage that includes the unconscious, as yet aconceptual, dimension. As a method of diagrammatic mapping of the unconscious, cartography creates a nomadic space of possibilities, something yet to come. The cartographic map serves as a pragmatic tool to "*read*, find, [and] retrieve the structures" (Deleuze, 1968/1998, p. 270, Deleuze's italics) that are enfolded in the outside of conscious thought and become unfolded in the process of bodymind learning.

NOTES

[1] Deleuze's quotation on the twenty-two folds is from *The Space Within* by Henri Michaux, in *The New Directions Series*, printed in France by Henri Marchand & Company. Michaux's book was first published by Gallimard in Paris in 1944 under the title *L'Espace du Dedans* and then appeared in English as *Selected Writings: the space within* (translated, with an introduction by Richard Ellmann).

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MIA PERRY

8. DEVISING THEATRE AND CONSENTING BODIES IN THE CLASSROOM

INTRODUCTION

This chapter draws the writings of Deleuze and Guattari into the field of drama and theatre education. Intersecting with MLT in various ways, the endeavour of this chapter is to think nomadically through an experience of collaboration and improvisation in classroom-based devised theatre creation. The process of this research revealed some affordances and challenges facing arts education today, but also provided a rich site from which to consider the potential of the social theory of Deleuze and Guattari to interrogate or read contemporary drama and theatre in education intensively and immanently.

The project described herein took place between 2007 and 2008 with a group of grade 9 drama students in a public secondary school in Western Canada. Over a year residency with the class, my roles shifted between that of a researcher, facilitator, teacher, and director. The qualitative methods taken up in fieldwork were carried out with both improvisational and systematic elements with a strong awareness of my own role and multiplicities in the data generation. I worked closely with the drama teacher to develop a program that introduced and explored contemporary theatre devising as an approach to inquiry, creation, and performance. The program consisted of three main parts occurring consecutively over the school year: Development of creation tools; Spectatorship; and Performance creation and production. This chapter includes a description and exploration of a structured improvisation process and surrounding discussions in the final part of this project.

Devised theatre can be considered a postmodern or "postdramatic" genre of theatre generally based on the subjectivities and circumstances of the artists/students involved, rather than an imposed fiction; the living textualities, rather than the pre-written text of a playwright (see Govan, Nicholson, & Normington, 2007; Heddon & Milling, 2006). It shares commonalities with forms of performance creation such as collective or collaborative creation, ensemble, or playbuilding. Key elements of devised theatre that differentiate it from other types of collective play creation include the commitment to multiple perspectives and subjectivities (specifically those of the creators involved), to multi-modalities (specifically lending equal weight to movement, sound and visual technologies as opposed to the traditional dominance of text), and by

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 93–108.

extension to performances that are not led by a "sing[ular] vision," or an "authorial line" (Etchells, 1999, p.55).

As a general rule, devised theatre is the creation of original work or the re-imagining of traditional texts by one or more theatre artists, often in collaboration with visual art, creative technologies, and other forms of performance such as music and dance. Devised theatre is often more closely related to Live Art (Heathfield, 2004) and performance art (Goldberg, 1988, 2004, Wark, 2006) than traditional notions of theatre, and draws references from various experimental movements in the arts (eg. Futurism, Surrealism, Dadaism). Ultimately however, the maze towards definition serves devised theatre better as a metaphor in itself than a descriptive tool. A particularly useful way to approach a definition of devised theatre is proposed by Govan, Nicholson and Normington (2007) in their book on contemporary performance practices. They suggest that devising may be most accurately described in terms of a plurality of "processes of experimentation and sets of creative strategies – rather than a single methodology" (p. 7). I take up the production and performance of devised theatre as an anomalous place of learning (Ellsworth, 2005) with unique affordances in terms of its pedagogical potential (see also Perry, Wessells & Wager, in press).

THEATRE, AFFECT, AND EDUCATION IN THEORY AND RESEARCH

This work is situated within a poststructural perspective on embodied pedagogy (Davies, 2000; Ellsworth, 2005; St. Pierre & Pillow, 2000), and within the theory of nomadic thought (Deleuze & Guattari 1984, 1987). Nomadic, or nomad thought is positioned in contrast to representational thinking and in this way rejects the notion of unified meaning; that is, the notion of thought that, no matter how diverse, leads back to a singular logic or reason (a tap root). Taking up pedagogy and performance in this light, I consider the student and participant as a body/mind/self in motion (Ellsworth, 2005) and focus on a non-representational perspective of analysis, understanding pedagogy to be lived and experienced by means of forces of affect, sensation and interrelation. Force is a term used carefully by Deleuze as something that exerts itself on others; in contrast to power, forces are always in relation to, and in conjunction with, other forces. This contingency means that no one force can be repeated, it is always in the process of becoming something else (Stagoll, 2005). Affect can be understood to describe the living process of change in response to force. Sensation implies the involvement of the bodily sensation *in* affect and *as* a force; it is an affect that is visceral, physical, and results in embodied change. Put in other words, "sensation is the affect, which is neither subjective nor objective; rather it is both at once: we become in sensation and at the same time something happens because of it" (Boundas, 2005, p. 131). I take up the concept of interrelation from both from an understanding of forces (mentioned above) as well as from theories of embodiment. Embodiment is a state that is always contingent upon the environment and the contexts of the body: "Continuously

and radically in relation with the world, with others, and with what we make of them" (Ellsworth, 2005, p.4).

Considering drama and theatre in education in terms of forces of affect, sensation, and interrelation, this study aligns with MLT in challenging the dominant perspective on pedagogy, as occurring and evaluated according to representational logic, reliant on semiotic systems and individualist endeavours. This is not to deny the integral representational dimension inherent in teaching and learning (that is, the aspect of semiotic, recognisable, and assessable practice through the demonstration of ideas and experience through sign systems); rather it is to give attention to equally integral but largely overlooked aspects of the pedagogical process. Models of representation are "limited to a particular mode of existence, or a particular dimension of the real (the degree to which things coincide with their own arrest)" (Massumi, 2002, p.7). This doesn't eradicate subjectivity, or the possibility for changing positions, but it assumes or shepherds a unified experience that is based on recognised destinations, structures of movement, and pathways of thought.

A significant amount of research in the field of drama and theatre in education can be positioned broadly as concerned with the affordances of drama and theatre education for literacy and multiple literacy skills (O'Toole & O'Mara, 2007) (see Baldwin & Fleming, 2003; Laidlaw, 2005; O'Mara, 2004; Schneider, Crumpler, & Rogers, 2006 as examples). In this work, drama processes are taken up as vehicles for transmediation (Siegel, 1995), supporting the interpretation and exploration of print texts (Mages, 2006; Medina & Campano, 2006), as well as scaffolding exercises to develop print and multiple literacies (Early & Yeung, 2009; Winters, Rogers, & Schofield, 2006). In this context the tendency to interpret meaning, to translate, to code, and "over-code" drama and theatre practices in education (Webb, 2009) is prevalent. In the project discussed in this chapter, the attention to, and awareness of, multiple semiotic literacies (by students, teachers, and colleagues) that were present and tangible in the work became at best a counterbalance, at worst an obstruction, to my pragmatic and theoretical endeavour of "produc[ing] different knowledge and produc[ing] knowledge differently" (Lather, 2007, p. 13). Indeed, maintaining a focus on non-representational, sensational, and affective aspects of experience in this study became an act of resistance to the various systems, expectations, and predetermined structures of the study.

It is in this space of tension, between the representational (and semiotic) and the affective paradigms, that this study is positioned. Considering affect in relation to, and in addition to, discourse-based analyses has been demonstrated in various ways for at least the past decade (with MLT, as well as for example, Hansen, 2000; Ngai, 2002), indeed, Patricia Clough suggests that the turn to affect has allowed a consideration of experience both in terms of "what is empirically realised and in terms of the philosophical conception of the virtual" (2010, p. 208). My analytical endeavour then, takes up the interactions and encounters of my project not only in terms of their representational indicators

(signs, texts, images, etc.), but also in terms of the affects, sensations, and relations that the indicators prompt the consideration of. This aligns with the transcendental materialism (Deleuze and Guattari, 1987) that is at the foundation of MLT.

Contributing to research that is extending the reach of representational analysis (e.g. semiotic, content, discourse-based analyses) then, I describe in this chapter a practice and a methodology that maintains a focus on *how things happened* in the site of research; on the relationship between details – people, events, words, projects, accidents, instructions, and on the forces and sensations that took place. In resistance to the prevalent assumption that data, art, and indeed pedagogy, function solely under a regime of signs (Grosz, 2008), I look to the movement of bodies, discourses, and forces of affect, in space and time. In this way, I consider the performances, interactions, and participation in the data in terms of how subjectivities are being produced and how inquiry and learning is happening, rather than how they are being signified (Leander & Rowe, 2006).

GLIMPSING THE TRANSCENDENTAL

Art, Elizabeth Grosz states, "is the art of affect more than representation, a system of dynamized and impacting forces rather than a system of unique images that function under the regime of signs" (2008, p.3). Concurring with this assertion, the analysis detailed below is a thought process feeding from a proposal of nomadic thought offered by Deleuze and Guattari, and is characterized by a rhizome. A rhizome describes a network of lines rather than points, within which there are multiple entryways and places of departure, and every line can connect to any other, "multiplying its own lines and establishing the plurality of unpredictable connections in the open-ended, what Deleuze called *smooth* space of its growth. In short, it lives. Rhizome does not represent, but only maps our ways, paths, and movements" (Semetsky, 2007, p.200, italics in original). Deleuze and Guattari explicate the rhizome theory in terms of six principles, the first two of which are those of connectivity and heterogeneity:

> 1 and 2. Principles of connection and heterogeneity: any point of a rhizome can be connected to anything and must be… This is very different from the tree or root, which plots a point, fixes an order….A rhizome ceaselessly establishes connections between semiotic chains, organizations of power, and circumstances relevant to the arts, sciences, and social struggles. (Deleuze & Guattari, 1987, p. 7)

Considering the rhizome in relation to a series of lines and territories provides a symbolic structure within which to unpack the pedagogical encounter. As students are put in relation to others, to ideas, and to experiences that address their surroundings and subjects, forces emerge that give rise to new action, thought, feeling, and movement. These processes can be described in terms of rhizomatic lines. The ontological and discursive resources afforded by the

rhizome allow forces of sensation, interrelation, and affect to emerge at the foreground of my analytical lens. And as noted earlier, these forces implicate the body, and accordingly the embodied aspect of performance and pedagogy becomes substantive throughout my analysis.

The following description and analysis stems from a structured (facilitated) improvisation aimed at generating performance material, and two class-based group discussions, preparing for, and reflecting on, the improvisation. In this series of events, a student proposed an idea for performance and I, in the role of facilitator, proceeded to set up an improvisation based on it. The improvisation lasted approximately ten minutes (still images have been captured from video footage for the purpose of illustrating the analysis). In the discussion immediately after the improvisation, reflection and impressions are shared. Drawing from Deleuze and Guatarri, I take up these three varying inquiries as spaces (that is, space in relation to time) and consider these spaces in terms of their relative smoothness or striation. The striated space is that which is structured and regulated by specific rules and limitations, the smooth space operates irregularly, without predetermined order, in conjunction with striation to create new possibilities of composition.

Establishing the Scene

With a public performance promised in just over a month, a sense of urgency was becoming apparent in the grade nine drama class of Lismore Secondary. Taken as a whole, the process of the year-long devising project involved the generation of performance material through explorations of self, of modalities, of themes, concepts, and texts, to name just a fragment. At times the students engaged enthusiastically; at times they were restless and impatient on this journey that was supposedly leading them to an "end-of-year show." Oscillating between a willingness to explore new approaches to contemporary performance and a desire and drive to play with expected and familiar forms, the overall process for the students smudged the edges of recognisable structures of theatre in education. Never quite able to leave "Oklahoma" or "Twelfth Night" behind them, the students committed, to varying degrees, to try creating performance through devising.

During a pivotal session in our process a discussion took place about a new idea for our performance. In this process the students made a collaborative attempt to articulate an assemblage – an outline of the spaces and content – for the "imagined world" under construction. This process was led by the students and carried out in the form of a group discussion. The students sat relatively still, in a circle, and spoke to each other from their positions as class-mates, taking up their roles as participants in the project. In this manner, they proceeded in a process that can be considered in terms of lines of segmentarity. Deleuze and Guattari write of the segmentation of our lives in society into pathways, definitions, binaries and groupings. Segmentation allows for stratification, and

therefore, in this case, for common organising principles and recognizable structures. Accordingly, this is the primary tactic used by the students in the phase of performance planning. Diane[1] suggested: "I think if people came on from different sides … [and] I could try to get a background for the screen where it's like traffic…." She continued, but then faltered, saying, "I have a vision in my mind, but I can't really describe it" (Focus Group, April 15, 2008). Here we came to an intersection in the discussion, but the drive to strengthen the lines of segmentarity was taken up by another student. Victoria stepped in to help: "it's …like the idea of a street, people all go somewhere…." Diane corroborated: "Exactly" (Focus Group, April 15, 2008). With every new comment in this process, the territory of the work became more and more defined, and the opportunity for movement and innovation within that became more restricted but at the same time, more likely. Two opposing consequences of territorialisation are suggested here because the tighter the definition, the shorter distance you have to go to step outside of it, but also the less freedom you are given to do so.

Early on in this emerging assemblage, processes, or perhaps possibilities, of deterritorialisation are evident. Deterritorialisation describes the attempt to depart from or disrupt a territory or organisation of ideas and actions. Adrian Parr (2005) states: "In so far as it operates as a line of flight, deterritorialisation indicates the creative potential of an assemblage" (p.67). The group explored the idea of every character possessing a bag or container of some kind and Diane, even as she began to articulate the territory of this concept, offered possibilities for departure (flight) from it: "someone might have something in it, someone might drop it and everything falls out, someone might just keep going….." Apart from these possibilities for lines of flight, however, the group discussion functioned overtly and primarily to organise, align, and striate ideas. It wasn't until the embodied improvised performance that the space of creation became smoother and more susceptible to rupture.

This group discussion, along with many other discussions and interactions throughout the project, revealed a drive towards collaboration, cohesion, and consensus – qualities that are not necessary to, and to some extent conflicting with, the development of devised theatre. This drive however, became a central characteristic and tension within the work and the dynamics of this group: Characteristic because the students generally participated in a mutually supportive, inter-dependent mode; a tension because the devising processes engaged in encourages divergent, conflicting, and contrasting perspectives, both in terms of inquiry and representation.

Improvising in Smooth Spaces

The process that followed – the improvisation – began to offer alternatives to the consensus-driven model of inquiry demonstrated in the previous discussion. In this case, the students took up the tools of a character (and all that that allows) and a bag or container of some kind; in addition, they let go of the spoken

discourse and relied on physical and gestural modalities (their improvisation having taken place to a background of music). With these tools and adjusted hierarchy of modes, the complex web of relationships that existed within the group of students (allegiances, social and academic hierarchies, etc.) was loosened, allowing for new possibilities to emerge in terms of connections, ideas, and deterritorialisation.

The following images (figures 1 and 2) show stills taken from a video recording of the improvisation. I have selected these two moments in part for the simple reason that they are clearly visible in the recordings and the interactions have translated very well to the visually recorded mode. Other interactions involved more subtle exchanges, or exchanges that were partially concealed from the eye of the camera, etc. These two examples therefore, represent just a fraction of what occurred amongst the youth at any moment within the ten-minute improvisation.

Figure 1. Sam and Victoria (foreground)

Figure 1 portrays a moment that was immediately preceded by Sam knocking over Victoria's bucket – a bucket that she was lugging around as if very, very heavy. When knocked by Sam, the "empty bucket" jettisoned across the space, revealing its actual weight. In the still image here, Victoria is investigating the bucket as if looking or checking for its contents; Sam is meanwhile holding his hands in the air as if to plead innocence or ignorance. That is a rough context and description of what can be interpreted from the visual and gestural signifiers in the image; what this image (indicative of action) is *doing* involves another line of analysis. There are many molecular lines (those going from one line of segmentarity to another) and lines of flight (departing from segmentarity) that can be seen to be emerging within this interaction. The collision of forces (forces of people, action, intention, internal and external character movement) is a rupture in itself, seen as two lines colliding momentarily and then diverging from each other and from previous pathways of thought or action. As Sam knocked Victoria's bucket he can be seen to have been creating a rupture, dismantling the pretence of weight that Victoria had been creating with her performance. Whether intentional or not, the action breaks down the previous attempts at consensus (described in the analysis of the previous discussion) with a direct challenge to her position (that is, to the imagined world she is playing in and representing). At the same time, the collision affects both characters physically, altering or forming a physical dynamic that wasn't there previously. This dynamic, frozen in time in an image, sees Sam standing over a crouched Victoria. The sensation of this corporeal interaction, like any other, affects the experience of the performers, and the progress of the action; the sensations have influenced the journeys of those characters. In my analysis of this moment, based on the image above, I am making no claims for the particular significance of this moment over any other; it is a fleeting, responsive, embodied interaction that, like every other, contributes to the rhizomatic growth of ideas, experiences, and performance creation. It is as significant as any other in the improvisations of students within the devising process, in that improvisation in this context is a space and time of inquiry.

If we were to follow these two particular student performers closely throughout the discussions and inquiries previous and subsequent to this improvised moment, we could map points on a trajectory that led them to the nature of their roles and participation in the final performance, as well as their reflections in final interviews. Without mapping the entire process here, it is worth noting that in the final production Victoria's character was portrayed in the role of a bartender at work who was also an aspiring musician. In the same scene, Sam played the role of a performing musician. Whilst the final production came about as a result of a series of embodied and improvisational inquiries and discussion, the public performance that resulted was scripted and rehearsed. The improvised moment analysed here, however, and the infinite other moments that took place around it, resulted from an actual interaction that occurred in time and space between bodies/minds/selves in relation, and could not have been prescribed or predicted.

Within this analysed moment of inquiry, the dynamics of interrelation are explored – façade, misunderstanding, and colliding forces all play out through the affective intensities of two people, with characters, in relation.

Figure 2. Kyle and Victoria

Figure 2 is taken from an interaction that happened a few moments after that of Figure 1. In this image, Kyle, who is moving across the space, carrying a guitar case over his head, has caught Victoria's attention. Considering the assemblage created in the previous discussion, and considering the lines of segmentarity put in place (with the proposal of an imagined busy street, traffic, people coming and going, etc.), this interaction can be seen as an active deterritorialisation. Kyle chose his bag in accordance with his character (a young musician), and "played" with the affordances of this improvisational mode. He moved with the case as if floating or flying the case through the space. Perhaps he was lifting his guitar case over his head because the imaginary surge of so

many people left no space for such a bag; perhaps his guitar case was indeed floating or flying. There are myriad interpretations of this interaction with his prop, with the space, and with the other participants. What is more interesting in terms of this analysis however, is what is happening in the moment that allows for this line of flight. The improvisational mode freed Kyle of the striations of verbal text adhered to in discussion, and perhaps as a result of this, or perhaps in part due to the interaction with a broader scope of forces (bodily, material, cosmological), his action emerged as a divergence from the objectives and consensuses established in the preparatory discussion. In this moment, music was playing, bodies moved around the space engaged in various activities, and forces of sensation swirled through the group. The inquiry facilitated by this experience was sensory, embodied, and relational. Kyle was affected by the bodies, sounds, sights, along with less tangible forces around him and in relation to that, discovered a way of being, and of contributing, to the emerging assemblage of the performance.

These interactions and the consequent affects, sensations and relations could not have happened in the striated space of the class-based group discussion. The disruption of spoken discourse, the physical movement involved in the interactions, and perhaps the less familiar territory of improvisation, afforded new relations, new arrangements, and new pathways of investigation and inquiry that were unexpected and unplanned. These interactions did not all function to confirm decisions or stabilise territories that were established in the preparatory discussion. Many of them, including the two moments analysed here, can be considered as lines of flight from the segmentary lines of expectation, convention, and consensus.

Regaining Common Ground

A process of spectatorship is taken up in the reflective discussion carried out by the students immediately after the improvisation explored above (Focus Group, April 15, 2008). Two main points of focus emerged for the students through this discussion, firstly in relation to character development, and secondly, in relation to the multiple modes of interaction and presentation. The notion of "character" remained very important for this group of students throughout the performance creation process. It provided the transitional space, or the safe context, in which to play, create, and investigate the dynamics of the group and circumstances of the work. In light of this, it is not surprising to find that one of the main foci of their spectatorship and reflection of this process was the way in which characters were explored or presented. The following comment, offered by Diane, suggests the significance of character presentation in the improvisation process, and attributes a quality to the extent that one can achieve a verisimilitude in their performance: "everybody was really really natural with it, it wasn't like *trying* to perform which is kinda nice because …that's happened a lot, so it felt really natural, it felt like everybody was *actually* their character." The notion of

"natural" is a pivotal and contentious point in this reflection as well as more generally throughout the creation process. From the perspective of devising practice, embodying and presenting the "natural" flows, connections, and disconnections in meaning and experience is central to the aesthetic form. The improvisation serves this objective in allowing for the natural movement of events without the imposition and striation of script or third party direction. The students took up the improvisation willingly on these terms, but with the insertion of character, which I consider in this context to function not only as an intermediary (between their own subjectivity and the world), but also as a mask – lending a metaphoric and porous barrier between themselves and their audience (of peers, teachers, researchers, communities, etc.).

Victoria refers to the character inquiry involved in the improvisation: "it helped because I know a little bit about my character but not everything…thinking about how is my character going up to other people because you wouldn't necessarily know that…so it helped build my character." This comment suggests the affordances of the embodied act in *relation*. In terms of inquiry, this comment implies the process of the *encounter*, which is described by Deleuze as "something in the world that forces us to think" (Deleuze, 1994, p. 139). He differentiates this from the object of recognition, which would assume that previous knowledge or experience is being confirmed. The encounter in improvisation is encouraged by the smooth space of the practice.

A number of students focused their reflections on the modality shift at work in the improvisation (that occurred to the background of music, and required no specific verbal text). Sam, for example, "liked how…you could just go up to someone else's character and just have a conversation without even saying anything, you could just like with eye contact or something……" Kyle adds: "because we couldn't talk that much….we had to express ourselves with our movement and our facial expressions, so while we were still our characters we were almost overdoing them so that we could get our point across whenever we interacted with someone else." These comments suggest, not only the significance of the unsettling of the primacy of spoken discourse, but also the notion of play. That is, the improvisation, in smoothing the event of verbal language, narrative structures, and specific objectives, allowed for a level of freedom in the students' explorations, interactions, and presentations.

What is happening in this reflection draws on much of the same processes that occur in the first preparatory discussion. Reclaiming verbal dialogue as the primary mode of communication, bodies seated and organised in a circle, the students return to mutually supportive roles, complementing each other and "making sense" of what happened in the improvised moments. In this way, they can be seen to have been reterritorialising the work, and creating new lines of segmentarity. The instability that emerged in the improvisation, in terms of the relationships between students and the relationships between the performed and the "real," was re-stabilised in reflection. Diane's comment on the success of their character portrayal (quoted above) serves this function of stabilising the

performance dynamics of the event. Later she adds: "like some people would be coming on and off and some people were actually on the entire time, just like sitting, …some people were showing their actual character and some people were showing the feelings of their character…." By emphasising the character driven aspect of the work, the students can be seen to have been relieving themselves in part of the responsibility of their actions and interactions. In discussion, they do not take up the notion of the "real" in the performance, or the performance in the "real."

Through the process of reflection, the students construct a revised version of their work. In recounting and describing events that occurred in the improvisation, in stabilising notions of performance, the students are identifying and reterritorialising from lines of flight that had occurred. This is not a retreating process, however, or a reversion to a state previous to the improvisation. Reterritorialisation, Leander and Rowe (2006) describe, involves a process in which "deterritorialised elements recombine and enter into new relations" (p. 433). In this way, transformations have occurred in the way the students are able to think about the assemblage of the work and therefore in the way that they are able to deterritorialise once again, in a process that is continual.

CREVICES AND CONNECTIONS

The brief episode in performance creation described in this chapter reveals no more than characteristics of the year-long youth project. In thinking through the process here with the tools provided by nomadic thought and the perspectives and insights provided by MLT, I hope to shed new light on recognizable dynamics in drama and theatre in education as well as point towards an alternative way to frame and to construct the practice. This final section comments on the tangible complexities in that construction and focuses on two particular topics, firstly relating to the body and secondly relating to consensus and collaboration.

As many scholars before me have suggested, we sense first, and intellectualise second (de Bolla, 2001; Ellsworth, 2005; Massumi, 2002; Osmond, 2007). Forces of sensation are visceral and physical, therefore, a non-representational perspective on learning demands an engagement with the body in conjunction with the mind and self (subjectivities). In the field of drama and theatre in education, the body remains largely at the edge (Perry & Medina, 2011). Considering its significant role in drama and theatre practice, research and practice that directly explores and addresses the body is sparse. In line with the MLT frame, this study has taken up literacy as inherently multiple, and has not prioritised or organised literacy into modes of communication or interaction; the practice and analysis flowed from forces encountered and not prescribed codes, themes, or types of activity. Mapping forces of affect, sensation, and interrelation though, it is not surprising that the body features as an omnipresent factor within the creation and learning experience.

As characters are explored through performance, the interrelation taking place takes on further dimension as the body is implicated differently in the event. The body as sensational as well as semiotic disrupts the signification of text, and imagined physicality (of character) is put in relation to actual physicality. The experience of the mind/body/self in the process of character development and performance is one of hybridity, synchronicity, and change. The body is revealed as a rich terrain of creation, inquiry, and representation. It is intricately related to our notions of self and the functions of our mind. This dynamic, although in many ways ineffable, begins to be articulated by the rhizomatic analysis of this study. The implications of the centrality of the body in this research extend to the way we imagine and construct embodied pedagogies, as well as the methods we take up to research and analyse learning and creative experiences. Two statements punctuate my thinking through the body in performance and education: "When I think of my body and ask what it does to earn that name, two things stand out. It *moves*. It *feels*. In fact, it does both at the same time…" (Massumi, 2002, p. 1, emphasis in original); "I am, therefore I think" (Osmond, 2007, p. 1109). Massumi proposes to find ways of putting corporeality back into the body; Osmond suggests considering the body as "knower," "doer," and "aesthetic medium." Both of these endeavours call for paradigms and practices that incorporate, but reach beyond, the representational. It is my hope that this study can open some avenues of thought or glimpses of possibility to this end.

Cull has cited Deleuze as suggesting that theatre (in his articulation of it) "might be a vehicle or machine that puts us in contact with the real" (2009, p. 5). This proposition serves as an interjection, but also as a prompt towards the final topic of consensus and collaboration in performance and education. The culture of consensus in education emerges as a striation in classroom space. Devising theatre thrives on lived, embodied, and proposed difference; education typically depends on that difference being tempered and put in subordination to representational aspects of pedagogy and a learning self which can be homogenised, generalised, and grouped. I take up the idea of "difference" as proposed by Deleuze (1994) to be a fundamental aspect of our realities, rather than a relative form of sameness. The homogenising effort of schools suggested above implies the ordering and cohesiveness that is strived for in classroom management, curriculum, evaluation, along with age, gender, academic strengths and weaknesses, etc. School is structured to organise, and in this organisation, like is put with like (age groupings, curriculum content, etc.) and a general consensus of purpose and process resides. This doesn't discount the individual struggles, conflicts, differences of opinion, perspective, and methods of practice that exist in every school, but the system is built to minimise the expression and impact of those differences. In some cases this can be illustrated with the school uniform, in others it is standardised testing, in others it is codes of behaviour. In this environment, consensus reigns as most desirous and rewarded. I speak in general and systemic terms, but it is evident in the details of every day classroom practice, as group projects culminate in a cohesive presentation of knowledge,

and those that conform to the organisations of time, space, subject, etc. are rewarded over those that do not. This culture of consensus may seem like an ideal circumstance for theatre creation, where the practice relies on group work and forms of collaboration, but in devising in education, consensus often serves to stifle. Devising is characterised in part by explorations of difference, be it through conflict, chance, failure, or rupture. In the school site of this study, the culture of consensus became a point of resistance to the process and possibilities of devising.

The verbal negotiations described in this chapter were typical of the students' inclination to group consensus, interdependency and mutual support. In contrast, disagreement or dispute of any kind was addressed as extremely problematic. This dynamic was loosened when the primacy of verbal discourses were unsettled, and alternative modes of communication and interaction took precedence. During these times, most notably in improvisations, inquiry and interaction could be seen to function in smoother spaces, without the striations of verbal language and all of the weight that those discourses carry. Consensus levels and unifies the creative space, quickly creating segmentation around that which is agreed upon. Devising thrives on difference, dissensus, and deterritorialisation. Here is an opposition to educational structures, but more importantly, it prompts a question for further inquiry. How does education look when we consider it in terms of dissensus? How does our education system prepare us as teachers and students to live in diversity, difference, dissensus, and desire (for that which is different)?

As a researcher who is also a teacher who is also a facilitator of performance creation, the relationship between philosophy, pedagogical theory, and approaches to practice sit at the heart of my work in this field. To suggest direction rather than resolution to the self-imposed questions above, I turn reflexively to MLT. Influenced and inspired by poststructural theory, I have questioned the value and relevance of my own interpretations of events, of data. I became wary and self-conscious in a social science climate where so much time and space and resources can be drained in beautiful theoretical rhetoric that floats like clouds above the looming reality of desks and school walls. The work of Deleuze and his collaborations with Guattari provides a theoretical and philosophical landscape within the poststructural paradigm that is at once enigmatic and pragmatic. Emerging from this, MLT offers a framework that traverses, encounters, and informs the modalities, subjectivities, and movements that occur during drama and theatre practices in the context of contemporary educational settings and striations.

NOTES

[1] All names are pseudonyms.

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ENTRY: LITERACIES AND BECOMING

"The elementary unit of language – the statement – is the order-word. … Words are not tools, but we give children language, pens, and notebooks as we give workers shovels and pickaxes. … Language is not life; it gives life orders. Life does not speak; it listens and waits." (Deleuze & Guattari, 1987, p.76).

MARIA DE LOURDES DIONÍSIO, RUI VIEIRA DE CASTRO
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9. LITERACIES IN THE WORKPLACE

Social Conditions, Practices and Meanings

LITERACY AND SOCIAL DEVELOPMENT

In Portugal, particularly after the dissemination of the results from the first national study on Portuguese adults' literacy levels (Benavente, 1996; OECD & Statistics Canada, 2000), which pointed to a severe literacy 'problem', successively reinforced, since 2000, by the regularly low performance of the Portuguese students in OECD-PISA, a particular perspective about the power and the personal and social effects of literacy, in a certain way, a "popular theory about literacy" (Carrington & Luke, 1997, p. 96) became prevalent in the public sphere. This perspective corresponds *grosso modo* to the (re)production of one of the most powerful literacy myths in the western world (Graff, 1979; Carrington & Luke, 1997): the causal relationship between peoples' literacy levels and the degree of economic and social development of the nations. In this relationship, literacy is seen as a crucial factor for the development and well being of individuals, communities and societies.

The data of the research on the Portuguese case were systematically framed in the public sphere by "powerful discourses" (Hamilton, 2001; Hamilton & Pitt, 2011) that, reinforcing the "deficit" nature of the performances under scrutiny, establish a causal connection with levels of education, social and economic development.

In this sense, low levels of literacy performance will 'explain' low levels of educational development (literacy is seen as a condition of academic success), social development (literacy is understood as a condition for accessing socio-cultural goods and for individuals social mobility), and economic development (literacy is considered to be a factor of economic growth).

In this discoursive formation, the 'literacy crisis' is said to have an accurate therapy: 'more school' and 'more literacy'. In recent years Portugal started some movements focused on literacy education or having at least some impact on it: (i) curricular reforms took place, first in secondary education and more recently in basic education; (ii) the National Program of Portuguese Language Teaching was launched in 2006/07, aiming at "facing the challenge and the need to improve the teaching of Portuguese language in the first grades of basic education, particularly at the reading comprehension and oral and written

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 111–125.

expression levels" (Ministério da Educação, 2007); (iii) the National Reading Plan is being developed after 1996, in order "to raise the Portuguese population literacy levels and to put the country at the same level of our European partners", seeking to "raising the reading levels of the Portuguese people allowing them to deal with the written word, in every circumstance of life, to interpret media information, to access scientific knowledge and to enjoy great literary works".

Besides the changes in the school curriculum, the issue of adult education gained a great centrality in Portugal, as a means of turning national economy and society similar to their counterparts of the European Union. The New Opportunities Initiative launched in 2005 was the most ambitious program aiming at the qualification of Portuguese population ever achieved; it was considered an essential tool for guaranteeing "the economic growth and the social cohesion" (Ministério da Educação, 2005). In the reference documents, the literacy skills development appears as a priority arena for action. But, because the skills to be developed were not specified, literacy turned a mere rhetorical device, a symbolic word intended to add meaning and value to the goals of the program, aligning it formally with national and international policy orientations.

The institution of literacy as a political priority was justified by the economic changes and technological transformations that built semiotic economies, where new *media* emerge, new texts circulate, new social roles appear, and where, therefore, multiple, dynamic and flexible literacies develop and new skills are required. The discoursive formation we are referring to can be identified in the economic field discourse. That is why the assumption of the workplace as a context for education and training, be it formal, non-formal and/or informal (Desjardins, Rubenson, & Milana, 2006) became commonly stated as an indispensable condition to the "economic success… and the productive work" (Rychen & Tiana, 2005, p. 73).

The presence of this discourse and the development of educational initiatives for youth and adults in different contexts, not always strictly related to professional training, became associated with an increasing visibility of literacy issues, either in its 'measurement', as part of diagnostic efforts, and in its 'improvement', through educational initiatives, or even in its monitoring.

In these circumstances, it is our goal, in this text, to make visible the foundations, guidelines and achievements of those education initiatives, developed in workplaces, seeking at the "assessment" and/or "promotion" of literacy. This task necessarily involves the clarification of the theoretical point of view from which our discussion will be developed.

THE SOCIAL NATURE OF LITERACY

In most of modern societies the access to information and knowledge mediated by the written language became a decisive factor for citizenship and full participation in everyday life. The way people interact with written texts has great social, educational and economic implications. The fact that very often this

relationship is felt to be unsatisfactory is one of the main reasons for the popularity of the 'literacy crisis' diagnosis. This diagnosis goes together with the idea that school is the most responsible agency for that crisis.

In these circumstances, literacy as a research topic emerged in Portugal in strong connection with the study of curriculum policies and classroom practices. Literacy has been a fertile ground for discussing the status and roles of the Portuguese Language in the curriculum, the pedagogy of language education, and the effects of school in the development of communicative competence. The specificity of knowledge, texts, artefacts and technologies of the different school subjects and the necessity of defining parameters, criteria and content for their teaching and assessment favoured a conceptualization of literacy as a set of abilities and skills to be learned at school and to be used by the individuals in the different contexts in which they operate: "In such uses, 'literacy' connotes the idea of being able to move in a system and to know his language well enough to understand it" (Lankshear & Knobel, 2003, p. 15).

However, literacy practices vary across time and space, reflecting the diversity of both the historical and the social context in which they occur (Barton & Hamilton, 1998; Barton, Hamilton, & Ivanic, R., 2000; Hamilton, 2009; Hamilton, M., & Hillier, Y., 2006). Studies on language, action, society and learning have been demonstrating how the use of texts is a situated practice, closely linked to the actions in which people are involved in the material and social world, and to the values people attribute to their experiences, as social identities are coupled with particular kinds of social activities (Cope & Kalantzis, 2000; Gee, 1999; 2001; Masny, 2010). In this social view, literacies are cultural and communicative practices that involve social relationships within particular groups, that are socially and culturally determined, and that are factor and function of contexts, social relationships, and texts. This social perspective also recognises that different domains of life (home and family, health and safety, community and citizenship, consumption, work, leisure, among others) give origin to different literacies and that, therefore, literacies are not independent from life stories and life chances, from social and/or individual trajectories or, even more, that there are no literacy practices more legitimate than others (Barton & Hamilton, 1998; Barton, Hamilton, & Ivanic, R. 2000; Barton & Tusting, 2005; Street, 1984; 1995).

What is at stake here is a comprehensive point of view, rather than a normative one, according to which the goal is more the identification and characterization of socio-cultural distribution of practices than the identification of deficits. Such perspective sees literacy as a social construction, forged in dynamic social fields, and as a result of "continuous investment" (Masny, 2010) in multiple text-mediated and always changing events. Through this participation and investment, people are transformed, which, therefore, does not tolerate quantification. According to Masny (2009, p. 15), this approach is interested "in the flow of experiences of life and events from which individuals are formed as literate".

LITERACY AND WORKPLACES

When the European Union assumed as a major political goal, in the Lisbon Council, in 2000, its transformation into "the most dynamic and competitive knowledge-based economy in the world, able to ensure a sustainable economic growth, with more and better jobs, and greater social cohesion" (European Council, 2000), it also put education, training and lifelong learning in the centre of the political and educational agenda.

The expression *lifelong learning*, among other meanings, denotes well the intended increasing permeability of diverse contexts, whether formal or informal, to education, a connection that deep technology changes made imperative. In Europe, one of the effects of this permeability was the emphasis on the promotion of the workers' "skills", understood as a condition for the "competitiveness" of the corporations and the economy, and for the "employability" of the individual.

For many industrial corporations, especially those going through reconversion processes, the concern about their employees' literacy levels became explicit. This concern benefited from State policies aimed at the increasing of the Portuguese population level of qualification and led to the formulation of training policies and to the development of concrete actions.

In face of a scenario like this one, two main questions arise: (1) what are the types and characteristics of the literacy practices one can identify in those workplaces? (2) what are the characteristics of the education initiatives aiming at the development of literacy "skills"? To answer these questions, we will take the case of two industrial companies (Case 1 and Case 2), located in the north of Portugal, which have been object of our own research (Dionísio & Castro, 2007; 2009). This research consisted of two studies of an ethnographic kind, which involved, besides observation and document collection and analysis, the inquiry of 299 staff members in one factory and 118 in the other one. A total of 39 semistructured interviews have been conducted with representative members of each company department, from the administration to the assembly lines.

Case 1 is a high technology industry, which produces car radios. It is a particularly complex organization, both in terms of the diversity of work tasks and the social organization forms. Along with neo-fordist practices, other forms of work organization are in use, as exemplified by teamwork, where workers' "collaboratively and in interaction design and redesign their work process in knowledge and assumption of each one functions..." (Gee, 2000, p. 186). The company has about two thousand workers (mostly women, married), 85% of them working in the assembly line. The formal education levels are significantly low: about a quarter of the workers has four years of basic education, or less, and more than one half did not attend school for more than six years. The workers are largely involved in professional training practices, as a result of the policies that were adopted by the company. The workers' participation in trade union activities is very significant.

Case 2 is a car bodies manufacturing company, which holds an important weight in the structure of Portuguese industrial exports. The majority (96.6%) of the six hundred staff members are male and 85% work in the assembly line. More than 60% possess only the fourth up to sixth school grade. In recent years, this company has experienced significant changes, both in terms of technology and organization, especially with regard to working practices and human resources management. These changes brought new demands in terms of literacy practices. The "Kaizen philosophy", aiming at the rationalization of work processes, the reduction of production and the increase of the productivity and goods quality, was the basis of all these mutations (Dionísio & Castro, 2009).

NEW SOCIAL ROLES: THE FACTORY AS A CONTEXT FOR LITERACY DEVELOPMENT

In both contexts literacy was said to be a 'problem'. The concern expressed by the two boards of directors derived, according to them, from the low literacy levels of the employees and from the need to find solutions for overcoming them.

Case 1 wanted, in the words of one of its administrators, during one of the interviews, to design and to develop "*a program to assess and improve the workers literacy*", based upon the conviction that "*our workers have low levels of literacy; our company is technologically advanced and it's hard to deal with this situation; we would like to know exactly what is going on*".

In Case 2, the need for a diagnosis and a subsequent intervention was of a similar nature. Here too, the workers formal qualification level was significantly low and this was considered to have negative implications for the company.

The reasons for proceeding with such literacy assessment was not, however, immediately obvious – particularly in Case 1 – and the arguments were not fully consistent. Actually, if, on one hand, the company was aware of the (low) education levels of its workers, on the other hand, no negative impact of these levels was reported: the workers performance appears in accordance with the company standards and expectations and there was no news about any negative results due to "illiteracy". When the directors were asked: "What is the issue with workers' literacy levels? Why are they important to you? What do you want to do with the collected data?", their answers underlined the importance of high literacy levels in a high-tech factory, due to the permanent necessity to train workers for the continuous new demands in the production process. In Case 2 the objective was mainly to promote general education, and not only technical and vocational training, pursuing a company tradition.

Thus, education and training emerged as regular practices in these contexts as a way to guarantee the success of changes in the production processes to which workers needed to adapt or as a form of "compensating' workers" school and

professional "deficits". At the same time, the companies assumed explicitly, through the intended provision of resources, knowledge and practices, a social role of production of cultural capital that might contribute to the social mobility of their workers (Carrington & Luke, 1997).

The way one understands the processes of production of this cultural capital, including the development of communicative practices of reading and writing, gave origin, in the two companies, to distinct initiatives.

In Case 1, opportunities for professional training were made available along with the provision of secondary school education (by means of an agreement with a local secondary school), usually attended by young workers who, for one reason or another, had not completed their formal school education. Yet those vocational training opportunities occurred mainly when production demands were lower, were developed on a voluntary basis and were almost exclusively oriented to the learning of tasks that were required by new production processes.

In Case 2, education and training were not merely confined to interventions aiming at supplying perceived deficiencies in the assembly line, nor were exclusively guided for activities that could meet the requirements of the different workstations. Indeed, many of the activities had objectives that were beyond workers' adaptation to new tasks. Indeed, it was almost explicit a great concern with the interaction between the adaptation to the continuous changes of workstation and other needs of a more comprehensive nature. This means that, along with a technical training, with practical and instrumental purposes, other actions were developed, as English language or information and communication technology teaching. Although these educational initiatives were recognised as having only an indirect relevance for the workers, it was expected that "*each one will have to feel that it is useful for its own work*", according to the opinion of one of the staff directors.

Due to this utilitarian view, which, according to their promoters, training should have, the training courses, in many circumstances, have a restricted, located and practical nature. Even if one of the directors, in one of the interviews, continually reinforced the idea of the underlying humanistic goals, conceiving training as an opportunity for workers "*to graduate themselves*", it often was seen as a process for "*preparing to do something useful*".

In this context, literacy was indeed a major concern. Pedagogic actions at this level aimed at solving workers' difficulties in communication, especially with written texts. In Case 2 initiatives were carried out in order to enable the "*understanding of things*". This objective gave origin to courses whose goals were the acquisition of new knowledge, and skills and attitudes development. These courses included, among others, the development of reading and writing skills – because, despite the training activities that were undertaken, "*the basis that reading and writing constitutes was missing*", as it was acknowledge by one of the trainers. A similar situation was found in Case 1, where, however, the "complexity" and the "quality" of the produced goods were a more explicit

argument for the need to develop workers' 'literacy'. In this factory, pedagogic initiatives arose from the identification of difficulties in comprehending various written and oral texts. "*When we talk about difficulties in comprehension, they do not happen only with work instructions. There is no succeeded professional training if people do not understand what is being said, and I'm not mentioning the technicalities. And if you give them a textbook or some documentation to interpret, they will not be able to do it*" commented one of the engineers in the human resources department.

In spite of this concern with broader issues other than "technicalities", in this factory 1, the priority goal defined for training in communicative practices consisted on the development of drafting skills and written texts structuring (e.g. report writing). As we can conclude from these objects and objectives for training, the target of these pedagogic actions were not the workers said to be in "literacy deficit", rather those workers that, due to the specialization of such written practices, didn't work in the assembly line.

Nevertheless, those training practices are not far from what Luke and Freebody (1999, p. 8) denounced as being the foundational assumptions of the modern literacy education "(a) that the practice of literacy is a universal human capacity above ideology and difference; (b) that literacy is amenable to and the rightful object of positivist scientific study and (c) […] that the institutional construction and distribution of literacy can be resolved through the development of scientifically based technologies for curriculum, instruction and evaluation". But against these assumptions, sustained in what Street (1984; 1995) called the "autonomous model", other perspectives defend that what matters is the interaction of people with their contexts and the cultural ways of using written language; as Barton (1994, p. 32) also puts it, "instead of studying the separate skills which underlie reading and writing, […] a shift to *studying* literacy as a set of social practices associated with particular symbol systems and their related technologies" should occur. But that is not the case yet in the two contexts we are describing. The idea of literacy as a set of "basic skills" which can be assessed in terms of proficiency levels, skills that can be taught and whose consequences can be measured prevails over its conception as a social practice, not as a simple technique or a neutral complex of skills.

LITERACY CONDITIONS AND PRACTICES IN THE TWO WORKPLACES

More than literacy contexts, the two factories were true places for multiple mediated texts and their "learning" – not only because of the diversity of the events taking place around written texts (which are quite diversified too), but also because of the different specialized spheres that organize such events, as well as because of the different power relationships sustaining them. Actually, with regard to these relationships, literacy events that happen in those two contexts can be seen as being structured around two broad categories: 1) on one hand, the "dominant official literacy" events, which, in most cases, intended to

control production; in this sense, they could be understood as authority devices that serve "surveillance" and, if that is the case, "punishment" purposes (Foucault, 1977); 2) on the other hand, a "literacy of resistance", visible in events that place the workers in the broader context of production relationships and in society. To this latter group belong (and they were found namely in Case 1) leaflets, brochures and newspapers produced by trade unions or groups of workers: despite its codified and specialized language, it was evident to the researchers that the assembly line workers did not have any problems in understanding them. To some extent, we are talking about events that belonged to an "empowerment" practice.

Examples of the first category – the "dominant official literacy" – could be found in both factories. Everywhere, there was a multitude of verbal information, serving different purposes and people, arranged in different formats: service orders, procedures, instructions, graphs, charts, posters, etc. Near the assembly line, especially in Case 1, we could see brochures and booklets with multimodal texts, highly specialized, about technical procedures (security procedures, for example), sometimes in foreign languages. Strongly dependent on context, highly codified and not always effectively used, most of these documents were produced by individuals that were positioned in upper levels of the hierarchy: engineers or members of the human resources department. In most cases, if necessary, these documents were "translated" to those people working in the assembly line by workers with middle management positions. Meanwhile, in the technical and management departments, other people read, discussed or produced reports and other texts, very often of great complexity.

In this context, the production and reading of the Case 1 journal (with news and information about working life and leisure in the company) stands, with its familiar register, a kind of "in-between place" (Bhabha, 1998), where power relationships appeared weakened and the company was depicted as a place where workers play relevant and active roles. The newspaper served, in a large part of its content, as a vehicle of the company's values and for information considered relevant for the correct performance of work tasks, but it also gave room for the workers' voice about their professional or non-professional lives. In this sense, the newspaper created other possibilities for the production of alternative forms of social relationships.

In Case 2, the demands of the new work processes and the continuous technological changes generated the need to make the communication faster, making written information accessible to a larger number of workers. Thus, changes in the organization of workspace within the factory corresponded to changes in social and communication networks, modifying the "written culture" through the circulation of new text genres, the increasing relevance of new media, the establishment of new communicative networks, the assignment of new functions to the written texts. In this factory, through reduction (less) or expansion (more), important changes in literacy practices occurred, with consequences in their scope, status and functions.

Such restructuring process, which generated changes in literacy practices and in functional contents, affected all the actors of the organization, some of them in a more obvious and continuous way, others more subtly. This fact argues in favour of a more detailed description of Case 2.

In this factory, in management, conception, coordination and control spheres, literacy practices became more diverse and the volume of written information that currently circulated in the company was even considered "unmanageable". In the assembly line, literacy practices have started to be more sophisticated and frequent. Written information (both environmental and task oriented) became more present and more diverse, and new contexts began to have special relevance – as it was the case of the "Information Points", around which workers could meet for leisure time or had to meet for work purposes. The spread of this new media has also led to more reading practices, repositioning individuals both in productive and receptive text tasks. However, because these tasks tend to the preservation or even the reinforcement of the boarders of work based discourse, it was not evident the emergence of "in-between" spaces.

If, at Case 1, literacy events were hierarchically distributed, with individuals without any need to read and even less to write (although "improved literacy levels" were required from them), at Case 2, changes in the organization of work contributed to a less hierarchical distribution of the communicative roles in what concerned subjects that had to use texts for their work. Reading and writing seemed to have become more frequent among larger numbers of workers.

In these changes, the replacement of paper by digital supports acquired special relevance, with the widespread and massive use of the information and communication technologies for the distribution of e-mail and SMS messages, mainly in the case of administration, management, coordination and control sectors. The team leaders of the production sector used these means of communication as well, particularly when they needed to communicate with the upper levels. The generalization of these electronic and digital technologies to store and provide information was evident also in the intensive use of internal databases.

If in Case 2 reading became a daily practice for a significant number of workers, writing was spread with less intensity, being more frequent within the administrative, conception, coordination and work control areas. In the assembly line, writing was a practice that was restricted to managers, mainly to section and team heads, as one of them commented: "*I write to report the lack of materials, I have to write the codes to point out which are the materials that are lacking to the workstation and sometimes to the assembly line. When the team head comes to me and says "Look, why is this and that missing?", or when a supplier comes... I have to write*".

It was in the departments, which were responsible for conception and coordination tasks that literacy events were more systematic, sustaining not only the activities that were developed within the department, but also the activities of other sectors. In accordance, it can be said that regulatory practices carried out

by certain sectors of the company over others endow written texts with different functions, but mainly to regulate the work. In fact there are documents produced in the conception and coordination departments, which are sent to the production sectors (whether they are part of the assembly line or not), just for regulating their activities. In consequence, texts produce a clear division between those who use the diverse increasingly complex media of written information in a 'productive' and dynamic way, and those who must have only a receptive position.

This factory 2 is, therefore, a literacy context of various sorts. Generalization and specialization, tradition and innovation, centrality and periphery, self-determination and over determination are some dyads, which can be used to describe such a complex and contradictory scenario. Actually, the literacy practices vary significantly among workers, shaping their identities. Reading practices are more generalized, although they vary according to the functional content of the workers' post: they identify those who have the power to define the work tasks to be developed by others and the way to perform them. If some of the workers only have to read and not to write (as it is the case of the assembly line workers), others have to write during significant parts of their working time. In this context, writing practices also create specific challenges mainly in what regards texts composition, if one wants them to be effective, as it is shown in the words of one head of department: "*Most of [the workers of the sector] have to identify the non-conformities and, there, the text is already very important, because one is writing an argumentative text to be sent to a supplier, with his own justifications. Sometimes there are difficulties related to the way the text is written. One has to argue that the piece came in bad conditions, because of 'this' or 'that' and one tries to do it in a way the supplier cannot refuse the argument. And there might be some difficulties there, in convincing him".*

In Case 2 it was possible to identify texts that besides establishing different links with the production activity, also vary in terms of their extension, gender, degree of codification, autonomy, medium and permanence. In the engineering department, for instance, it was possible to find very long texts such as guidelines or regulations produced by Portuguese ministries and European agencies. These texts presented a high degree of formalization; they also could be highly codified and relatively independent of the context in which they were to be read; their period of validity was also quite long. In what the assembly line was concerned, texts were shorter, although also highly encoded, multimodal (associating the iconic and the verbal, as illustrated by drawings, product specifications and technical data sheets), and electronic (e-mails, for example). In any of these cases, the texts were closely related to the working tasks: framing them or being their output. Meanwhile, it should be noted that texts with this nature did not have to be immediately active when production tasks were performed, and could rather function as a resource, a potential support for the task development – which was typically the case of work procedures.

In this Case 2, texts played diverse roles in the life of the workers; these texts structured their activity and, in this process, texts positioned workers differently. In the assembly line, it could be observed that the workers did not read nor write much. This does not mean that the practices in which they were involved were not literacy practices as their activity was strongly regulated by verbal or multimodal texts. For these workers, literacy practices took a specialized form – reading the specifications, which came with the product and regulated the way they should work with it, as one of the workers stated: *"My work post requires me to read drawings because I work with parts. I provide parts for the assembly line, and also for the outside. Everything is done through drawings. [...] The part has a specification that has to match with the drawing"*.

Together with these strongly framed reading activities, occasionally, assembly line workers could become also involved in autonomous writing practices, yet regulated by the on-going tasks. Anyway, this was not the only pattern that could be identified in the assembly line as team leaders dealt with texts in a more autonomous way: sometimes they played the role of mediators between the text and the other assembly line workers. This means that team leaders acted as primary interpreters of written texts, which they afterwards convert into oral instructions to the other workers. But, they also use to fill checklists, to draft technical failures reports, and to read work instructions.

In the engineering department, of this second factory, people faced written texts differently, and this makes it another context of specialized literacy events, involving articulately, recontextualization and regulation tasks. The production of car bodies currently follows an extensive set of requirements, formalized in directives, which come from national and European agencies. Those requirements needed to be adopted and adapted by the factory. In so doing, the engineering department became a producer of guidelines to the inside of the factory.

Meanwhile, in parallel with these recontextualization practices, there were people dealing with the production of specific information related to the car bodies components, and the procedures for their assemblage: drawings, charts and graphs were filled with relevant information for the work to be done in the assembly line.

It is interesting to note how these individuals transform the texts, depurating and simplifying them according to an ideal reader they bore in mind. Actually, these are effective text producers – the drawings and the writing of the specifications that go to the assembly line are the result of a demanding task of selecting the essential and of erasing what is seen as not relevant for the car body construction, on the assembly line.

When one observes the activities developed by the workers in the engineering department, in terms of the writing and reading practices they perform, the department is a good example of the transformations that are happening at the factory. These transformations underlie the current coexistence of the "old" and the "new" workers, the "old" and the "new" forms of labour, as a result of the

progressive rationalization, complexity and codification of the work, a process in which literacy practices are reaching remarkable importance.

FROM LITERACY SITUATED PRACTICES TO LITERACIES AS A TRAINING OBJECT FINAL REMARKS

It is within the complex framework of these "textual habitats" (Unsworth, 2001) that we can clearly recognize the Factory as a non-homogeneous context, as far as literacy events and practices are considered. Access to literacy is unequal and its production and use may serve to produce social asymmetries, which, however, continuously gain new shapes, due to the "nomadic tendencies of literacies", which means that "they are not wed to *a* context, but are taken up in unpredictable ways across various contexts" (Masny, 2010, p, 339). In this way, in the Factory, the transformations that occur in the organisation have impact both at the level of the interaction with texts as well as among people. New practices and new discourses have impact on the way of becoming an *Other*: a multiliterate individual (Masny, 2006; 2010). Actually, those new processes in the organization of production introduced in both factories represented a crucial step for that.

When we consider the nature of the tasks that workers were expected to perform and the characteristics of their workplaces in respect to reading and writing practices, some significant differences could be found between the two factories. On one hand, it was possible to identify individuals who were deeply and continuously involved in literacy practices, both in terms of reading and writing different text genres, with different purposes and contents – these are the ones who have no 'literacy problems'. On the other hand, there were those with scarce involvement with texts, whatever their format, and whose main daily tasks did not depend immediately on written texts, even if they were surrounded by them. This was the case of the assembly line workers, for whom these texts were of little relevance, since they were not immediately useful for their activities. However all those instruction manuals, maps, charts, and posters that regulated what was being done and what needed to be done were the *locus* of the 'official literacy'; in hierarchized contexts as the ones we are describing, this official literacy wields "immense power over working lives" (Kleifgen, 2005, p, 453). To this dominant literacy, which aimed, to some extent, to keep the workforce disciplined through a "normalization process" (Foucault, 1977), workers opposed dynamic and contextualized communication processes, talking with each other and using and sharing practical knowledge, derived from years of experience.

In a certain sense, these "endogenous literacy practices" (Kleifgen, 2005, p, 460), which contradicted the "deficit" claim, surely represented, for the administrations, a 'deviation' form not easily acceptable, as it escaped from their

control and their "normalization" procedures. In this light, the assessment of literacy that the administrations wanted to pursue could be understood as a way to maintain such control on behalf of the 'complexity' and the 'quality' of the produced goods.

Thus, much more than a matter of greater or lesser ability to produce car radios or bus bodies, it is the importance given to literacy that really produces meanings: first, it represents an appropriation of a public discourse that sees literacy as an individual problem and as an economic development factor, and therefore as something that the administration of the factory should formulate as a problem of its own; second, it implies a redefinition of the *loci* of legitimate literacy production and literate people.

When both factories administrations take the literacy diagnosis and development into their own hands, they are giving themselves the power to point out the strengths and weaknesses of the educational outcomes with regard to reading and writing. In this sense, the workplace becomes a place not only to produce goods but also to learn in the ways companies consider most appropriate. To a certain extent, these roles of the corporation may be seen as giving full meaning to the idea of "continuing education", such as Deleuze conceives it when "anticipating the spread of the institutions of perpetual training and lifelong learning" (Semetsky, 2008, p, ix). In fact, relying on the way Deleuze envisions contemporary education - as "giving way to frightful continual training, to continual monitoring of worker-schoolkids or bureaucrat-students" (1995, p. 175) -, Semetsky (2010) goes further arguing: "the same way that corporations have replaced factories, schools are being replaced by the abstract concept of continuing education" (p. 325). Being so, it doesn't seem abusive to argue that these new corporations, assuming these new educational roles, in their own 'organised school forms' are new "means to provide a continuous stream of human capital for the knowledge economy" (Semetsky, 2012, p. 325)

According to this, ideas about the school that "does not prepare" and about the "unprepared" economy will keep being intertwined, reinforcing the prevailing discourses in the public sphere about the "literacy deficit", and hiding "the complexity", in words of Masny (2010), "of rhizomatic connections and processes involved in becoming with multiple literacies" (p. 348).

At the very end of this narrative of two factories, it is possible to presume that, to a certain extent, workers kept being transformed. This transformation was not necessarily an effect of the administrations literacy concerns or even was recognised by them. This study allowed seeing that transformation happened at every moment the workers had to encounter ever unknown and newer texts. Ultimately, literacies happen in the multiple ways people live their lives.

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ELIZABETH DE FREITAS

10. MAPPING THE MATERIALITY OF CLASSSROOM DISCOURSE: EXPRESSION AND CONTENT IN SCHOOL MATHEMATICS

INTRODUCTION

Mathematics is often considered an entirely cognitive activity pertaining to immaterial, ideal abstract forms. Plato argued that mathematical concepts are unchanging and eternal and exist in an ideal realm of pure *being* known to us through reason and reflection, while the physical world is the world of change and *becoming* known through the senses. Neo-Platonist and formalist philosophies of mathematics – the first denying the material world as anything but a distraction in coming to know mathematics, and the second emptying mathematical entities of all material substance – continue to dominate and underpin contemporary approaches to mathematics curriculum. The terrain of the discipline was charted in the nineteenth century, as Deleuze (1993, 1994) and Deleuze & Guattari (1987) suggest, through the ongoing tension between state-sanctioned or "royal" or "major" mathematics and alternative or counter historical lineages of mathematics, which they name "nomadic" or "minor". According to this account, state mathematicians demoted the materiality of mathematics, and imposed "civil, static, and ordinal rules" on notions such as "becoming, heterogeneity, infinitesimal, passage to the limit, [and] continuous variation" (Deleuze & Guattari, 1987, p. 363). These rules were exemplified in the various attempts of the nineteenth and twentieth century to ground mathematics in axiomatics, logic and set theory. The counter-actualizing tendencies of nomadic mathematics, in contrast, pursued the entanglement of the material and the mathematical. The projective geometry of Desargues, for instance, was judged "dangerous and unsound" because of its reliance on the diagrammatic and its operative approach to mathematical figures (Smith, 2006, p. 150). And although this kind of physico-mathematical approach found favor with some state mathematicians, such as Monge and Poncelet, it still remained a threat to the dominant analytic tradition and epsilon-delta police whose aim was to rescue axiomatics from the threat of this destabilizing nomadic mathematics (Smith, 2006).

Any attempt to break up this terrain by looking at mathematical activity as a deeply material enterprise of assemblage-making will radically diverge from the state-sanctioned image of mathematics as an axiomatics of logical deduction. One way of deterritorializing the rigid terrain of the discipline and re-territorializing it as nomadic flow involves re-thinking the relationship between

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 127–140.

language and mathematics. Recent interest in the role of language in teaching and learning mathematics has shed considerable light on how mathematics is tethered to particular syntactic structures (O'Halloran, 2007). Close textual studies of grammatical forms used by students and teachers in written artifacts and classroom discourse point to the persistence of these structures in determining what is *sayable* in mathematics classrooms. Linguistic analysis suggests that fluency in these grammatical forms is what allows students to make mathematical meaning, and that apprenticeship into these forms of discourse is thus a political concern (de Freitas & Zolkower, 2009; Martin, 2007; Veel, 1999). The focus on communication in mathematics classrooms, however, fails to interrogate the assumption that mathematical thinking occurs *in the head* and *prior to speaking, drawing, constructing, etc*. Curricular guidelines and textbooks demand that communication be a central activity in the mathematics classroom, but teachers typically address the communication standard by asking students to *verbally share their thinking*. This "think aloud" strategy is also prevalent in reading instruction where it is sometimes referred to as "languaging" (Swain, 2006). Such an approach seems to impose a very confining image on both thinking and communicating, and in so doing fails to recognize the ways in which content and expression are materially coupled, and the ways in which "indisciplines" are at work in language, traversing *transversally* that which is spoken. The primary aim of this paper is to bring the work of Deleuze (1993, 1994), Deleuze and Guattari (1987, 1994), and Massumi (2002, 2011) to bear on the question of materiality in mathematics, by attending to the way that content and expression are assembled in classroom "communication". I show how Deleuze and Guattari argue against the concept of communication, offering instead the concept of expression (or expressivity) as that which better captures the materiality of language. Finally, I show how this new approach can be leveraged in the study of mathematics classrooms by analyzing a short video of classroom interaction. My aim is to show how mathematical thinking can be reconceived as a highly material activity that is constantly re-assembling the nexus of expression and content. In this way, the chapter pursues what Bogue (2009) describes as one of the important strategies of multiple literacies theory, that being its focus on the potential of "micro-level negotiations of group interactions" to disrupt institutional constraints (p. vii).

THE LANGUAGE-CENTRIC CONCEPT OF COMMUNICATION

Stockero and Van Zoest (2011) note that mathematics educators ask students to share their thinking for a variety of reasons, including such diverse aims as enhancing student problem solving skills (Fello & Paquette, 2009), broadening student views on what constitutes mathematical activity (Hodge, 2009), and offering opportunities for teachers to study student thinking (Kastberg, Norton & Klerlein, 2009). Similarly, Bochicchio *et al.* (2009) suggest five essential

components of successful whole-class conversation, the second being "publicizing" student thinking:

> The teacher must support students in sharing their ideas so that other students have the opportunity to hear and comprehend those ideas and subsequently think about and respond to them. Without this step, discussion is not possible. The teachers' actions can include asking students to go to the board and share their work or thinking as well as having a student's idea restated by the student, other students or the teacher. (p. 608)

Although Stockero & van Zoest (2011) suggest that teachers need to move beyond a "replication" model where students are simply asked to *share* their thoughts in order to enhance engagement and participation, they continue to support the notion that *explanation* can capture student thinking. Moreover, they fail to problematize the relationship between thinking and the verbal processes of "making thinking public". Van Zoest *et al.* (2010) define thinking as students' "ideas about approaching problems, what led them to their solutions, their justifications for solutions, and their reflections on mathematical activity, as well as their solution methods and answers to problems" (p. 50). Such a definition may intend to invite open deliberative sharing, but the list of possible forms of "thinking" are implicitly geared towards signification (justification, reflection, method, solution). Although this research has contributed substantially to the study of classroom discourse, and this chapter is not meant to detract from that contribution, but to point to the ways that this approach glosses over its assumptions, and often imposes an overly rationalistic linguistic or semiotic model on creative and potentially disruptive acts of thinking. Conceptions of thinking and its relation to language remain dualistic and simplistic in much of the research on mathematics education, often reducing the concept of thought to a form of inner speech (Lynn, 2010).

Sfard (2008), drawing on Bhaktin, Vygotsky and Wittgenstein, proposes that we overthrow this tradition by recognizing how thinking is an inherently public activity, an always already collectively performed patterned activity, "an individualized version of *interpersonal communication*" (Sfard, 2008, p. 81). For Sfard, communicating is a *patterned collaborative activity* which comes before individual thinking. This approach helps us revise our interpretation of classroom discourse by pointing to the externality of thinking. Sfard's work tackles the well-entrenched beliefs of those who would defend an ontology of private cognitive acts. The challenge for such an approach, however, is to move beyond the language-centric assumptions about thinking (and communication) that one often finds in Vygotsky-inspired work. I am concerned that there is no room in this approach for thinking as a radical asignifying creative act, nor for the

indisciplines at work in language where the nomadic erupts and pursues a line of flight. Although Sfard has offered us an operational method for studying mathematical performance in classrooms, in that language-use is taken as immanently public and accessible to researchers, and, as discussed above, it does seem to exhibit particular grammatical and syntactic patterns, her theory doesn't help us study the way language-use is far from transparent. What this means in practice is that mathematics remains the immaterial conceptual content that is *given* shape and matter through language-use, but is otherwise uninhabited or immaterial. Once again, we find that mathematics is ultimately banished from the material realm and made to occupy either an abstracted ideal or an empty signifier. One wonders what is lost if mathematics remains chained to, and contained within, a regime of signification that cannot fathom (nor abide) the disruptive and rupturing nature of thought outside of communication? Rotman (2000) argues that the assumption that mathematical objects are immaterial and disembodied too often causes mathematical writing to be "invisibilized" as a "neutral and inert medium for describing a given prior reality" (p. 47). He argues against this kind of tacit Platonism, suggesting that "mathematical signs do not record or code or transcribe any language prior to themselves" (p. 44). In an attempt to break with these tacit assumptions, Rotman suggests that diagrams and other engagements with surfaces are the "enabling technology" for mathematical thinking.

EXPRESSION RATHER THAN COMMUNICATION

Deleuze and Guattari (1987, 1994) challenge us to think the radical nature of thought outside a communication model. Instead of a logic of communication and its requisite binaries of sender/receiver or signal/noise or content/message, they offer a logic of intensities, a logic of ontogenetic "assemblages engaging in irreversible durations" (Brunner & Rhoades, 2010). This is a flat ontology that resists the tendency to separate out ideal entities from real ones. According to this logic, interaction is a creative practice of material experimentation within rhizomatic ecologies (Guattari, 2008). In a rhizomatic assemblage, there is no center nor root, but a proliferation of entry and exit points, a dispersal of lines (traits) that erupt outward and often loop back (Gough, 2004, 2005, 2007). This is a topo-philosophy in which regimes of signification impart more and more signifier, saturating the acentric network, while disruptive lines of flight spur new potentialities (Semetsky, 2006). This radically material ontology of interaction demands that we think the "thisness" or "haecceity" of becoming, so that we might study classrooms in terms of fluidity, affect and the exteriority of thought.

Deleuze & Guattari (1987) push back at the totalizing eye of linguistics and other discourse frameworks that reduce all activity to language. A rhizomatic assemblage is ontologically heterogeneous, incorporating and developing in and through diverse entities, so that language becomes just one trait (or line) in

the assemblage. Perhaps more importantly, lines (traits) in the rhizomatic assemblage are not all ultimately linked to linguistic features. The rhizomatic assemblage is composed of diverse realities, most of which are not bound to language. In other words, there are ways of expression that do not pay lip service to an image of thought (or becoming) that is entirely dominated by linguistic or discourse models: "semiotic chains of every nature are connected to very diverse modes of coding (biological, political, economic, etc.) that bring into play not only different regimes of signs but also states of things of differing status" (Deleuze & Guattari, 1987, p. 7). In the classroom, assemblages are formed with heterogeneous materialities (body, smartboard, desk, language) quaking and quivering with affective intensities.

This approach aims to decenter language from the analysis: "A semiotic chain is like a tuber agglomerating very diverse acts, not only linguistic, but also perceptive, mimetic, gestural, and cognitive …" (Deleuze & Guattari, 1987, p. 7) They criticize Chomskian linguistics for not being sufficiently abstract in that it fails to connect "a language to the semantic and pragmatic contents of statements, to collective assemblages of enunciation, to a whole micropolitics of the social field" (Deleuze & Guattari, 1987, p. 7). Linguistics, like psychoanalysis, is too keen to reduce difference and repetition to marks of an underlying sameness. It's not that we aren't to study language as part of the system of affect, but just that arborial models—unlike rhizomatic ones—are always imposing images of language on the assemblage that make language the transcendental coding, "A method of the rhizome type, on the contrary, can analyze language only by decentering it onto other dimensions and other registers" (Deleuze & Guattari, 1987, p. 8).

Not only is language decentered, but language itself is reconceived outside of a communication model (Lecercle, 2002). Language is neither informational nor communicational. Language is itself a "collective assemblage of enunciation" which forms one of many regimes of signification whereby bodies are inscribed with power. In the context of the classroom, language is less about information and more about imposing "semiotic coordinates" on the child. The bodies in the classroom are "emitting, receiving, and transmitting" the "order-word" that constitutes language as obedience (p. 77). Language is not a code nor is speech the communication of information. Language is a material act or effectuation: To "order, question, promise, or affirm is not to inform someone about a command, doubt, engagement, or assertion but to effectuate these specific, immanent, and necessarily implicit acts" (p. 77). One can no longer imagine a clean distinction between speech and language (parole and langue), since there is no pre-existing syntax or primary signification. Nor can one imagine language as the translation of prior thinking into verbal expression. For Deleuze and Guattari, the only possible definition of language is "the set of all order-words, implicit presuppositions, or speech acts current in a language at a given moment" (p. 79). It is not the case, however, that order-words are equal to language, but that they constitute its very possibility. Language-use is performative in that it

"presupposes a conventional context of eligibility", prescribing or in the least confining the possible manner of response (Massumi, 2002, p. 9). While communication relies on the mirror-like function of language, order-words realize the molding function of language.

The interesting tension is thus between the "indisciplines at work in language" and the order-word as discipline. It is precisely the sites of indiscipline where an asignifying thought bores a hole in the surface of language and disrupts the order word. If we speak in indirect discourse, that is to say, if the "collective assemblage of enunciation" speaks through us, then speech acts are multifarious and emit "all the voices present within a single voice" (Lecercle, 2002, p. 80). But these same acts must, on occasion, function as points of disruption and nodes of emergence whereby the collective assemblage of enunciation is broken or torn, and the site marks the emergence of something outside of language—if only momentarily, a line of flight tears off from the rhizome and zigzags away, creating a new territory. Direct discourse (speech on one's own behalf) "is a detached fragment of a mass and is born of the dismemberment of the collective assemblage" (p. 84). Accordingly, "There is no individual enunciation. There is not even a subject of enunciation" (p. 79), but there are sites or events of asignifying disruption where thinking punches its way through the surface of language.

The communication model has long been suspect because of the way it privileges the existence, intention and rationality of an interior life that is both subject of and subject to the transmission of information between private and public spheres (Massumi, 2002). Deleuze and Guattari (1987) appeal instead to the concept of *expressionism*. Expression is never simply a matter of representing, describing, corresponding or complying, but neither is expression the causal construction of content or thought. Instead the linear causal link between content and expression is disrupted or inflected by chance. Expression's potential is linked to accident, event, singularity, change. The singular is not an instance or a member of a set, but an occurrence that envelops a potential collective. It is a disruptive event that nonetheless acts as a magnet in structuring the behavior of others around it. Deleuze's concept of singularity comes directly from the mathematics of discontinuous curves—mathematical singularities mark ruptures in a curve, sudden shifts in direction, and the flight of the infinite (Deleuze, [1968]1994; Smith, 2005). They break through the ontological rules that structure the relationship between language and content. Thus the singular act of expression is not an act confined to language, despite it being spoken in some sense by a collective. As Massumi (2002) suggests, one can accept that the subject is "in a sense spoken by extra-linguistic forces of expression" without reducing the expressing individual to an instantiation of a system (p. 7). In the gap between thought and language, or content and expression, lies "the immanence of their mutual deterritorialization" (Massumi, 2002, p. 9). It is in these gaps or breaks that the classroom as assemblage (a mix of machinic and ennunciative operatives) reassembles itself, and the points of suture or

"expression-content articulations" migrate and re-couple, the one form passing over to the other (Massumi, 2002, p. 10). Expression and the act of expressing are meant to capture the absolute materiality of the thinking-speaking relationship. There are thus intermediate entities between thought and language, "asignifying particles" of expression. These particles are atypical and stammering, constituting the "cutting edge of the deterritorialization of language" (Deleuze & Guattari, 1987, p. 99 cited in Massumi, 2002, p. 15).

According to Bogue's (1989/2001) reading of Deleuze, there is, within language, an anonymous nomadic "aleatory point" which manifests itself as nonsense or paradox, a site that "possesses no particular meaning but is opposed to the absence of meaning."(Deleuze, 1990, p. 89, in Bogue, 1989/2001, p. 76). This point traverses the surface of words and things and is generative of life. The aleatory point is a mobile element or empty slot: "it lacks its own identity, it lacks its own resemblance, it lacks its own equilibrium, it lacks its own origin" (Deleuze, 1969/1990, p. 55). Thought discovers its "higher power" in an aleatory point, a Nietzschean inspired break with rational thought (Bogue, 1989/2001). Thinking is "no longer a ratio reinforcing a reactive, sensory-motor forces, but an unbounded creativity from which active affections flow" (Hughes, 2011, p. 91). Or, in other words, as Deleuze states, "To think is to create" (1994, p. 192).

> Thought strikes like lightening, with sheering ontogenetic force. It is *felt*. The highest operation of thought is not to choose, but to harbor and convey that force, repotentialized. The thinking is not contained in the designations, manifestations, and significations of language, as owned by a subject. These are only partial expressions of it: pale reflections of its flash. The thinking is all along the line. It is the process: its own event. (Massumi, 2002, p. 28)

Deleuze and Guattari (1987) point to the dangerous "private thinker" whose thinking is oppositional (citing Kierkegaard and Nietzsche) (p. 376). They bemoan the term "private thinker" because of the way it conjures an interiority that they are trying to subvert, arguing that it is these sorts of thinkers and acts of thinking that actually "place thought in an immediate relation with the outside" (p. 377). Such thinking is not to oppose one image against another, but to depose image reproduction altogether. Making thought exterior is a method of undoing the subjection of thought to the true model or ideal form, it is a nomadic strategy for crushing the machine that regulates the distribution of copies. The form of "exteriority" has no space for model and copy, no striated space for the point-by-point adherence to method, but occupies instead the smooth space of ambulant differentials. Deleuze and Guattari refer to the 19th century writer Heinrich von Kleist (2004) who describes thought as a proceeding or process and not a controlling conceptual regulator of speech and affect. For Kleist, thought is pure intensity, a swirling of inarticulate sounds and unanticipated conflations, and not that which controls language in some legalistic state sanctioned way (Deleuze &

Guattari, 1987, p. 378). Thus both thought and language come to be materially coupled (and de-coupled) in vibrant assemblages where neither rules the other. It is precisely through this decoupling of thought and language that the exteriority of thought is given life. Only then can thought participate in becoming-minor, in becoming event, problem, haecceity. As Massumi (2002) suggests, the event or singularity of thought must fall through the "propositional mesh" of language and *express* "the field conditions that gave rise to it and the collective potential its occurrence envelops" (p. 24). The individual student lives this expression as an intensity across his or her body, impacted by and impacting on the micro-perceptions and tiny molecular articulations that hum and twist in all interaction: "The body has become an expressive event: a voluble singularity" (Massumi, 2002, p. 27).

In the next section, I show how this concept of expression, rather than communication, can be used to study mathematical thinking in the classroom.

THE STAMMERING EXPRESSION OF POTENTIAL: CAN I USE THE "POINTER-THINGER"?

In this section I apply the tools discussed above to analyze a short video excerpt of mathematics classroom interaction. The video records a grade 7 mathematics classroom in California, and can be found in a teacher education resource entitled *Connecting Mathematical Ideas: Middle school video cases to support teaching and learning* (Boaler & Humphreys, 2005). The lesson aims to develop student algebraic thinking through generalizing arithmetic tasks. The class begins with the teacher placing a diagram of a 6x6 square border (picture frame) on the overhead projector (Figure 1), and asks the students to determine how many unit squares are in the border. Students are first asked to 'mentally' determine the number of unit tiles.

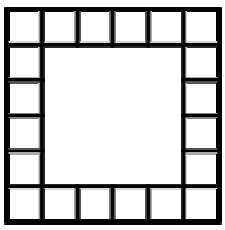

Figure 1

The teacher asks them to do so 'without talking, without writing, and without counting one by one' and then asks them to verbalize their methods. She then asks them to do it with a 10x10 grid, also projected onto the screen (eventually,

she asks them to complete the task for any size frame). Although the task is one that enforces the communication model on the students thinking, demanding that they 'translate' their thinking into words, there is an important moment of disruption in the classroom assemblage when the student Colin is called on. Up until this moment, students have stayed seated while answering the question "What were you thinking?" but Colin's contribution functions as a singular perturbation that re-directs the classroom interaction. Colin's method for answering the question involved a path around the outside of the border, starting on the top edge. He saw that one side was 10, then he moved to the adjoining side, and noticed that there would be 9 remaining "because this one's overlapping". Then he moved to the bottom one, and noticed that it would have 9 for the same reason. Finally, he looked at the last edge, and noticed that it would have only 8. In the classroom interaction, however, we see that his language-use is less about communication, and more about the making of material assemblages with the diagram and any other devices he can find:

13	Teacher	OK. Another way to do it? Colin?
14	Colin	All right, how I did it was … I just put one side was obviously gonna be ten … so it's ten, and then I did like the bottom one and that was gonna …
15	Teacher	Could you go up and show us? I think that might help us.
16	Colin	Can I use like a pointer-thinger?
17	Teacher	The pointer's in the top drawer if you want to use it … top … right in the center … there it is.
18	Colin	All right I found it. Anyway, so I, like, I know this side is ten so I just did like ten and then this one, this one's the overlapping one, so then this would be nine, then this one would be nine, too, because this one's overlapping. And then for this, one it's be eight because these two, this one is being used by this one and this one is being used by that one.

In the case of Colin, language fails to operate as a form of communication (of his thinking). He uses a series of indexical spatial references ("one side", "bottom", "it's ten", "that was") that bind his speech to the actual diagram on the overhead projector. Colin's stammering troubles the regime of communication that would demote his thinking to some entirely linguistic form, for as Lecercle (2002) suggests, "the speaker is in constant danger of being burked by language: a wet blanket of signification smothers any attempt at expression" (p. 6). When the teacher asks that Colin go up and show the others what he means, he confidently asks if he can use the teacher's "pointer-thinger" to engage the diagram. In so doing, a new material assemblage is formed (Colin-"pointer-thinger"-diagram) that functions to de-center language as communication and leverage it instead as expression. The event draws the watching eye of his peers to his hand movement

and the shadow of this movement projected onto the screen. Colin produces a moving image for his peers to study, gesturing the diagram into activity. By putting the diagram in motion, Colin performs an act of nomadic mathematics, an act that invigorates the diagram and materializes the mathematics.[1] In line #18, Colin embeds his speech in the diagram to such a degree that his spoken words become material appendages of this new assemblage. The repeated ambiguous use of indexical language ("this one") further decenters language as the legislator of truth (and the vehicle of explanation) and invests such power instead in the material "pointer-thinger", a device that Colin maneuvers with great joy. This moment in the video marks a shift in the classroom activity, a significant break with the sitting/speaking subject—instead a subject that moves across the room and interacts with the diagram— and thus points to the kind of event when links between expression and content are broken and re-assembled. It is not simply the case that Colin is using language in an indexical way (to point at material objects or material inscriptions), for this would be to impose a linguistic imperialism on the activity at hand. Why must it be his spoken words that code the activity? Might it be the case that language is not the legislator of meaning here, but is rather taken up into a material assemblage where the diagram and the pointer-thinger possess more agency? Through such an analysis, we begin to see how Colin's actions re-territorialize mathematical thinking and shift the nexus of content and expression so that mathematics itself is bound in the tangled assemblage.

CONCLUSION

Attending to the materiality of language is more than simply attending to the phenomenological in experience (more than simply studying the way that other bodily senses play into our making of meaning), but demands that we, in Delanda's words, "assert the mind-independence of the material world" (Delanda, 2008, p.162). Such an assertion, if it is to truly embrace materialism, needs to resist the temptation of falling back on references to atemporal essences behind the appearances. Neither is the discursive to be explained away in non-discursive terms, as though there were no discursive forces and formations that might pursue their own logic. And yet Delanda offers a compelling historical (both biological and anthropological) portrait of the emergence of language (if not discourse) in materialist terms. Drawing on Deleuze and Guattari's concept of double articulation, by which both geologic and social strata are formed, Delanda maps two processes: the first concerns "the materiality of the stratum", whereby specific material is synthesized (quite literally, compounds are formed from diverse kinds of atoms) and then organized and ordered through contraction and expansion forces; the second concerns "the expressivity of the stratum" where expression refers not simply to language but to "colour, sound, texture, movement, geometrical form and other qualities that can make geological or meteorological entities so dramatically expressive" (p. 163). It is the mutual

entailment of this double articulation that ensures that content and expression are like two sides of a möbius strip. I have argued that expression is a powerful tool for rethinking the role of language in social interaction. Expression is a larger concept that encompasses language as well as many other heterogeneous materialities. Before the emergence of living creatures, Delanda argues, expression was entirely three-dimensional - "the geometry of a crystal, for example, was what expressed its identity" (p. 164). Like other materialities, language emerges biologically as a mode of expressivity, unfolding (and extending) in temporal relations rather than spatial ones. This temporal extension – suggests Delanda - is what allows language to de-territorialize its own and other materialities. Language appropriates – inscribes and codes – other material practices, and hence the "imperialist pretentions" of language-based theories (p. 165).

This materialist approach is well suited to analyzing mathematical discourse since it allows us to problematize the all too common assumption that mathematical content is immaterial. Given the strong focus on communication in education generally, and the prevalent reliance on classroom discourse in the study of teaching and learning, we need to attend more carefully to the way we theorize language-use in relation to the particularities of specific disciplines. Mathematics curriculum, for instance, emerges from/within the tension between a state-sanctioned axiomatics, where deduction entails the derivation of a set of theorems from a set of axioms, and a nomadic materialism, where deduction "moves from the problem to the ideal accidents and events that condition the problem and form the cases that resolve it." (Smith, 2006, p.145). In other words, axiomatics treats the figure and the number as static and staid - in Platonic fashion - in terms of its essence and its derived properties, while nomadic mathematics embraces the ideal accident of the provisional assemblage and pursues the mathematical concept as an adventurous temporally unfolding process (de Freitas & Sinclair, 2012). Although current linguistic-inspired approaches to mathematics (classroom) discourse help us trace the grammatical patterns that legitimize participation in the field (Whitin & Whitin, 2002), they all too often impose a regime of signification on the content-expression assemblage, explaining away the indisciplines at work in language as interruptions rather than lines of flight. In the case of Colin, we see how his stammering re-assembles the content-expression links, that the sounds he makes are asignifying particles or intermediate entities that, together with the hands, the projector, the diagram, and various other material-affective forces, produce an entirely new mathematical assemblage. This re-assembling is the manner by which nomadic mathematics circulates in a mathematics classroom - Colin brazenly takes up the tools of the master (pointer-thinger), attracts the watching eyes of his peers, and works the asymmetry of the problem to bring forth a new unanticipated solution. Mathematics is in motion at these moments, quite literally through its embodiment in the material assemblage, but also in its unscripted actualization. Reading this event as a process of material assemblage

allows us to see how the mathematics itself is at work, in part as a logical constraint (and thus still tied at one end to signification), but more importantly as an ontogenetic force or flow of energy that activates as much as it is activated. Such an approach demands an entirely new philosophy of mathematics, one that kicks back at the ontological binary of ideal/real and rethinks the ontology of mathematics and becoming.

NOTES

[1] See also de Freitas 2012a and 2012b for other examples of how diagrams can be put in motion.

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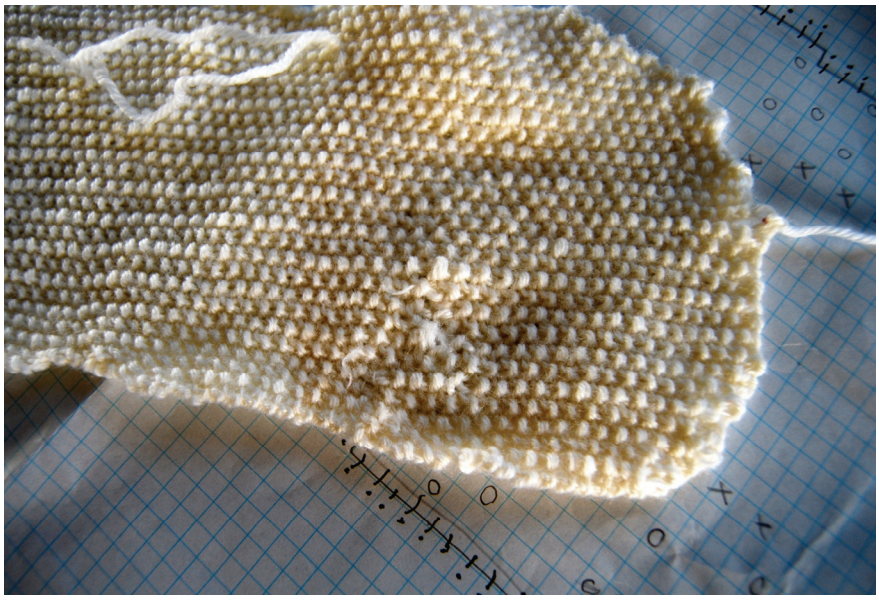
LINDA KNIGHT

11. KNITTED IMAGES

Interception

Knitting deterritorializes and reterritorializes. The wool unravels from the ball and gets taken into something else, a shape, a plane, a part of something. It is momentarily reterritorialized before becoming into something else.



D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 141–142.

ENTRY: TEACHER-BECOMINGS

"The actual is not what we are but, rather, what we become, what we are in the process of becoming – that is to say, the Other, our becoming-other." (Deleuze & Guattari, 1990/1994, p.112).

FRANCIS BANGOU

12. READING ICT, SECOND LANGUAGE EDUCATION, AND THE SELF

An Agencement

INTRODUCTION

In response to the steadily increasing use of Information and Communication Technology (ICT) in our everyday personal and professional lives, curriculua are being transformed to ensure that students at all levels develop the necessary technological knowledge, skills, and dispositions to fully function as citizens of the twenty-first century (Lock, 2007; Yukhymenk & Brown, 2009). In recent years a plethora of research has been conducted on the integration of ICT into school curriculua and classrooms (e.g., Bangou, 2003, 2006; MacLean & Elwood, 2009; Boulton, Chateau, Pereiro, & Azzam-Hannachi, 2008). A lot of this research has focused on the infrastructure of and access to ICT in schools (e.g., Plante & Beattie, 2004; Bangou, 2010), the ways that ICT transforms the practices of teaching and learning (e.g., Reid, 2002), and best practices related to the integration of ICT and education (e.g., Lock, 2007; Ianculescu & Parvan, 2011).

Within this changing environment, "Educators in teacher preparation programs are challenged to provide learning environments where preservice teachers learn how to learn and learn how to teach, *with* and *through* digital technology" (Lock, 2007, p. 576). The field of Second Language Education (SLED) is also adopting ICT into the teaching of second languages, and therefore it has become crucial for teacher educators to provide preservice second language teachers with the indispensable technological skills necessary to integrate ICT into different facets of their teaching, no matter how challenging the task (Bangou, 2003). As I am an educator in a teacher preparation program working specifically in the field of SLED teacher preparation, I took this challenge to heart.

Three years ago, Multiple Literacies Theory (MLT) (Masny, 2010) and I collided when I used a slightly augmented version of the framework I'll discuss below to explore the notion of technological literacy through a year-long ethnographic study of two preservice second language teachers who learned how to integrate ICT into their Spanish teaching practice (Bangou & Waterhouse, 2008). Since that time, both MLT and I have become *other than* through the interconnected understandings created by Deleuze and Guattari's (1987) work.

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 145–161.

This chapter should be read as an *agencement* (Deleuze & Guattari, 1987) of the interactions that have been taking place between Deleuze and Guattari, ICT, SLED, MLT, and I over the last couple of years.

In this chapter, I will use MLT, (Masny, 2009) to explore the experiences of three preservice second language teachers who were learning to integrate ICT into their practice. More precisely, I will show that learning to teach a second language using ICT occurred through reading, reading the world, and self (Jeffrey, 2002; Webb, 2009) within the *agencements* of the Master of Education (M.Ed.) program where this research took place. Here, factors such as ICT, curriculua, teaching practices, beliefs, and even the preservice teachers' themselves were connected forces that could potentially create change—and ultimately a better, more egalitarian world.

In exploring how this happened, this chapter will first introduce the concept of *agencement*, as well as that of MLT. Then, the study and method will be described, followed by a presentation of the experiences of the three preservice teachers through their own words and perceptions. This approach to analysis will enable us to deterritorialize an *agencement* of the researcher, ICT, SLED, and teacher education—and hopefully to create lines of flight and, ultimately, new knowledge.

AGENCEMENT AND MULTIPLE LITERACIES THEORY (MLT)

Agencement

Deleuze and Guattari's (1987) concept of *agencement* recognizes that the relationship between content and expression is part of complex interwoven relations, and as such no signification is isolated from circumstances.

Agencement has usually been translated into English as "assemblage" (e.g., Macgregor Wise, 1997, 2005; Masny & Cole, 2009; Leclercle, 2002; Braidotti, 2006). However, in this chapter, I use the original French term *agencement* because to me, the word "assemblage" falls short of translating the unpredictability and consistent reinvention of an *agencement*. For instance, an assembled piece of furniture would be the result of the assembly of prefabricated parts according to specific linear instructions (the replication of knowledge). Each part was created with the image of the completed piece of furniture in mind; if the instructions are not followed correctly, then the final result would not be what it was meant to be. In stark contrast, an *agencement* refers to the arrangement of various elements that were not necessarily meant to be put together in the first place but that, when arranged, somehow constitute a functioning whole (that is, they create new knowledge). Although affected by its components, an *agencement* is, by nature, unpredictable. It is not created according to specific linear instructions, and therefore takes on a certain temporality.

Deleuze and Guattari's (1987) concept of *agencement* is intrinsically connected to their perspective on language, linguistics, and pragmatics; they believe that "language does not operate between something seen (or felt) and something said, but always goes from saying to saying" (p. 76). Therefore, in their view, spoken communication always transmits what has *already* been said, and for this reason discourse is always indirect. According to Deleuze and Guattari, "Language is made not to be believed but to be obeyed and to compel obedience" (p. 76), and, for this reason, language is primarily a tool of order In fact, to communicate is really to give an order, which is why Deleuze and Guattari view the fundamental units of language to be the order-word, which, for them, "do not concern commands only, but every act that is linked to statements by a social obligation" (p. 79).

According to this understanding of language as being an enforcer of order, the relationship between statement and act is one of redundancy that has two forms—frequency and resonance. Frequency refers to the significance of information, and resonance to its subjectification. In fact, as Deleuze and Guattari (1987) note, "There is no significance independent of dominant signification, nor is there subjectification independent of an established order of subjection. Both depend on the nature and transmission of order-words in a given social field" (p. 79), and this is why enunciation is fundamentally social. However, as Deleuze and Guattari also recognize, "The social character of enunciation is intrinsically funded only if one succeeds in demonstrating how enunciation in itself implies [collective *agencements*]" (p. 80).

In order to comprehend the concept of collective *agencement*, it is fundamental to first understand the makeup of the acts that constitute order-words. Deleuze and Guattari (1987) believe that these acts consist of "incorporeal transformations current in a given society and attributed to the bodies of the society" (p. 80). Here, the word "body" is understood in its broad sense of entity. To illustrate their point, they give the example of how a judge's sentence transforms an accused into a convict. In an educational context, a similar example would be how a school psychologist's diagnosis transforms a student into a special needs learner. In fact, for Deleuze and Guattari, the order-words (or *agencements*) of enunciation "in a given society (in short the illocutionary) designate this instantaneous relation between statements and the incorporeal transformation or noncorporeal attributes they express" (p. 81); therefore, *agencements* are bounded to circumstances and, as such, are "in constant variation, are themselves constantly subject to transformation" (p. 82).

For Deleuze and Guattari (1987), then, the confronted *signification* of enunciation ("territorialization") is in a state of constant variation ("deterritorialization") due to ever-changing circumstances. These circumstances constitute "the degrees of deterritorialization that quantify the respective forms and according to which contents and expression are conjugated, feed into each other, accelerate each other, or on the contrary [are] stabilized and perform a

reterritorialization" (p. 88). Here, the term "reterritorialization" refers to the act of a signification's retransformation (or becoming), which, according to Deleuze and Guattari, occurs via three types of lines: the first is "the molar or rigid line of segmentarity; in no sense is it dead, for it occupies and pervades our life, and always seems to prevail in the end" (p. 195), and the second is the line of molecular segmentation, "the segments of which are like quanta of deterritorialization" (p. 196). Deleuze and Guattari's third line is the line of flight, which "no longer tolerates segments; rather, it is like an exploding of the two segmentary series. She has broken through the wall, she has gotten out of the black holes. She has attained a kind of absolute deterritorialization" (p. 197).

For Deleuze and Guattari (1987), therefore, navigating through *agencements* means wandering through intermingling molar, molecular, and lines of flight. As Macgregor Wise (2005) sums up,

> [*Agencement*] shows us how institutions, organizations, bodies, practices and habits make and unmake each other, intersecting and transforming: creating territories and then unmaking them, deterritorializing, opening line of flights as a possibility of any assemblage but also shutting them down. (p. 86)

What all this means is that there is no direct line between content and expression. In fact, for Deleuze and Guattari (1987), the relationship between content and expression is foremost rhizomic (that is, without, hierarchy, without beginning or end) in that "not every trait in a rhizome is necessarily linked to a linguistic feature: semiotic chains of every nature are connected to very diverse modes of coding (biological, political, economic, etc.) that bring into play not only different regimes of signs but also states of things of differing status" (p. 7). Therefore, we cannot say that content is signified or that expression is a signifier; instead, they are both variables of the *agencement* of enunciation.

From the above line of thought, Deleuze and Guattari (1987) conclude that an *agencement* comprises two axes. The first axis is horizontal and includes two segments: one of content, the other of expression. On the one hand it is a "machinic" *agencement* of intermingling bodies, of actions and passions, reacting to and with each another. On the other hand it is a collective *agencement* of enunciation, acts, statements, and incorporeal transformations. On Deleuze and Guattari's second axis, which is vertical, *agencement* "has both territorial sides, or reterritorialized sides, which stabilize it, and cutting edges of deterritorialization, which carry it away" (p. 88).

In light of the above discussion, let's consider the *agencement* of second language teacher education in today's world. On the horizontal axis we have to consider the mélange of bodies defining ICT, SLED, and second language teacher education (e.g., the body of educators, the body of students, the body of computer engineers, etc.), as well as the tools assuring their symbiosis. We also

have to consider statements and expressions such as the ones we find in curriculua and/or textbooks. On the vertical axis we have to simultaneously consider ICT, SLED, and second language teacher education territorialities and reterritorialization, as well as the line of deterritorialization that carries the always-transforming statements and acts of teacher educators, teachers, and students. Lastly—and most interestingly—we have to consider how all of these factors combine in a particular teacher education program.

Multiple Literacies Theory (MLT)

Deleuze and Guattari's (1987) concept of *agencement* has been deterritorialized and reterritorialized in Masny's (2009) theory on multiple literacies. Wanting to move away from traditional definitions of literacy, which hold at their core the sole ability of reading and writing, Masny proposes that literacy be reconceptualized as a multi-faceted understanding of,

> […] texts that take on multiple meanings conveyed through words, gestures, attitudes, [and] ways of speaking, writing, valuing and are taken up as visual, oral, written, and tactile. They constitute multimodal texts in a broad sense in multimodal forms in a broad sense that fuse with religion, gender, race, culture, and power. It is how literacies are coded. These contexts are not static. They are fluid and transform literacies that produce speakers, writers, artists, communities. (p. 13)

As Masny (2009) further argues, a fundamental aspect of MLT is focusing on reading, reading the world, and the self as texts that "intersect in complex ways and non-linear ways in becoming" (p. 182). It appears, then, that MLT focuses on the relationships between content and expression (meaning). Like an *agencement*, such a relationship is non-linear and complex, and it implies a multiplicity of bodies (bodies of speakers, bodies of writers), tools (visual tools, oral tools, tactile tools, etc.), and enunciation (texts), as well as the notions of territorialization, deterritorialization, and reterritorialization.

According to MLT, reading occurs both intensively and immanently. Intensive readings are disruptive and focus more on the *how* than on the *what*. As Masny's (2009) theory holds, "To read intensively is to read critically" and to consider that "cognitive, social, cultural, and political forces are at work" (p. 15). Immanent readings, on the other hand, are about virtual thought and investment in reading. Indeed, Masny considers reading to be intrinsically associated with sense as being "activated when words, notes and ad icons are actualized in interested ways" (p. 183). For instance, the sight of a bouquet of roses might bring to mind either a favorite Valentine's Day or the funeral of a loved one. Consequently, one cannot predict *how* reading is going to happen. As Masny argues, reading, reading the world, and the self are the effect of an *agencement* "of actualized and immanent experiences" (p. 183).

PRELUDE TO THE STUDY

In 2000, the Faculty of Education where this research took place was the recipient of a Preparing Tomorrow's Teachers to Use Technology (PT3) grant, which aimed to advance the integration of ICT into M.Ed. programs. The grant was intended to encourage systemic changes and improvements in teacher education programs and thereby ensure that all M.Ed. graduates would be able to make appropriate use of ICT to improve their teaching practice and their students' learning opportunities (Bangou, 2003).

This ambitious goal was based on the International Society for Technology's (ISTE) National Educational Technology Standards (NETS), developed in the year 2000. These standards were grouped into six main categories, as follows:

- Technology operation and concepts: Teachers demonstrate a sound understanding of technology operations and concepts;
- Planning and designing learning environments and experiences: Teachers plan and design effective learning environments and experiences supported by technology;
- Teaching, learning, and the curriculum: Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning;
- Assessment and evaluation: Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies;
- Productivity and professional practice: Teachers use technology to enhance their productivity and professional practice; and
- Social, ethical, legal, and human issues: Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK–12 schools and apply that understanding in practice.

As shown by the work of O'Riley (2003), educational curriculua have been heavily revised under the influence of political and corporate interests since the 1980s. For O'Riley, "Two principal areas have emerged from the fray to design and disseminate technology discourses: technology education and educational technology" (p. 4), and the narratives surrounding technology education and educational technology are "momented by a dogma of high tech, production, economic expansion, and inevitability" (p. 4).

As we saw above, notions of productivity, operationalization, improvement, and effectiveness were intrinsically part of the ISTE's standards for educational technology, so such production-based discourse was definitely not foreign to the field of teacher education (including SLED teacher education). On the contrary, by the time those standards had been released in 2000, schools in the United States had already been investing heavily in computers to teach subject matter and to prepare learners for success in the twenty-first century (Bangou, 2003).

Since that time, it has become even more imperative for teachers to acquire the necessary technological skills to be able to use computers as an integral part of their teaching practice (Bangou, 2003; Lock, 2007). For instance, when the present study's research was taking place in 2001-2002, both the American Council on the Teaching of Foreign Language (ACTFL) and the National Council for the Accreditation of Teacher Education (NCATE) required that second language teacher candidates be provided with the opportunity to experience technology-enhanced instruction and also to use ICT in their own teaching (2002). The fact that the M.Ed. program where this study's initial research project took place was accredited by NCATE made the research project even more relevant to both the Faculty of Education and to the preservice teachers enrolled in the program.

THE STUDY

This study was initially part of a larger project that took place from June 2001 to June 2002, and it recruited its participants from the preservice teachers in my university faculty's M.Ed. program. This study had the goal of investigating the knowledge-base construction practices of a group of six preservice teachers in terms of technology-enhanced second language education (Bangou, 2003, 2006, 2008).

Looking back on it today, MLT and Deleuze and Guattari's (1987) concept of *agencement*, provide us with a new point of entry from which to map the six student teachers' journeys towards becoming literate with ICT as a second language teaching tool. As we will see, these journeys were not always smooth, for, as Masny (2009) argues:

> Learning literacies do not take place in a progressive linear fashion. In a Deleuzian way they happen in response to problems and events that occur in life experiences. Literacies are not merely about language codes to be learned. Learning literacies is about desire, about transformation, becoming *other than* through continuous investment in reading, reading the world, and self as texts in multiple environments (e.g., home, school, community) [italics added]. (p. 15)

Within the collectivity of enunciation of the M.Ed. program, "to be technologically literate" meant to understand and operationalize ICT, and also to use ICT to be more effective as teachers, to be more productive as teachers, and to maximize student learning for the twenty-first century. This understanding informed the research questions that guide the present study, which are: (1) Within the collective *agencement* of enunciation in the M.Ed. program, how were ICT, SLED, and second language teacher education connected? (2) Within the M.Ed. program, how did reading, reading the world, and self happen?

Context

The duration of the M.Ed. program featured in this study was five academic quarters long. During the summer of 2001 (the second quarter of the program), the preservice second language teachers had the opportunity to attend a required class related to education and ICT. This class was also open to preservice teachers from different educational areas (e.g., social sciences, administration, etc.). During this five-week summer course, students learned about computer presentation software (i.e., Microsoft PowerPoint), website design, and computer spreadsheets (i.e., Microsoft Excel). The course was divided into lectures and lab sessions. During the lectures, students participated in discussions about ICT and education in relation to ISTE standards. These lectures provided the professor with the opportunity to use and showcase different technologies in his own teaching practice. In order to provide the preservice teachers with a real opportunity to put their new ICT skills into practice, the summer course's final project—helping an imaginary in-service teacher incorporate ICT into his/her practice—included the following elements:

– The preservice teachers were required to create a website that included a teacher-client profile, two website evaluations, a PowerPoint presentation, a technology/media-based lesson plan, a computer spreadsheet project, and a reflection paper (Bangou, 2003).

Since I was the faculty member in charge of infusing ICT into the university's M.Ed. curriculum (as informed by ISTE standards), I seized the opportunity to alter the requirements for two of the second language education M.Ed. course curriculua. These alterations, which were incorporated with ICT literacy in mind, are described below.

During the fall quarter, following completion of the summer course on ICT in education, the preservice teachers attended a second language methods teaching course while also observing in-service second language teachers in secondary and middle schools for five hours a week. In order for the preservice teachers to feel comfortable using ICT to enhance and facilitate their teaching practice, as well as their careers as professionals, I altered the curriculum to enable them to practice the technological skills they had developed during the previous quarter's ICT and education course (Bangou, 2003). Firstly, I organized for the class to visit a school computer lab to observe how an in-service teacher infused technology into her teaching practice. Secondly, I established a class website with links to online resources (Bangou, 2003). Lastly, the course syllabus was transformed to include two ICT-based assignments. I created weekly hour-long technological workshops that I delivered over a six-week period in order to help students meet the syllabus's new ICT requirements, which are outlined below:

– The preservice teachers were required to build professional web-based portfolios that included their teaching philosophies, resumes, their biographies; and
– As a final project, the preservice teachers had to create a two-week web-based unit plan (Bangou, 2003).

During the following winter session, the preservice teachers were enrolled in a preparedness course that had the goal of helping them to prepare for their full-time ten-week teaching practicums that would take place during the following (and final) quarter of the M.Ed. program. The preparedness course also aimed to help the preservice teachers assemble their final academic portfolios, which included six five-minute video segments that showcased their teaching practice, six video reflections, a position paper, an action-research paper, and two of their best lesson plans. This class met once a week for two and a half hours. As the teaching assistant for this class, one of my objectives was to keep the preservice teachers practicing the technological skills they had acquired and developed throughout the summer and fall. The course's syllabus was thus transformed to include the following assignments:

– The preservice teachers had to make weekly presentations about their experiences on a second language education listserv called FLTEACH[1];
– Each week, the preservice teachers had to identify a technology available for use in their placements and determine how to access it and use it effectively in the classroom; and
– The preservice teachers had to create a video of themselves using ICT in their practicum classrooms for inclusion in their final academic portfolios (Bangou, 2003).

In addition to being infused into the three courses described above, ICT was also being incorporated into other classes in the M.Ed. program as teaching tools and lesson topics. Moreover, the preservice second language teachers were also provided with the opportunity to choose a topic related to ICT and language teaching for their capstone projects (Bangou, 2003).

In addition to advocating for the incorporation of ICT into the preservice teachers' practice, I believed it was important for them to become aware of issues related to power and equity (Blackburn & Clark, 2007). Traditionally such issues were not addressed in the university's M.Ed. program, and I believed that one of the added benefits of learning to teach a second language with ICT—the so-called world's greatest equalizer—was that it provided a way to reflect on these topics. I therefore encouraged the preservice teachers to design lessons that dealt with power and equity (Merryfield, 2001), and modelled critical perspectives and practices (Canagarajah, 1999) in my own teaching by asking

questions of websites such as, Who is included? Who is invisible? To whom is this website addressed? (Warnick, 2001). Then I asked the student teachers to do the same with the websites they used in their web-based unit plans.

METHOD AND ANALYSIS

As stated earlier, this study was initially part of a larger research project that took place over the period of a year, from June 2001 to June 2002. This initial project used observation, interviews, online chats, and document review to collect data for analysis.

During that year I observed the participants both at the university during M.Ed. classes and during their field placements in local schools. These observations focused on the instructional strategies of the participants, as well as on how ICT was implemented into their teaching practice (Bangou & Waterhouse, 2008). Each participant was also interviewed on three occasions: once at the end of the fall quarter after the teaching methods course, again at the end of the winter quarter after the preparation course, and finally at the end of the spring quarter after their teaching practicums. These semi-structured interviews were each divided into three major themes: (1) the technological tools used in their field placements and at the university; (2) the curriculua in their previous schools and at the university; and (3) their relationships with their peers, instructors, mentor teachers, and field educators (Bangou & Waterhouse, 2008). I also set up and conducted seven online chats with the participants to discuss issues related to ICT and education. This chat room proved to be an effective forum for sharing opinions and experiences that informed the research (Bangou & Waterhouse, 2008; Bangou & Wong, 2009). Finally, I looked at participants' final projects and academic portfolios to gauge their ICT-related teaching philosophies and pedagogical activities as they were represented in these documents (Bangou & Waterhouse, 2008; Bangou & Wong, 2009).

The present study, which looks back on the previous research through the lens of MLT and *agencement*, meanders through multiple territorializations and deterritorializations of ICT, SLED, and second language teacher education. As it would be impossible to talk about the entire multitude of *agencements* that occurred during that year, this chapter will draw its discussion from selected vignettes that arose from the experiences of the three preservice teachers during the incorporation of ICT into teaching practices. After all, MLT is about multiplicities that should not be understood as reproductions of the same experience, but rather as ruptures of repetitions; linearity is impossible, and so exploration becomes rhizomatic and analysis changes into mapping (Masny, 2009; Alvermann, 2000). As Masny states:

> Data in the more traditional way is about empirical data. Deleuze and Guattari (1994) have moved away from empiricism because it supposes a foundation grounded on [the] human being who seeks to fix categories and

> themes. They call upon transcendental empiricism. It transcends experience (Immanence). It deals with perceptions and the thought of experience creating connections and becoming *other than* [italics added]. (p. 17)

Participants

A total of six preservice second language teachers participated in the initial study. This chapter focuses on three of them. All of the names in the text below are pseudonyms. All of the participant information presented in this section has been drawn from the initial study (i.e., Bangou, 2003).

Pam. Her parents had bought an Apple 2E when she was about five years old, and she remembered "playing with this little bunny rabbit" on the computer. In high school Pam started talking on chat rooms, and she vaguely remembered a ninth grade class where she learned about basic computer programming. She had started high school using WordPerfect, then had changed to Microsoft Word during her last year of high school when typing assignments became mandatory.

Pam first started emailing when she entered university. During her undergraduate studies, Pam had used computers mainly to type her assignments and do research on the Internet. After graduation Pam had the opportunity to spend a semester as a substitute German teacher at a U.S. middle school, where students were using something even "more basic than PowerPoint" for a project and yet she was not able to respond to their questions about it. At the time of the research, Pam mainly used the computer for word processing, emailing, and browsing the Internet.

Pam entered the M.Ed. program to become a qualified German as a second language teacher. She advocated for the use of ICT in second language classrooms numerous times throughout the research project,

Tim. Tim was a twenty-five-year-old white male. He "had never had a computer growing up or anything." He had started using computers only when he reached high school, though he "would generally write it out first and type it from that."

Before entering the M.Ed. program to become a qualified Latin as a second language teacher, Tim had used computers exclusively to type his assignments and for emailing. He had never attended a class where ICT was used as a teaching tool. The summer course on ICT and education was the first time that Tim had to use a computer to do things for a class. He did not own a personal computer at the time of the research project, and even by the end of the program he was not convinced that computers were able to enhance second language education.

Michaela. Michaela was a twenty-two-year-old Latina female born in England of Venezuelan parents. When she was twelve years old, her family had a

computer with Microsoft Works on it. She remembered how she had learned to use the word processing program on her own. However, soon "they abolished that and they brought in" Microsoft Windows. For Michaela, change "was an issue," because she had already learned how to use the other program on her own. When she had been a student abroad, Michaela worked for an oil company that provided her with free training for Windows. In her opinion, when compared to the other learners, she had been the "slowest," and she had not liked that.

Michaela entered the M.Ed. program to become a qualified Spanish as a second language teacher. Before the M.Ed. program she had used her personal computer mainly to do word processing and emailing, and had never attended a class where computers were used as teaching tools. At the time the research, Michaela was already teaching Spanish at the university where the research took place and was the single mother of a two-year-old child.

WORLDS COLLIDING: "BECOMING" ICT-LITERATE SECOND LANGUAGE TEACHERS[2]

The Agencements*: of Michaela, Pam, and Tim*

At the beginning of the fall quarter, when I first introduced the new ICT requirements for the methods of teaching course, one could feel the tension in the air. It was clear that, for many of the preservice teachers, ICT had not been territorialized as part of second language teaching. By the end of the research project, conceptualizations of SLED were deterritorialized and reterritorialized to include ICT within teaching practice agencement.

In a rhizomic agencement, there was resistance expressed in terms of antagonistic reactions towards the ICT-based assignments. There was vehement contestation from some participants to meet ICT-based requirements in a SLED M.Ed. program. Michaela cried. It was a struggle to get through the required summer course on ICT and education: "Yeah, […] that was a struggle." Furthermore, she did not understand why she had to learn more about ICT in a teaching methods class. In fact, she compared completing the ICT requirements of the program to the task of having to pass an advanced mathematics class before becoming a language teacher: "Imagine, you know, passing Math 104 and then people coming to tell you, Oh, now we're gonna do a website with Math 250. It's like, no."

In a later interview, Michaela revealed the source of her rigid reaction on that first day. She said that she always had to learn everything that had to do with computers on her own, and she did not think she was capable of learning to design a website: "Are you kidding? [I thought,] I can't do that… I saw it like math, and… it was terrible. I mean, it was just horrible. I got terrible grades and I barely passed." What affects were living through Michaela when ICT assignments were extremely challenging? There was a sense of worry emerging

especially since, as a single mother, she was afraid of failing the course: "Yeah, it could be a threat." She further explained,

> I'm putting my life on hold for this program because I have chosen to do so. But at the same time I'm affecting my son's life because I'm choosing to do this. So, you know, our financial level is lower; we live in subsidized housing, we do the food stamp thing, and stuff like that. You know that tells me that I have to give my very best effort in everything I do.

In stark contrast to Michaela, there was greater openness (molecular lines) with Pam when the ICT requirements were first announced. In fact, Pam was the only preservice teacher who advocated for the integration of ICT into the SLED M.Ed. program. She even went so far as to tell the class that she felt lucky to have the opportunity to improve her technological skills, regardless of the fact that learning the new skills was sometimes frustrating for her. During her first interview, in reference to her reaction on that day, Pam said, "I think it is that I've been around [ICT]. I mean, my dad is a computer science professor." Moreover, the advancing role of ICT in teaching had been on Pam's radar since she had been a substitute second language teacher:

> I probably wouldn't have been as open to it if I didn't really see things when I'm teaching… [I]n these five years since I graduated to when I taught at the same school […] they had advanced so much and computers [had become] so important just in those five years. And I'm guessing in the next five years when I am teaching and I'm out there, you know, it's gonna keep on growing and I'm really gonna need to know these types of things.

Indeed, ICT in second language teaching had already been deterritorialized and reterritorialized through previous teaching experience, thus foregrounding a transforming role of ICT and herself in the M.Ed. program.

Contrary to Michaela and Pam, Tim did not have any noticeable reaction on that first day when the ICT requirements were announced. He remained quiet and neither protested nor supported the technological agenda of the teaching methods course. Was there a willingness to question a reading of ICT currently in the agencement that once in the teaching course ICT reterritorializes as ICT in SLE and reconfigures the agencement?. During our first interview, when I asked him about that day, Tim admitted that some of the usages of ICT in the summer course on ICT and education had not convinced him that ICT was always being used for clear pedagogical purposes:

> For […] PowerPoint presentations, I mean, you would have this screen, and there would be two short sentences or something that would be [on] the screen. And that was a PowerPoint presentation. But how does having these two short sentences up there really benefit someone who is taking notes? Do you see what I'm saying? I don't know; it seems that it was a [computer] presentation just for the sake of using PowerPoint.

As a Latin teacher, the most compelling reason for Tim to want to use ICT in his teaching practice would be to teach the students how to read Latin better. However, Tim did not see how he could teach more effectively with ICT as a teaching tool:

> [A] PowerPoint presentation […] seems like a lot of trouble to go to when you can just write it on the board. How is the PowerPoint presentation easier than just writing it on the board? You know, do students necessarily get more just because it is flashing on the screen […]?

For Michaela, Pam, and Tim, reading, reading the world, and the self happened on that first day when there was an expression of the collective *agencement* of enunciation of the M.Ed. program, and old and new worlds collided.

Intensive reading (that is, critical reading) happened at this juncture. In the agencement that included Michaela, Pam and Tim, Michaela in the interview questioned the importance of meeting ICT requirements in a SLED M.Ed. program. Tim raised his concern in the interview when he decided that ICT was not always being integrated into the classroom in a pedagogically sound manner. Meanwhile Pam accepted that the course's ICT requirements were necessary for the future success of herself and her students; Furthermore, regarding immanent reading (that is, thought of and investment in reading): What is the sense that emerges with Michaela at the thought of letting down her son? What affect works through Tim in relation to unsatisfying experiences with ICT in the summer course and Pam, the though of her father and openness to computers?

Within the M.Ed. collective *agencement* of enunciation, these three preservice teachers were constantly navigating through multiple incorporeal transformations: teachers, students, web page designers. In fact, reading self as transformed within the collective *agencement* of enunciation of the M.Ed. program contributed to reading self as territorialized within other environments. For instance, for Michaela, reading self as a mother occurred when she was confronted to her transformation as a second language teacher, and a web page designer within the M.Ed program. On that first day, therefore, reading, reading the world, and self was actualized through Michaela's tears, through Pam's advocacy, and through Tim's silence—but anything else could have happened instead.

Through Pam's, Michaela's, and Tim's reactions to the role of ICT in second language teacher education, their conceptualizations of ICT were deterritorialized, and reterritorialized in association with the collective *agencement* of enunciation of the M.Ed. program. Such intense pressure on the conceptualizations of these preservice teachers is not surprising, for as Webb (2009) argues, the demands of accountability and performativity that are placed on teachers usually lead to a "crisis of authenticity." In the same vein, Jeffrey (2002) talks about how teachers must often construct multiple selves and

restructure their identities while navigating through the multiple discourses presented by teacher education.

CONCLUSION

In this study, through an exploration of MLT and Deleuze and Guattari's (1987) concept of *agencement*, power (*pouvoir*) was indeed everywhere, and was effectuated through reading, reading the world, and the multiple selves of the M.Ed. program.

The function of the teacher educator, in Deleuzian terms, is to establish a form of apprenticeship that encourages preservice teachers to "read everyday reality in a foreign language with a hesitancy and a stuttering, keeping in abeyance our everyday modes of apprehension" (Roy, 2003, pp. 172–173). Students' "creative stammerings" (Deleuze & Guattari, 1987, p. 98), questions, and searches for links should therefore be engaged with, rather than being rejected as indicative of their failure to grasp content. After all, it is in these spaces of unknowing where complex thinking can take place, where struggles against inequality can occur, and where "a new experiment in thought could be inserted, that might help teachers get an insight into the generative possibilities of the situation" (Roy, 2003, p. 2).

In Deleuzian terms, preservice teachers' knowledge and understanding might best be conceived of as a series of maps, "entirely oriented toward an experimentation in contact with the real" (Deleuze & Guattari, 1987, p. 12). In other words, these maps do not replicate knowledge; rather, they create and perform new knowledge (Allan, 2004; Gough, 2004), and by doing so they forge, and enhance, and transform the *agencements* of tomorrow. As a teacher educator interested in ICT and SLED, my participation in the research agencement and, my own *agencement* presented in this express chapter have shown me that I must become a force that will contribute to preservice teachers' drawing of their own maps of ICT, SLED, teacher education, and of life—and ultimately to create change by doing so.

NOTES

[1] FLTEACH was an asynchronic messaging service where foreign language teachers in the United States could post their questions and hold daily discussions on diverse issues related to foreign language teaching.

[2] The participant quotations presented in this section have been drawn from the initial study (i.e., Bangou, 2003).

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P. TAYLOR WEBB

13. NIAL-A-PEND-DE-QUACY-IN

Teacher-Becomings and the Micropolitcs of Self-Semiotics

INTRODUCTION

> *Once there exists, in a culture, a true discourse on the subject, what experience does the subject have of his [or her] self?*
> – Michel Foucault, *Subjectivité et vérité* (translated in Parras, 2006, p. 124)

An endless cacophony insists that teachers *be* this or that. Parents, administrators, bureaucrats, politicians, and academics insist that teachers *be*: proficient, accountable, effective, involved, caring, fair, efficient, responsible, reflective, knowledgeable, collegial, and so on. Teachers, themselves, insist that they *be*: helped, encouraged, supported, prepared, educated, compensated, included, facilitated, etc. As I have noted elsewhere[1], I am struck not so much by the fact that educators are subject to so many desires about their selves, but by the assumption that these selves are malleable, synthetic, plastic – that they can *become* so many things. The apparently endless desires about teaching selves rest on the notable assumption that teachers can *become* in the first place.

What does it mean for teachers to become? What do teachers experience when becoming? Is it even possible, as Michel Foucault noted, to answer such questions in ways other than the ways established by the 'true' discourses of teacher preparation, curriculum, and policy? My use of the terms *plastic*, *synthetic,* and *malleable* signal teacher-becomings within a large (and at times, competing) range of subjectivities that teachers are expected to inhabit. With the use of these terms, I am not suggesting that teachers do not want to experience and perform specific subjectivities, or that these desires are somehow not important. I am, however, drawing attention to the large number of groups invested in the teaching body – what I refer to as *subject desirings.* And, with these terms, I am signaling that teachers are implicated in their own becomings as *desiring subjects*. Subject desirings and desiring subjects are found throughout the work of teaching in curricula and policies. The idea of teacher-becomings, then, raises a number of questions about who authors and experiences teacher-becomings.

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 163–177.

Chapter organization

Within, I review three examples of how teachers write, and are written by, desires about their work. The idea of teacher-becomings – opposed to teacher-beings – is theorized as a *micropolitics of self-semiotics* that raises a number of objections to a preferred discourse about 'teacher identity' often found within the literatures on teacher preparation, teacher education, and teacher professionalism. While I am sympathetic to attempts to professionalize teaching, I am not convinced that such forms of regulation should rest on essentializations of teacher identity. Part of my sympathies rest with my own experiences teaching elementary school for several years. During this time, I experienced a number of becomings but I'm not sure if I ever became 'professional'.

Instead, I argue that teachers are constantly in the process of becoming – always in the middle – and that they cannot achieve a presumed state of identity because of the immanence of subject desirings. For the purposes of this chapter, subject desirings are those semiotics found in curriculum policy; semiotics that are intimately assembled within the hopes, dreams, and aspirations of teachers. I conclude by suggesting that any form of professionalization needs to account for teacher-becomings rather than, and only than, teacher-beings.

The chapter proceeds by reviewing examples of teachers engaged in a *micropolitics of self-semiotics* within the smooth and striated spaces of curriculum policy. The examples of teaching selected for this review all framed their analyses with the theoretical framework of Gilles Deleuze and Felix Guattari. My chapter pauses at various points to map four conceptual plateaus associated with teacher-becomings: multiplicity, difference, assemblage, and rhizome (Deleuze and Guattari, 1987). My goal for this chapter is to provide a map of teacher-becomings that illustrate these four conceptual plateaus. I conclude by discussing how MLT (Multiple Literacies Theory) assists teachers to 'read' the desires circulating throughout their work and their selves (Masny, 2006; Masny and Cole, 2009; Masny, 2011).

BECOMING AND BEING IN TEACHING

On one hand, it is fairly straightforward to identify teacher-becomings. They are everywhere. As I will explain shortly, teacher-becomings are the *affective lines between multiplicities*. For instance, teachers experience anger, confusion, hostility, frustration, indignation, joy, pleasure. Teachers encounter these affects everyday. Sometimes they experience several of these affects in an hour. Affective lines, then, are the creative trajectories the self traverses as it attempts to move among, sometimes escape, a myriad of different affects. Deleuze and Guattari (1987) explained that

> a line of becoming is not defined by points that it connects, or by points that compose it; on the contrary, it passes between points, it comes up through the middle…a line of becoming has neither beginning nor end,

> departure nor arrival, origin nor destination…. Becoming is the movement by which the line frees itself from the point, and renders points indiscernible: the rhizome, the opposite of arborescence; break away from arborescence. (pp. 293–294)

On the other hand, it is impossible to identify teacher-beings even though the professionalization literature continues to drill down into the supposed genetics of these beings in anticipation of extracting 'best practices,' endemic teacher knowledges, and the prototypical expert (Smagorinsky, 2009; Webb, 2007).

May (2005) distinguished between the ideas of being and becoming when he stated,

> In traditional philosophy, being is contrasted with becoming. Being is that which endures, that which underlies, that which remains constant. Being is the source and the foundation, fixed and unchanging. God is being; Nature is being…. On the other hand, becoming is ephemeral, changing, inconstant, and therefore less substantial than being. (p. 59)

The search for 'teaching gods' is motivated, partly, to identify the enduring teaching constants that will hopefully substantiate a quasi-profession. Often, these gods are referred to as 'best practices.' In my experience, the only enduring aspect of teaching elementary school was that it constantly changed. Unfortunately, the search for these 'best practices' has not produced what it seeks because teacher-becomings are immanent.

What is immanent? Immanence is an idea that signals the endless connections between relationships and contrasts sharply with ideas of transcendence. Transcendence is an idea that seeks to rise above the endless connections - best practices, the solution, the silver bullet, the right way. Transcendence is a major purpose, and assumed goal, of curriculum and policy. Often the word and practices of 'standardization' are used to signal attempts at educational transcendence. Curriculum and policy attempt to provide some kind of order to what is delightfully unpredictable and immanent. However, as I will argue, teachers are constantly thrown into the differences between immanence and transcendence regarding their work. How can they not? Even after an hour-long lesson, the immanence of contradictory feelings - joy, disappointment, reflection, intuition - leave many teachers wanting to rise above the immanence of affects. However, it is in these micropolitical spaces, that teachers are fully aware that there is no transcendent position to teach. There is only immanent becomings, followed by another lesson to be taught in the next hour.

TEACHING GODS ARE DEAD

> *God is dead. God remains dead. And we have killed him. How shall we comfort ourselves, the murderers of all murderers?*
>
> – Nietzsche, *The Gay Science*, #125 (p. 181)

I have positioned the ideas of *being* and *becoming* as a binary. I have done so as a way to illustrate the persistence of teacher preparation research and activities that supposedly exhume 'best practices'. This foil is a way to illustrate the folds of teacher-becomings but certainly limits the kinds of teacher becomings that I discuss in this chapter. Nevertheless, I believe that the binary adequately represents certain practices - 'transcendent truths' - explicated in teacher preparation literatures and evidenced in teacher preparation that utilize, and seek, 'best practices'. More importantly, these transcendent truths circulate within curriculum and policy.

In what follows, I selected three research vignettes that serve as examples of teacher-becomings. I selected these vignettes because they illustrate how teachers make sense of, and enact, curriculum and policy – prevalent objects in teachers' work that is imbued with semiotic desires about that work. I also selected these vignettes because they pay attention to how curriculum policy "is written onto bodies and produces particular subject positions" (Ball, Maguire, & Braun, 2012, p. 3). In other words, I selected these examples because they illustrate how teachers 'read' subject desirings, and, subsequently, read desiring subjects.[2] I also selected these examples for their explanatory import of the concepts multiplicity, difference, assemblage, and rhizome (Deleuze and Guattari, 1987). These concepts were selected to illustrate the central idea of *becoming* which is the theme of this volume.

FIRST PLATEAU: MULTIPLICITY

Deleuze and Guattari (1987) discussed the idea of multiplicities that are not prefigured, pre-coded, or genetic (i.e. innate) precursors to being. Deleuze and Guattari (1987) emphatically stated that multiplicities are "neither subject nor object…"; instead, multiplicities are "determinations, magnitudes, and dimensions…" (p. 8). Becomings are positioned between multiplicities and emerge as affects. In this sense, multiplicities help us better understand the assumptions inherent in subject desirings: a single teacher can *become* many – and perhaps, can *be* actualized into many beings. Deleuze and Guattari (1987) humorously noted the multiplicities in their own work when they stated, "Since each of us was several, there was already quite a crowd" (p. 3).

Honan (2004) noted how teacher-becomings were manifest through the coding and decoding of governmental curriculum policy. Honan described how teachers interpreted and adapted curriculum policy to classroom practice – what the author described as a "rhizo-textual" process. Through this process, teacher-becomings sought smooth space – lines of flight – within the striated space of curriculum policy that attempted to reterritorialize them into "effective" teachers, or effective beings (Honan, 2004, pp. 273–275). These subject desirings, however, produced a multiplicity of (at least) three other teacher-becomings: (a) teacher-in-dependence, (b) teacher-in-adequate, and (c) teacher-in-denial (p. 276). It may be the case that the teachers in Honan's work were

reterritorialized as "effective" teachers, but in so doing, these teachers were also in-dependence, in-adequate, and in-denial. Honan (2004) demonstrated how attempts to code a particular teacher-body – effective – also coded teacher bodies in other ways. Multiplicities are always a site of micropolitics; as Deleuze and Guattari (1987) noted, "a rhizome or multiplicity never allows itself to be overcoded" (p. 9).

Semetsky (2006) noted the ways the curriculum policy – or subject desires – contributed to the micropolitics of teacher-becomings when she stated,

> Subjectivity, when understood as a process of becoming, differs from the traditional notion of the self looked at, and rationally appealed to, from the so called top down approach of the macroperspective of theory; instead Deleuze recognizes the micropolitical dimension of culture as a contextual and circumstantial site where subjects are situated and produced. As a qualitative multiplicity, subjectivity does not presuppose identity but is being produced in a process of individuation which is always already collective…. (p. 3).

In addition to subject desirings, the multiplicities in Honan's research illustrated the micropolitics of desiring subjects when *affective lines competed with each other and competed within themselves*. For example, a teacher's feelings of becoming inadequate competed with feelings of being adequate – teacher-becoming-in-adequate. And, a teacher's strong feelings about being independent (often signaled in teaching literatures as being 'autonomous') competed with feelings of becoming dependent on curriculum policy – teacher-becoming-in-dependent. In this sense, affective lines competed with themselves for expression. Further, affective lines of inadequacy mixed with, and competed against, lines of independence, producing additional lines of denial and confusion. Affective lines were intersecting vectors that both combined and sheared teachers' feelings regarding contested notions of effective beings. Teacher-becomings, then, were micropolitical *within* each affective line and *between* other affective lines. Semetsky (2006) noted that,

> the unconscious perceptions are implicated as minute, or microperceptions...they are part of the cartographic microanalysis of establishing 'an unconscious psychic mechanisms that engenders the perceived in consciousness' (Deleuze, 1993, p. 95).

I have tried to illustrate the micropolitics *within* affects by separating the prefix from the root, as in the case of in-adequate. Readers should note how language is coded with notions of being, i.e., "prefix" and "root", contributing to the complexity of discussing the idea of becoming. The micropolitics *between* affects in the multiplicity of independence-inadequacy-denial could be illustrated like: *nial-a-pend-de-quacy-in*, indicating how messy becomings are and indicating an absence of language regarding this process of unconscious

perceptions. *Nial-a-pend-de-quacy-in*, then, is just one way of denoting a particular teacher-becoming.

SECOND PLATEAU: RHIZOME

> *A rhizome has no beginning or end; it is always in the middle, between things, interbeing,* intermezzo.
>
> – Deleuze and Guattari, 1987, p. 25

Deleuze and Guattari (1987) provided four principles of rhizomes as a way for understanding the micropolitics involved with teacher-becomings (pp. 3–25). One, rhizomes, and hence becoming, are not arborescent (rooted, fixed); instead, rhizomes have the potential for unlimited growth through its own transformation. Two, rhizomes are characterized by the movement between and through points rather than to points that they connect – "a becoming is always in the middle; one can only get it by the middle" (Deleuze and Guattari, p. 294). Three, rhizomes are difficult to destroy because they are constantly in motion and constantly fleeing attempts at being fixed. Last, rhizomes are cartographical and able to describe becomings spatially. The cartographical principle is a deliberate attempt to avoid describing formations of the self with arborescent explanations (e.g., narrative, voice). Instead, rhizomatic cartographies attempt to map becomings in movement and do not engage with (in fact, eschew) genetic analyses of the self designed to fix, or root, being. Semetsky (2006) provided a wonderful summary of the rhizome when she stated,

> The rhizome, as embedded in the perplexity of the situation, goes in diverse directions instead of a single path, multiplying its own lines and establishing the plurality of unpredictable connections in the open-ended smooth space of its growth. In short, it lives. It does not represent, but only maps our ways, paths and movements together with, as Deleuze says, "their coefficients of probability and danger" (Deleuze, 1995, p. 3). The situation is problematic not due to subjective uncertainty but because such uncertainty arises out of the conflicting experiences [the micropolitical] constituting this very situation. (p. 73)

Honan (2004) argued that the rhizo-textual process was evidence of teachers becoming professional. Teacher-becoming-professional then sought to reterritorialize the striated (and deleterious) semiotics of 'ineffective teachers' or 'teacher deficit' found throughout the curriculum policy. These "professional" teachers *were* the micropolitical sites that confronted subject desires of *being effective*, and the micropolitical sites that attempted to escape this particular governmental desire. Even though the rhetoric of "effectiveness" is hopelessly contested term, for now, the idea of a rhizome provides a way to talk about teacher-becoming as *micropolitical sites confronted with attempts at fixing a particular identity*. Somewhat like Foucault (2005), Honan implicitly argued that teacher-becomings were creative ways to care for the self amidst a powerful

semiotic that desired "effective beings". Teacher-becomings sought smooth spaces of creative autonomy, professionalization, and expert when teachers literally re-wrote the curriculum policy based on an alternative definitions of being effective and becoming professional.

While Honan's research indicated some resistance at attempts to fix or root teacher beings that were 'effective', it remains to be seen whether or not teachers are ready to experiment with the micropolitics of the multiplicity of *nial-a-pend-de-quacy-in*. Are teachers prepared to, borrowing from Semetsky (2006) above, to "multiply its own lines and establish the plurality of unpredictable connections in the open-ended smooth space of its growth" (p. 73)? The persistent semiotics of 'teacher deficit' and 'ineffective teacher' articulated in so many curricular policies creates a deleterious atmosphere. However, and more importantly, the persistent semiotics of deficit cements ideas of teacher-*being* and completely avoids ideas of teacher-*becoming*.

Honan's research illustrated that teachers responded differently to characterizations of being ineffective; but in so doing, these more professional responses similarly articulated ideas of being - as in *being* professional. Again, being. What is different between *being* ineffective and *being* professional? Are the differences in *being* the same state described differently? Or, are these different states characterized differently? I know when I taught elementary school I was both ineffective and effective. Did I have two beings, or was I different from myself over a period of time? To compound matters, I was often independent and dependent when I taught and these multiplicities were connected (or what I will discuss as 'assembled') with feeling ineffective and effective. Did I have four beings? Oh my, that is a crowd! In order to answer some of these questions it is helpful to understand the idea of difference and to understand some of the immanent possibilities in becoming. It seems to me that teacher preparation, curriculum, and policy might work with the immanence of teacher-becomings, like *nial-a-pend-de-quacy-in*, rather than trying to control such a multiplicity or characterize it as broken or flawed and attempt to fix a particular being out of it.

THIRD PLATEAU: DIFFERENCE

May (2005) provided a helpful explanation of difference and identity when he stated,

> Duration is not identity. It is difference, difference that may actualize itself into specific identities, but that remains difference even within those identities. There is not being here, at least not in the traditional sense. Or, to put the point another way, if there is being, if there is a constant, it is becoming itself: the folding and unfolding of substance, the actualization of duration. If we have a taste for paradox, which Deleuze does, we might say that the only being is the being of becoming. (p. 60)

Difference is an idea that can be useful when talking about teacher-becoming and curriculum policy. Difference is often discussed as an idea that makes distinctions between things that are the same; or, difference illustrates distinctions of the same over a period of time. Above, May (2005) discussed difference in just this way and in relation to being and becoming. Interestingly, curriculum policy often attempts to take the difference between things and produce a state of equivalence over time (e.g., test scores). But as May (2005) indicated, we should not be duped into thinking that duration is identity or being. In general, difference is concerned with the variations between two states, and in what follows, I examine the research of Roy (2003) to illustrate the idea of difference in teacher-becomings.

Like Honan (2004), Roy observed that teachers were fluent in a reading of the rhizomatic-semiotics of curriculum policy. However, his research indicated that teachers did not achieve a state of being professional when engaging with curriculum policy. Even though teachers responded to being ineffective, teachers sought solace from the micropolitics of becoming by attempting to control and suppress difference. The state of teacher-becoming-in-out-control was simply too great and teachers in Roy's (2003) study regulated or controlled their different becomings.

For instance, Roy (2003) identified teacher-becomings related to multiplicities of stress. Subject desires produced so much stress that teachers described themselves as becoming numb – "I do not know my own feelings anymore" (p. 162). Unrecognized affects pushed teachers to repress multiplicities rather than explore and experiment with these (anesthetized) affects. The affective differences were too great, and teachers did not explore their becomings because they were not prepared for encounters with different multiplicities. Becoming-numb left teachers seeking repression of their multiplicities within the available signs provided to them by subject desirings (i.e., curriculum policy).

In this sense, teachers in Roy's (2003) study were constantly in flux and responded by trying to control or fix these constant changes of the self. Difference was everywhere, as May (2005) observed,

> Here is a way of seeing the world: it is composed not of identities that form and reform themselves, but of swarms of difference that actualise themselves into specific forms of identity. Those swarms are not outside the world; they are not transcendent creators. They are of the world, as material as the identities formed from them. And they continue to exist even within the identities they form, not as identities but as difference. From their place within identities, these swarms of difference assure that the future will be open to novelty, to new identities and new relationships among them. (p. 114)

Roy (2003) noted that teachers suppressed difference by developing acceptable or preferred identities (i.e., conformity). In Roy's (2003) research, teacher-beings were created through the readily available "despotic signifiers"

repeated in pedagogy, curricula, and policy (p. 12). These 'truths' determined how teachers understood their becomings and provided the preferable way to articulate themselves within a swarm of multiplicities and the intense micropolitics of the school. What is interesting in Roy's (2003) research are the numerous teacher-becomings - indeed swarms - that were translated or actualized into particular, preferred teacher-beings over a period of time. As Roy noted, the

> ...grand schemes of reform and change are rapidly taken over by territorializing forces, but an imperceptible rupture remains the hidden, unnoticed fault line that can allow what Britzman and Dippo (2000) have called "awful thoughts" or dissident movements to surface. ...What this signifies is that the grand-scale reforms and large structural initiatives [policy], although they may look impressive, are less important from the point of view of real change than the minor movements of disorientation and dissidence at the micropolitical level.

Arguably, the work of a controlled becoming is extremely complex and the risks of a schisis very real. But even so, Roy (2003) noted that teachers were not prepared for the work and practices of becoming. Instead, teachers reterritorialized their becomings within the despotic signifiers that maintained particular arrangements of the school and of teachers themselves. Difference in the multiplicities produced by curriculum policy, then, was feared. Teachers in Roy's research repressed these multiplicities in order to be the same. In other words, teachers conformed to the wishes of the curriculum policy because "awful thoughts" and dissidence at the micropolitical level were too great.

Taken together, multiplicity, rhizome, and difference are helpful ideas that assist a discussion about teacher-becomings rather than perpetuating a discussion about what teachers ought to be. It might be the case that teachers overcome repetitive (and repressive) forms of identity - for instance, "ineffective" - to explore a creative process of becoming and transformation. To my mind, this sounds a lot like what education could be - an experiment in difference rather than an adherence to the same. I suppose this is what distinguishes education from training, or worse, indoctrination. Nevertheless, teachers in Roy's (2003) study wrote themselves as particular beings through the available semiotic systems and subject desirings within their immediate work. This is certainly some of the power of curriculum policy. In the next section, I examine the final plateau of assemblage in relation to teacher-being and teacher-becoming.

FOURTH PLATEAU: ASSEMBLAGE

> *…the only assemblages are machinic assemblages of desire and collective assemblages of enunciation.*
>
> – Deleuze and Guattari, 1987, p. 22

The idea of *assemblage* is central to understanding teacher-becomings. In its most straightforward sense, assemblage denotes the arranging and fitting together of multiplicities during becoming. Earlier, I illustrated the idea of *nial-a-pend-de-quacy-in* as one way to understand this assemblage. In a more elaborate sense, assemblage is the fitting together or arranging of multiplicities with semiotic elements (i.e., signs) in the production of subjectivity (Stivale, 1998). Assemblage, then, denotes a process of teacher-becomings that is not entirely "within the self" but is produced within different registers and signs of curriculum policy. This is what Deleuze and Guattari mean by a collective assemblage of enunciation. Collective assemblages of enunciation are semiotic systems that express, refer, denote, connote, allude, or otherwise signify machinic assemblages; and these assemblages often signify the semiotic system itself (Deleuze and Guattari, 1987, p. 504). Assemblage also denotes a process of teacher-becomings that are multiplicitious and different, and developed in a rhizomatic fashion (i.e., not linear and not arborescent or rooted like in many conceptions of being).

For the purposes of this chapter, I have used curriculum policy as the key system of semiotic desires that write teachers. Roy (2003) discussed these systems as "despotic" (p. 12) and Honan (2004) described curriculum policy as "managerial" (p. 267). Semiotic systems are ways to develop meaning, and are involved with discourses, words, actions, thoughts, and practices. Of course, I have paid close attention to some of the meanings associated with 'best practices'. Assemblages, then, are imbued with semiotics: understanding, learning, meaning-making, interpretation, performance, coding, decoding, and over-coding of different signs. In the final section of this chapter, I will discuss how teachers sense or 'read' some of the signs with the help of Masny and Cole (2009). As such, teacher-becomings must be understood as both assemblages of desire and collective assemblages of enunciation. More importantly, teacher-becomings are assembled through the desires, signs, curricula, policies, and enunciations of others and do not stand apart from these heterogeneous elements.

In my own research, I noted how teachers developed semiotic systems in response to accountability policy that sought to determine ineffective teachers, much like the semiotic systems found in Honan (2004). And, like Honan (2004), teachers in my study wrestled with difference in the multiplicity of *nial-a-pend-de-quacy-in* when accountability policy sought specific curricular performances from teachers. In other words, accountability policy sought specific test scores from teachers and this particular semiotic system produced swarms of difference for teachers.

Interestingly, teachers created curricular fabrications to respond to the accountability policy that was used to control them (Webb, 2009). Teachers knew that performances represented their professional status and therefore could be used as political capital to shape evaluations of their practice. In my work, I called these performances "fabrications" and teachers mutated curriculum into fabrications for viewing and circulated images of these fabrications into the

semiotic system of the school. For instance, a teacher in my study described how he fabricated portfolios to manage his principal's impressions of him as a teacher.

> I keep portfolios of the kids' work and I assess quite frequently and so the principal assumes that I'm a good teacher. She's popped into my classroom [unannounced] and asked me 'how are you going to teach this-and-this' and 'how are you going to assess it.' Kind of this bullshit thing we do. And you know, I'm prepared now. I show her the portfolios. Mind you, I don't have to show *what's in* the portfolio – just the idea that I have a portfolio [indicates to her that] I'm on the ball. I don't take out the [evidence] to show, for instance 'here are the writing pieces and here's evidence for reading and math.' No, just the idea that I've got the portfolio and it looks official – it's got the kid's name on it, it's got my name on and it's got the principal's name on it. She assumes that I'm on top of things. She said to me one time, 'Well good, I don't have to worry about you.'

Portfolios were assembled as a heuristic to explain student performances *and* as a particular sign of being a 'good' teacher in the school. Another teacher discussed how she circulated signs into the prevailing semiotic system of the school that determined what a good teacher was. She stated,

> Teachers use 'walking in the hallways' to make judgments about other teachers. As a new teacher, I was much more concerned about it than I am now [six years later] because I was concerned about what other teachers would think of me by how my kids walked in the hallway. I'm not nearly as concerned about that anymore, although I believe they need to walk quietly in the hallway because they are going to disturb other classes – not so much what other teachers think [about my teaching]. I wouldn't argue that walking in a straight line is quality teaching. It's just a kind of teaching. It's a kind of quiet teaching. Just because there is noise going on in a classroom doesn't mean its chaos.

As I noted earlier, teacher-becomings are assembled through the desires and enunciations of others and do not stand apart from these heterogeneous elements. What this means is that teachers certainly developed signs to circulate within established semiotic systems of the school, but only in relation to the semiotic system already in place. Difference was not an option. I guess I'm overly partial, but wouldn't it be great to see teachers and students singing and dancing in hallways? Nevertheless, portfolios and walking students down hallways were assembled in relation to an accountability policy that sought these very specific kinds of performances.

More importantly, however, the accountability policy assembled teachers-becomings. Much like Roy (2003), my work indicated that teachers sought a fixed being rather than explore the multiplicities produced through curriculum policy. The most significant evidence supporting this claim was the fact that

teachers maintained signs for their colleagues to monitor. Accountability policy created a semiotic systems wherein teachers produced objects, practices, and ideas that communicated ideas within the school. These practices and objects (i.e., walking and portfolios) became assembled onto the external accountability system. But what about teacher-becomings? Unfortunately, teachers mentioned that trying so hard to be the same left them exhausted. Well, actually, teachers stated that becoming within a despotic, managerial, and accountable system of signs made them feel "paralyzed," "ineffectual," "wallowing," and "something of a drain." For instance, a teacher in my research noted that,

> My personal goal of trying to help all kids become excited lifelong learners can't be fulfilled for many different reasons...There are days that you go home and you think, "Why am I doing this? Should I be doing this?" It's becoming something of a drain.

And another,

> the more they [administrators] emphasize something that I don't believe in, the more I become paralyzed and ineffectual. I'm teaching something I don't agree with. I'm being forced to teach in a certain way [a fabrication]. I try to do the other one [authentic teaching] in a way that's not drawing the attention of the administrators too much, but it becomes paralyzing. You find yourself wallowing instead of teaching.

The assemblage of *nial-a-pend-de-quacy-in* is a powerful way to understand teacher-becomings. However, *nial-a-pend-de-quacy-in* only hints at the kinds of signs that are produced, that is, the collective assemblage of enunciations. Assemblage assists understanding teacher-becomings not just as psychological effects, but as powerful combinations of the self expressing itself in particular ways and for particular reasons (i.e., to conform, to avoid, to resist, etc.). *Nial-a-pend-de-quacy-in* is also a complex set of signs that is produced within complex semiotic systems of the school and in relation to the complex subject desirings of curriculum policy. I have provided a few examples of the kinds of signs that are circulated in schools, but I imagine there are many more signs that teachers develop in schools to express the multiplicitious difference in their work and with themselves. Next, I end by discussing how Multiple Literacies Theory (MLT) assists understanding how teacher-becomings can be transformative at micropolitical levels. MLT can be a very valuable asset for teachers to understand the multiplicitious difference in their work and as a way to sense the many different subject desirings of themselves.

CONCLUSION: TEACHER-BECOMINGS AND BECOMING TEACHERS

> *Fail to know what everyone else knows and you have a chance to create something interesting.*
>
> – Todd May (2005), p. 149

On one hand, it is understandable that the multiplicities, rhizomes, differences, and assemblages of becoming *nial-a-pend-de-quacy-in* are discounted and ignored. As I noted earlier, there is not a well developed language in teacher preparation and curriculum policy to understand teacher-becomings. Of course, this has much to do with the overwhelming subject desirings invested in and around teachers' bodies. On the other hand, the multiplicity of *nial-a-pend-de-quacy-in* is also ignored due to the preferred trajectory of understanding the teacher with ideas of being rather than becoming. In fact, and unfortunately, *nial-a-pend-de-quacy-in* is too often portrayed as teachers not knowing what they are doing rather than as the important signification of surviving an overwhelming set of despotic, managerial, and accountable signs. And, any sign that is produced from *nial-a-pend-de-quacy-in* seems to be immediately castigated as "cheating" rather than as surviving. Teachers are all-too-often characterized as unaccountable in so many ways. In the end, the multiplicity of *nial-a-pend-de-quacy-in* is further assembled with feelings of guilt within the prescriptions of producing "effective" teacher-beings.

Fortunately, Multiple Literacies Theory (MLT) assists understanding how teaching and learning can be transformative at micropolitical levels (Masny, 2006; Masny and Cole, 2009; Masny, 2011). MLT provides ways to 'read the self' when becoming – cartographies in self semiotics. When we feel, encounter, or 'read' an emotion, we have entered a space of becoming. It will take us somewhere (it has direction and speed) even if we don't know where it will take us at the moment. Thus, Deleuze and Guattari (1987) note that becomings are haptic in the sense of perceptual but likely not optic or tactile (p. 479). MLT assists teachers 'read' the semiotic systems that are often handed to them. MLT provides an alternative to reading policy for meaning – MLT provides teachers opportunities to 'read' policy in relation to becoming and embrace becoming rather than avoiding it. MLT highlights teacher-becomings as affective lines – multiplicities – assembled into a semiotic rhizome, and thus, one possibility of teacher-becomings is that they may become powerful tools for educators in ways that assist in the accomplishment of their work rather than as, and only as, standardized prescriptions developed to regulate educational difference.

MLT insists on a creative approach to teacher-becomings, whereas "local knowledge" is used "to produce moments of inspiration, experimentation, critique and art" (p. 5). Semiotic assemblages of the body, then, are the creative intermezzos – the in-betweens – of teachers and curriculum policy and not independent ontologies vying for "teachers' souls" in the production of teacher-beings (Ball, 2003). Rather, MLT assists teachers embrace the affects of "otherness, strangeness and alienation" that accompanies teacher-becomings (p. 5). Admittedly, this is hard work. It's always easier to follow a recipe than create one. In this spirit, I've always enjoyed the following quote by Michel Foucault, even if its use of a gendered object is not representative of the large number of women teaching in schools. Foucault (1994) stated,

> Modern man…is not the man who goes off to discover himself, his secrets and his hidden truth; he is the man who tries to invent himself. This modernity does not "liberate man in his own being"; it compels him to face the task of producing himself. (p. 312)

Similarly, Conley (2005) noted that "the struggle for subjectivity is a battle to win the right to have access to difference, variation, and metamorphosis" (p. 172).

To end, I think Conley (2005) is correct that teacher-becomings are a battle. I imagine this isn't a particularly pleasant way to frame this idea for those teaching or working with teachers. Nevertheless, we may indeed have to face the task of producing ourselves but do so in very different ways and in relation to a range of unequal "despotic signs". In this sense, MLT can assist teacher-becomings resist preordained end points of their bodies through a reinterpretation of the concept of power. In MLT, power is understood to operate at the micro-levels of the body, rather than operate just at the macro-levels of government and articulated through curriculum policy. In this sense, power is not used to hold teachers "accountable" to particular kinds of being. Instead, power is linked to different kinds of transformations endemic to the processes of teaching and education. Of course, it's not always clear how and what will be produced through becomings. However, I'm inclined to think like Todd May in that my not-knowing is likely to produce something interesting. I would at least like the opportunity to not know how to deal with my becomings. And, given what policy and curriculum have produced for us so far, I think education and teaching could use a lot more of not-knowing today.

NOTES

[1] This paragraph is approximated from my previous (2009), pages 125-126. In what follows, I pick up where I left off discussing teachers' subjectivities but now with the explicit frame of understanding ways to 'read' these becomings through Multiple Literacies Theory (Masny and Cole, 2009).

[2] While my examples privilege curriculum policy texts, I do not mean to exclude other pedagogical semiotics, like events, actions, and thoughts. My selection of curriculum policy is designed to amplify the subject desirings and to amplify the ways teachers 'author' themselves as desiring subjects. In this sense, curriculum and policy also warrant a review that doesn't characterize them as entirely pernicious. However, that is beyond the scope and intent of this chapter.

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ENTRY: DETERRITORIALIZING BOUNDARIES

"This is how it should be done: Lodge yourself on a stratum, experiment with the opportunities it offers, find an advantageous place on it, find potential movements of deterritorialization, possible lines of flight, experience them, produce flow conjunctions here and there, try out continuums of intensities segment by segment, have a small plot of new land at all times." (Deleuze & Guattari, 1980/1987, p.161).

GRAHAM LIVESEY

14. SHIFTING BOUNDARIES IN ENVIRONMENTS AND ORGANIZATIONS

INTRODUCTION

> On one side, we have the rigid segmentarity of the Roman Empire, with its center of resonance and periphery, its State, its *pax romana*, its geometry, its camps, its *limes* (boundary lines). Then, on the horizon, there is an entirely different kind of line, the line of the nomads who come in off the steppes, venture a fluid and active escape, sow deterritorialization everywhere, launch flows whose quanta heat up and are swept along by a Stateless war machine. The migrant barbarians are indeed between the two: they come and go, cross and recross frontiers, pillage and ransom, but also integrate and reterritorialize. (Deleuze and Guattari, 1987, p. 222)

In the above quotation Gilles Deleuze and Félix Guattari describe the rigid and imposed boundary systems of state run urban and agricultural societies (striated space), and the fluid and shifting boundary systems of nomadic cultures focused on the journey (smooth space); these represent ends of a continuous spectrum. In the middle is the hybrid figure of the barbarian, an agent who comfortably fits into both striated and smooth space conditions. Smooth space emphasizes the journey, the line of movement through shifting territorialities, whereas striated space represents systems that delineate the earth through the creation of infrastructure and boundary systems. These differing approaches to delimiting the world coincide with differing modes of survival, both in the structuring of human societies, in organizing land, and in the construction of shelter. There is a close functional and ecological relationship between the structure of human organizations and the structure of spatial territorial systems. This can involve the blurring of spatial and organizational boundaries, leading to a more effective ecological or organizational alignment, or can lead towards the hardening of boundaries, or even structural collapse.

Deleuze and Guattari's (1987) concepts of smooth and striated space, in which they examine the differences between nomadic and state (urban-agricultural) territorial systems, provide a basis for examining the operation of boundary systems, as does their concept of assemblage with its territorial function. Against the highly bounded worlds of urban-agricultural societies, they advocate for the shifting boundary systems employed by nomadic cultures. In the oscillation between striated and smooth space, the functioning of boundaries

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 181–192.

becomes a vital issue. Here we will examine the boundary systems of human modified environments, and the territorial and organizational aspects of these systems, and, by implication, the way environments have been constructed, and the way that organizations operate; this will culminate with the proposition that a movement towards the boundaryless is desirable.

THE FUNCTIONING OF BOUNDARY SYSTEMS

Boundaries typically are narrowly defined linear elements in a landscape or organizational system. Boundaries have a discernible thickness, actually or virtually, however, regardless of how wide a boundary is it is situated between two (or more) adjoining entities: boundaries define a figure against a field, subdivide systems, separate inside from outside, and delineate organizational and spatial entities. Boundaries establish directionalities and territorialities, and can generate competition and conflict. A boundary also creates a zone or borderland, typically a narrow territoriality that blends the characteristics of the adjacent entities. Boundary systems imply that there are territories, and territories are typically defined by centres of power. A system of boundaries (defining nations, ecosystems, organizational structures, etc.) is a continuously reorganizing network defining territories, patches, or entities. As relationships between territories in the system change, so does the overall balance in the system. In some places the boundaries are resistant to exchange, while in others they are on the verge of erasure. Flows of economic, social, political, and ecological factors are continuously being redirected.

If we draw from Deleuze and Guattari's (1987) assemblage theory, and from the complementary discipline of landscape ecology, it can be suggested that as an assemblage, or as a productive aspect of a territory or organization, the boundary functions as a habitat, filter, conduit, source, and sink (Forman, 1995). Ideally, it functions as all of these. The boundary is the limit, or the edge, boundaries create a zone that is either open or closed to cross movements of flows. Boundaries are also corridors of movement, and add and subtract elements from a system. There are particular species and people associated with borders. The functioning of a boundary depends on the adjacent structures, territories, the properties of the boundary, and the type of flows that are moving across or along it, this in turn defines the habitat and what can occupy it. Humans create a multitude of boundary, or edge, conditions through urban and rural settlement patterns. For example, when a boundary is moving outwards, then it is considered a frontier. Those frontier people living on this edge act as an "avant-garde," or a force of expansion, or colonization.

The notion that a boundary is a habitat underscores the territorial functions of boundaries. As a habitat, boundary conditions can support species that are similar to those inhabiting the surrounding areas (patches), but in differing concentrations. This suggests, as noted above, that the boundary is a zone that can support a variety of organisms. Organisms that can occupy the boundary,

while belonging to the adjacent territory, can also have distinct characteristics. In some cases the boundary habitat supports those not found elsewhere in the system, there are a wide range of boundary dwellers who act as part of larger territories or on their own. These marginal species or members of a society, have a special role to play in systems. Boundary dwellers include the "edgewalker" who appears in some aboriginal cultures (Neal, 2006), and more contemporary figures such as custom agents, marketers, lobbyists, sales people, envoys, mediators, and spies. Often, these edge species are go-betweens, protectors, criminals, outcasts, drop-outs, refugees, monsters, subversives, or those organisms, such as weeds, that have adapted to the boundary condition and exist best in the in-between. Despite the apparent thinness of boundary territories, these are vital habitats, often playing an essential role in the overall functioning of a system.

Boundaries, like membranes, operate with varying degrees of permeability, or porosity: some materials and organisms may cross, and others may be blocked, or partially blocked, depending on many factors (Forman, 1995). There are elements in the structure of any boundary (or membrane) that can inhibit, facilitate, channel, deflect, or block movements and flows, these can include changes in composition, ruptures, or accumulations of foreign materials (Forman, 1995). Further, while a boundary may block one kind of flow, it may be completely permeable to numerous other flows (Wiens, Crawford & Gosz, 1985). Boundaries, play a role in defining the limits of functional territories, and in regulating the flows of materials, organisms, energy, information, and the like, much of which depends on either "mass flows" or "locomotion" (Forman, 1995). Mass flows refer to movement along an energy gradient, while locomotion involves the transportation of material by animals and vehicles. The porosity of a boundary depends on the composition of the boundary, and what is trying to cross, or pass through the boundary; as a filter a boundary can be defined as "any device or arrangement which removes or separates out constituents" ("Boundary," 2007). There are holes in boundaries, either constructed or inherent, that allow for the passage of materials and organisms. In constructed environments these include gates, doors, windows, checkpoints, and the like, all of which modulate flows and movements. The filtering effect of a boundary pertains to the structure of the boundary and the entity supporting it; there are also active agents that can participate in the filtering of various flows across a boundary. The filtering function is the primary role of boundary systems, this establishes how adjacent territories and organizations interact.

While a boundary as a filter involves flows that cross, or attempt to cross, a boundary can also function as a channel along its length, often becoming part of a corridor or network system. This notion of boundaries as channels of movement and complex interactive networks, invokes Deleuze and Guattari's (1987) concept of the "rhizome." A network can have rhizomatic properties depending on its structure, and a network can be either independent of or integrated with surrounding territories. That which flows along a boundary,

usually as part of a network, plays a particular function in a larger territorial system. As Forman and Moore (1992) note, boundaries function just like corridors, they write: “Corridors serve as conduits for movement along the corridors, filters of movement across them, sources of effects on their surroundings, sinks for objects in the matrix, and habitats for edge species” (p. 247). The only difference between boundaries and corridors, is that the filtering function is primary in boundary systems, whereas corridors function more actively as conduits, or channels, for the movement of materials, information, organisms, energy, and the like. In urban environments, where transportation systems act as a primary element in defining the structure and functioning of cities, they act primarily as networked corridor systems, but they also rigidly subdivide the environment, acting often as impenetrable boundaries to many types of flow. In this case the intersections, or nodes, are also vital parts of the system, with a distinctive intensity. As channels of movement, boundaries play a vital role in the functioning of adjacent territories, often allowing organisms a temporary refuge, or protected path, in general movement patterns.

The final two functions of boundaries, are the concepts of source and sink; a source gives off things and a sink absorbs things (Forman and Gordon, 1986). As a source, a boundary is the location from where something emanates, originates, or flows. This reflects the idea, that the edge or boundary of a territory or organization impacts on both the entire system, but also directly on the adjacent territories directly. Within the structure of a cell in an organism, all elements have a role to play, the same applies to territories and organizations. The edge, or boundary is the zone that interacts with other adjacent structures, it is the point of resistance, conflict, or exchange. If enough accumulates in the boundary zone, then it will eventually give off its own flows, it may become a new territory with its own defined boundaries. This phenomenon is like the processes of deterritorialization and reterritorialization that Deleuze and Guattari describe as being part of an assemblage. According to Forman and Moore (1992), the sink effect “refers to the absorption or accumulation of objects by the boundary” (p. 247). In other words, materials, energy, organisms, and /or information can be purposefully or inadvertently trapped, or stored, in a boundary condition. In physics, a sink is “a place where, or a process by which, energy or some specific component leaves a system” (“Sink,” 2007). Flows that are do not pass through or are not reflected by a boundary, can be blocked, and hence can accumulate as a sink condition. These can become a significant factor in the composition of a boundary, resulting in its modification, or transformation. In extreme cases these can negate the boundary altogether. As a sink, however, they can also participate in the reorganization of a system. A sink might also provide a means for ameliorating situations elsewhere in a system. When the component that has been removed from the system reenters the system, then the sink switches to a source. As a distinct element in a landscape, or territorial system, boundaries will

inevitably both add and subtract components from a larger system. This may be the temporary storage, and release, of solar energy, or the holding of migrants at a border station. The total resources in an environment determine the amount of boundary activity and/or conflict (Aldrich & Herker, 1977).

The structure of a boundary determines how it functions, as do the adjacent territories, and various flows across and within a boundary. Further, these many factors (including various "disturbance" factors) can cause the destabilization of a boundary. Like other landscape and organizational elements, boundaries can be formed suddenly or slowly, they can migrate or shift, and they can be breached or erased. Boundaries define territories and organizations, and the type and degree of interaction between entities. Boundaries regulate, or modulate, the flows and exchanges (materials, energy, organisms, or information) in a landscape or between organizations (Cadenasso & Pickett, 2007). According to Cadenasso and Pickett, the amount of flow and exchange depends on the type of exchange, the composition of the territories, and the structure of the boundary. Boundaries operate as filter mechanisms regulating flows, as part of a boundary network, as habitats supporting organisms, and as a vital source and/or sink for elements in the larger system. In a dynamically balanced system, such as an eco-system or bureaucracy, boundaries play a vital role, and perform all five functions. Architects have tended to seek stable boundary systems, most notably in the construction of walls that act as boundaries between inside and outside, and between functions. And yet, even in the most rigid of architectural orders there always remains a certain instability in boundary systems. Within environments created by humans (both urban and agricultural), there exists a plethora of boundaries, both on the surface of the earth and in human organizations. These create highly rigid and striated territories that typically are inefficient and highly disrupted. To introduce smoother flows, or to move to a smooth space condition, requires they operationalizing of territorial and boundary systems in new ways. Within the dynamics of these systems, there are many opportunities for modification, to allow for more effective flows.

BOUNDARIES IN TERRITORIES AND ORGANIZATIONS

The paired Greek gods Hestia and Hermes represent a balance between centre and edge, stasis and movement. The French historian Jean-Pierre Vernant has described their opposing qualities in terms of gender, space, and function. Hestia's function involves "giving domestic space its center, its permanence, and its boundaries, Hestia must root the human dwelling place in the ground" (Verant, 2006, p. 194). Hestia is also the goddess of the hearth, and her function operates at the level of the house and the city; from a center (the hearth) bounded space emanates. She is countered by the god Hermes, who is a messenger, traveler, and has particular qualities associated with external space and boundaries, Vernant writes:

> Nothing about him [Hermes] is settled, stable, permanent, restricted, or definite. He represents, in space and in the human world, movement and flow, mutation and transition, contact among foreign elements. In the house, his place is at the door, protecting the threshold, repelling thieves because he is himself the thief...for whom no lock, no barricade, no frontier exists. He is the wall piercer....he also stands at the gateways of towns, on state boundaries, at crossroads.... (p. 159)

These two gods, who capture the spatial structures of the Greek city state, also reflect the traditional gendering of space in which women control the domestic (internal) realm and men the external; this division of space and function is similar to that found in nomadic hunter-gatherer cultures. Hermes is the "wall piercer," the one who cannot be enclosed, the one who crosses boundaries. While these two mythical figures exist as a dialectical duo, and capture both striated (Hestia) and smooth space (Hermes), it is the elusive figure of Hermes that is to be admired here. Hestia is consistent with the tradition of urban settlement, and the establishment of the camp, Hermes is the restless thief (hunter) who dwells at the boundary, and also transgresses boundaries with ease; he is akin to the barbarian and the nomad.

The rigid, and often impermeable boundaries, created by the settlement patterns of urban-agricultural societies tend to static, providing for the functionalities described above. In nomadic cultures, which seek different forms of stability from urban-agricultural societies, there are seasonal patterns and boundaries at play, the journey tends to be primary; as Deleuze and Guattari (1987) note nomad space "is localized and not delimited." In nomadic hunter-gatherer cultures, boundaries would have been fluid and shifting as groups moved through a landscape, continuously adjusting to topography, sources of food, the seasons, the supernatural, and competing groups. The anthropologist Hugh Brody (2005) writes eloquently about the concept of boundary in such cultures:

> The knowledge that marks hunter-gatherers' relationship to their territories is an intricate mixture of the real and the supernatural. There are facts about things and facts about spirits. And the wall between these two kinds of entity is not solid. People can cross from the natural to the supernatural; spirits can move into the human domain. Just as this divide between physical and metaphysical is permeable, so also is the divide between humans and animals. In this way, the boundaries around the human world are porous. This porosity is the way of seeing and understanding the world that underlies shamanism. (p. 244–245)

The shifting and highly porous boundaries found in nomadic cultures are reminiscent of Deleuze and Guattari's (1987) description of the "borderline" of a pack of animals. As a pack, or swarm, of animals moves the shape of the pack and the relative position of individuals within the pack continuously

changes, changing the outline of the pack. Further, Deleuze and Guattari suggest that the figures such as the leader of a pack or the sorcerer can occupy the borderline or fringe condition. The nomadic, or smooth space, definition of boundaries tends to be based on organizational and shamanic systems, rather than constructed and territorial systems. This underscores the emphasis placed on becoming in the work of Deleuze and Guattari. Aldrich (1979) defines organizations as "boundary-maintaining systems of human interaction" (p. 219). Organizations are often preoccupied with determining membership, or who belongs and who does not, this is managed by systems of authority and/or governance; this in turn leads to the control of behavior (Aldrich, 1979). The management of organizational boundaries, which are often shifting, addresses cross border movements (entry and exit), and interactions with internal and external agencies. As Aldrich notes: "Control over exit is also a defining characteristic of an organization's authority. Authorities have the power to sanction deviants or remove undesirables, and the ultimate sanction they wield is the expulsion from the organization" (p. 224). This suggests that those who are deemed not to belong can be banished, or exiled, or placed in marginal situations such as detention centers. The control of criminal behavior is a major role of the state, much of criminal activity attempts to cross various kinds of boundaries illegally.

Organizations control their boundaries to differing degrees, depending on the function and structure of the organization. When organizations face internal and external challenges or conflicts they can construct boundaries and impose strict rules, particularly on members, or they can expand and loosen boundary structures. Attempts to control dissenting factors can be done with coercion, by appealing to loyalty, or by absorption, co-option, or rejection (Aldrich, 1979). Organizations that restrict movement across boundaries tend to follow hierarchical control models, as opposed to those that allow for free movement. Every organization or territory has agents who take on the role of crossing or spanning boundaries. These agents ensure that the entity is interconnected to other entities, this is often necessary for survival. Boundary personnel gather information and materials, and also represent the organization to others. They control or filter the flows in and out of an organization or territory, can create lateral structures, occupy the boundaries of the entity, and store and give off information as required. As "gatekeepers" these personnel or species can hold more power in the overall organization or territory than many of those occupying more central positions; they are also more open to corruption (Aldrich, 1979). Therefore, we can suggest that there are various agents involved in the destabilization, transgression, or erasure of boundaries. These include figures who patrol boundaries and yet are impervious to them, and also invasive plant and animal species.

The qualities of boundaries, both in terms of their relationship to entities and as entities themselves, are a vital aspect of the functioning of an organization.

Like all spatial conditions, these are in a constant state of change as forces and flows across and along the boundary vary. The edge of a territory or organization, or the space influenced by a boundary, denotes a zone of influence. This is true of both the boundary as a habitat condition, but also for political, geographical, and organizational boundaries. State systems, corporations, and other societal organizations are governed by codes, authority figures, structural dynamics, and jurisdiction, these determine to a large extent the functioning of boundaries. Writing about jurisdiction and boundaries, Manuel DeLanda (2006) states: "Any process that calls into question the extent of legitimate authority, such as a clash between organizations with overlapping jurisdictions, can destabilize their boundaries, and if the conflict is not resolved, compromise their identity" (p. 74). As DeLanda also points out, conflict can result in the sharpening of boundaries, or differences between insiders and outsiders (eg. citizens versus foreigners) (DeLanda, 2006). This occurs in urban communities, cultural organizations, and religious groups where certain narratives are used to maintain and extend boundaries. Border skirmishes occur when one group wants to test the boundaries of another group. Various "practices of inclusion and exclusion" define the boundaries of groups, which in turn lead to enforcement systems (boundary definition) that include codes, policing systems, territorial marking, and the like (DeLanda, 2006).

Organizations and agencies, particularly bureaucratic ones, are continuously being reorganized, usually to address changing circumstances. As well, new agencies emerge, and old ones disappear, or are collapsed into other units; the boundaries of these entities are continuously changing. Like geographical territories, organizational boundaries abut or overlap one another. As these are organizations, boundaries can be very fluid and are constantly shifting to adjust for new markets, competition, priorities, and the like. Organizations can be subject to the same territorial challenges that operate between adjoining states, jurisdictional ambiguities are a common problem, often resulting in inefficiency and conflict. Organizations are typically charged with functional, and societal, responsibilities, innovation and creativity are not necessarily factors. Agencies are subject to conflicting pressures from all sides, and often struggle to coordinate activities with other organizations; for example, this occurs within the departmental structure of a large corporation or institution (FitzSimmons & Gottlieb, 1996). Bureaucracies and administrative systems tend to be clumsy and inefficient, often responding to the force with the most power (often economic). Governmental agencies are often caught between citizens, and large economic forces (corporations); regulatory regimes are susceptible to being out-dated and out-moded, unable to address changing circumstances.

TOWARDS A BOUNDARYLESS CONDITION

In management theory, the boundaries of organizations are also examined. Some of the most important players in the functioning of organizations (bureaucracies,

corporations, etc.) are the boundary personnel (purchasing, marketing, shipping, receiving, etc.), or those who play a vital role in interfacing and providing a linkage to other organizations; these are akin to the barbarian agents that Deleuze and Guattari describe in the opening quote. Writing about boundary personnel in contemporary business, Aldrich and Herker (1977) state:

> Innovation and structural change are often alleged to result from information brought into the organization by boundary personnel. All complex organizations have a tendency to move towards an internal state of compatibility and compromise between units and individuals within the organization, with a resultant isolation from external influences. This trend can jeopardize the effectiveness and perhaps the survival of the organization, *unless* the organization is effectively linked to the environment through active boundary personnel. (p. 219)

This reflects the inherent tendency in many organizations to look from a centre outwards, firstly to the boundaries of the organization and then to external agencies and territorialities. Without, an effective two-way mechanism in play, and an ability to understand the broad landscape, an organization can become isolated and obsolete. The diligent protection of boundary systems normally found in contemporary organizations, provides coherence, but is a movement towards systems with softer boundaries, shifting boundaries, or no boundaries at all, a way to a more effective, and productive, management of territories, cities, bureaucracies, and organizations?

The stronger the boundaries are in a system, the less integration between bounded entities. Boundary systems tend to be penetrated by holes that create leaks and linkages, however, numerous elements are used to modulate boundary systems (Mitchell, 2010). Nick Marshall (2003) presents alternative models for organizations and their approaches to boundary management, he opposes these to classical models that support clearly defined boundaries that provided containment. In discussing the notion of boundaries as permeable membranes, he writes:

> Rather than being closed off and self-sufficient entities, organizations are envisaged as open systems which can not be insulated form the outside world because their boundaries are necessarily and continuously crossed by inputs and outputs, the character of which impose constraints and contingencies relative to the technological and task environments of the organization. In this sense, the outward-facing boundaries of organization are considered less like the solid walls of a container and more like a permeable membrane or zone of interaction. (p. 59)

Marshall (2003) examines socio-cultural construction of boundaries, and the move towards boundaryless, or highly networked, systems. In a world of continuously changing boundaries, he suggests that "alternative and overlapping boundaries are produced, reproduced, enforced, merged, or transcended" (p. 71).

In their analysis of the boundaryless organization, Ashkenas, Ulrich, Jick, and Kerr (2002) argue that while you cannot completely eliminate all boundaries in organizations, effective organizations can make vertical, horizontal, external, and geographic boundaries much more fluid and permeable. This is necessary for organizations to have speed, flexibility, integration, and innovation (Ashkenas *et al.,* 2002). Post World War II organizations (and territorial systems) have tended to proliferate division, through the creation of numerous departments, or internal boundaries; this was led by increasing specialization, but could result in problems such as slow organizational operations, protectionism (turf disputes), and lack of integration (Ashkenas *et al.,* 2002). However, as Ashkenas *et al.* state,

> ...by making specific external boundaries more permeable, you can dramatically increase speed, flexibility, integration, and innovation. In addition, the more that strategy, technology, management practices, resources, and values flow back and forth naturally, the less necessity there is for crisis-generated breaches of the outer wall. By concentrating on the *value chain* and the process by which organizations link together to create products and services that have more value combined than separate, you can find a reasonable level of permeability. (p. 185)

In developing organizations that are boundaryless, or have introduced permeability in all boundary situations, it is necessary to work with complexity, ambiguity, continually changing circumstances, and new modes of functioning; older models of corporate control have become obsolete (Ashkenas *et al.,* 2002). Successful contemporary organizations are nimble, and able to work with permeable boundaries that are constantly reorganizing, they are not based on top down hierarchical structures with numerous internal divisions. This conception of the boundaryless organization is very reminiscent of the organization of nomadic cultures and animal packs, as conceptualized by Deleuze and Guattari.

As Brody (2005) notes, for nomadic cultures boundaries are fluid and unstable, as well as porous; boundaries are not static, they belong to operational systems. He writes:

> Being able to move with accuracy on the ground appears to require a parallel freedom of movement of thought—an absence of constraint, a welcoming of many states of mind, from humour to trancing to drunkenness. A fluidity of boundaries, a porousness of divisions, can be seen as useful and normal. (p. 254)

Boundaries may be physical and appear arbitrary, as in the case of some national borders, or they may be relatively intangible, such as limits of personal space. Many boundaries are cultural constructs than can be inadvertent and often invisible, including the borders between nations. Territories are defined on many levels, and operate on different scales; they overlap, nest, conquer, eliminate,

bond, adjoin, invade, etc. Boundaries in urban environments are being continuously made and remade, on varying time frames. Those that appear important at one point in time, can be eliminated, or erased, or softened, or strengthened. One type of flow, such as information, depends on various network and surface systems to function. Information systems will have boundary constructs that include barriers, sources, conduits, and sinks. Another flow type, passing through and across the same field, will have a different system of boundaries.

Some materials or species will encounter a boundary, and pass directly through it, others will become trapped in the boundary for some length of time (habitat or sink), while others will use the boundary as a secretive movement system. Those using it as a conduit may be using it as form of protection. All of these conditions employ transitional devices, or intermodal exchanges. It is evident that boundaries are an active part of ecological and organizational systems, and that boundaries function in complex ways. Recognizing that boundaries are porous and unstable can make entities function better. Deleuze and Guattari note that systems oscillate between striated and smooth space, so that it is possible to conclude, as in the analysis of the boundaryless organization, that it is not possible to achieve a fully boundaryless or bounded condition. In territorial and organization structures the overall functioning of a system is more effective if boundaries have permeability and flexibility. Boundaries, as they filter flows, support various boundary dwellers, and remove and add elements, are an essential aspect of systems; boundaries act in the deterritorialization and reterritorialization of human ecologies.

> It is thus that the frontiers which for a long time were the most impenetrable slowly become transparent; the intermediary regions, the regions of passage, the doors, the interstices become new centers (Hong Kong, Singapore, the Rivieras) toward which crowds converge and from which they spread out, instructed in a new way to listen to things. (Butor, 1989, p. 101)

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CAMERON DUFF

15. LEARNING TO BE INCLUDED

INTRODUCTION

Inspiring consternation and praise in near equal measure, Deleuze (1995:143) once observed that "everything I've written is vitalistic, at least I hope it is, and amounts to a theory of signs and events". This chapter proposes a pedagogy of signs and events, grounded in Deleuze's vitalism and practised (or *lived*) according to the ethology that Deleuze derives from Spinoza. Such a pedagogy should, in turn, yield a novel ethics of the sign whereby the becomings that Deleuze (1994) regards as central to all life may be accelerated or promoted. Reflecting recent attempts to articulate a Deleuzian philosophy of education (see Semetsky, 2006), I will endeavour to express a literacy of signs and events in the course of exploring the mechanisms by which bodies learn to territorialise place, amid the processes by which places territorialise bodies. My conjecture is that a Deleuzian literacy of signs and events should help to establish an 'ethico-ethology' of place capable of explaining the becomings that transform bodies and places alike. I will then apply this conjecture to the analysis of qualitative data recently collected in Melbourne, Australia among individuals recovering from a mental illness. On the basis of this analysis, I will argue that recovery may be construed as a process of learning to manipulate the signs and events of one's 'becoming well'. Recovery is a process, an open extended event, by which the recovering body becomes sensitive to an array of signs evinced or emitted in diverse internal, intermediary and external milieus. These are the signs and events by which bodies become well. The always unfinished event of recovery links diverse human and nonhuman signs, bodies and events in the joint expression of an enhanced capacity to affect (and be affected by) other bodies and signs. One of the most important of these capacities in the context of a body's recovery from mental illness is the capacity to affect place in the expression of belonging to, or feeling included in, the socius or 'bodies-politic' (Protevi, 2009:33-42). I will close with a discussion of how this insight may inspire novel ways of understanding the role of social inclusion in promoting recovery from mental illness. First, a broader introduction to the idea of a literacy of signs and events is required.

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 193–207.

DELEUZIAN PERSPECTIVES ON EDUCATION AND LEARNING

Deleuze's promotion of a discrete literacy of signs and events has held appeal for scholars, artists and activists in a variety of disciplines, although the work of developing such a literacy has been most pronounced in literary criticism, education and performance studies (see Masny and Cole, 2009). Scholars in these fields have shared an interest in articulating a novel philosophy of education in the wake of Deleuze's differentiation of 'education', 'teaching' and 'learning' (Bogue, 2004:340-41). Eschewing 'common sense' understandings of the pedagogical exchange – the process whereby knowledge is said to be transferred in a reliably linear process between expert and novice subjects – Deleuze is rather more interested in the actual affective, intensive and material processes of *learning*. Deleuze (1994:164-6) construes learning as a rupture or shock in which a body, whether human or nonhuman, is opened up to forces of difference and becoming. Learning occurs on a line of becoming as a body is transformed or 'recomposed' in the affects, forces, percepts and concepts it may establish relations with. In this way, learning is perhaps best understood as an instance of *subjectivation* in which bodies acquire or adopt novel affects and capacities. This contention has led scholars in education, performance studies and related disciplines to elaborate what have come to be known as 'affective pedagogies' in an attempt to clarify the character of the subjectivation processes expressed in teaching and learning.

Affective pedagogies position education and learning as intensive processes of affective and material production, in which forces, sensations and intensities are transmitted between bodies in ways that transform their distinctive capacities (see Hickey-Moody, 2009). Learning, as such, needs to be reconceived as a dynamic, intensive and rhizomatic *practice* as bodies are folded into and out of discrete assemblages of signs, affects, technologies, subjects and ideas. Learning is less cognitive than affective in this sense, insofar as bodies learn as their capacities for affecting and being affected are transformed by the array of entities they encounter. Anna Hickey-Moody (2009) has developed these kinds of arguments in a series of studies of the ways discrete pedagogical modalities work to transform the materiality of bodies, signs and texts. Noting important differences in the pedagogical effects of literature, sound, and movement, and the ways each are positioned as discrete learning modalities, Hickey-Moody elaborates novel affective strategies for transforming 'bodies of learning' in varied communities of practice. Semetsky (2009:451-54) adds that such pedagogies enable or extend the various forms of "affective knowledge" by which bodies are transformed in the event of their "effective learning". Exploring the actual experience of affective/effective learning, Ronald Bogue (2004:330-34) conceives of teaching and learning as an "apprenticeship in signs", drawing from Deleuze's book on Proust to propose a model of learning based on the exposition of formal and informal signs, including non-linguistic signs such

as memories, images, gestures, recollection, desire, micro-perceptions and imagination.

Each of these thinkers takes seriously the Deleuzian contention that learning must be reconceptualised in affective, temporal and intensive terms. It follows that education can no longer be imagined as the mere realisation of innate human capacities, whereby an existing tendency or impulse finds its satisfaction in the pedagogical opportunities presented in formal educational settings. Reading and writing for example, should not be regarded as trained (or enculturated) expressions of innate human capacities for speaking and reasoning. In a series of arguments that bear a strong consonance with Foucault's notion of 'discipline', Deleuze (1994) dismisses the idea of a natural fit between education and some set of *a priori* human faculties. Education is an 'art' of government; a set of 'coding' practices in Deleuze's terms, whereby capacities are articulated within bodies in ways that regulate the affective and relational expressions individuals bodies may experience. Learning is not the same thing as education in Deleuze's view, precisely because the body's 'natural' faculties can never be posited in advance of the event of their expression. Yet Deleuze's privileging of the notion of learning over and above the conventions of education presents a series of novel problems, upending established accounts of the pedagogical exchange. If neither reason nor some innate capacity for understanding can be assumed, then how is the whole process of learning to be explained?

Deleuze's idiosyncratic response to these questions emphasises the significance of signs and events understood as conditions of 'real experience' immanent to the *process of learning*. In a celebrated observation, Deleuze (1994:139) insists that,

> Something in the world forces us to think. This something is an object not of recognition but of a fundamental encounter. What is encountered may be Socrates, a temple or a demon. It may be grasped in a range of affective tones: wonder, love, hatred, suffering. In whichever tone, its primary characteristic is that it can only be sensed.

In other words, if encounters in and with the world force us to think, then learning should be understood as the outcome of those encounters which enable a body to expand or increase the array of bodies, objects and entities it may affect and be affected by. Learning establishes a means of assigning meaning to experience by furnishing a basis for explaining how and why bodies come to affect one another in experience. *Learning is an intensive function of thinking*. Thinking, however, is radically recast in Deleuze's (1994) mature philosophy in the form of a line or 'compound of forces' that enters bodies, causing them to compose affective relations with other bodies, and so provoking a kind of intensive learning as bodies affect and are affected by one another. These affects are never recognised as such, but are only sensed. It follows that thinking is a primarily affective process in which bodies learn how to interact, relate to or

'compose themselves' with other bodies in the shock of their encounters with them. This is why Deleuze is so insistent that learning must be reconceived as an intensive process, rather than a kind of technical training. Learning is a function not of recognition, but of sense. One does not recognise ideas or problems as true without first *sensing this truth*; without first feeling the force of this truth experienced as a disruptive shock that carries the body beyond itself into novelty, into the very creativity of life. Bodies learn in and through encounters which force them to think, to become and to change as they creatively adapt to novel circumstances. Learning as such "is not a quality but a sign" (Deleuze, 1994:140).

Learning involves the slow acquisition of the capacity to sense signs and events. The world constantly emits signs, which one must learn to perceive and hence to 'know' in order to manage the manifold differences by which experience is given as a *problem* for life. Deleuze understands all practices of learning as specific responses to particular problems encountered in and through life. Examples include the problem of driving a car; swimming in the ocean; falling in love; understanding great literature; maintaining civil relationships and/or keeping a job. Learning describes the means by which bodies come to recognise, respond to and occasionally solve these sorts of problems as they are presented in life. This suggests, in turn, that learning ought to be conceived as an experimental and always experiential ethos, and not as some kind of felicitous dividend derived from the transfer and subsequent recognition of 'ideas'. The ethos proper to learning requires what Deleuze (2000:4) memorably calls an "apprenticeship to signs". Just as the carpenter learns by "becoming sensitive to the signs of wood", and the physician acquires her skill by "becoming sensitive to the signs of disease" (Deleuze, 2000:4), learning no matter what the discipline, aim or objective entails a process of becoming sensitive to signs and events; learning how to identify, decipher and manipulate them; learning how to be affected by them, and to affect them in turn as one slowly acquires the capacity *to emit signs*. To learn is to sense signs and events in life.

This does little however to establish the character of signs and events. The problem of course is that signs are a function of encounters of sense rather than recognition. Signs, as such, do not always lend themselves to representation, or enable the founding of a reliable semiotics in a more traditional sense. Signs are openings into the virtual; they are the measure of the virtual in its becoming actual; the "bearer of a problem" provoking thought, action or expression (Deleuze, 1994:139-41). As I have noted, signs may be both formal and informal, with each triggering an opportunity for learning in that each conveys something of the way all things are differentiated in their becomings. Signs present openings for the establishment of novel relations and the experience of novel affects, insofar as signs create a basis for composition in and between bodies, both human and nonhuman. Deleuze (1994:165) provides the example of swimming to clarify this process of acquiring the capacity to identify and decipher signs in the process of establishing novel affective capacities.

In learning to swim one must discover a means of affecting the water – just as one must allow oneself to be affected by it – in acquiring the capacity for buoyancy and movement. At first, the novice swimmer is likely overwhelmed by the sheer fecundity of signs emitted by the water. These signs comprise a "system of liaisons or differential relations between particulars and singularities corresponding to the degrees of variation among these relations" (Deleuze, 1994:165). Each corresponds to "the real movement of the waves" such that learning to swim requires that one becomes able to "conjugate the distinctive points" of one's body with the "singular points" of the water (Deleuze, 1994:165). One must learn to 'sense' the signs emitted by the water as one learns when and how to breath so as to enable the movement of one's limbs; how to coordinate these movements to enable propulsion through the water; how to allow oneself to be affected by the water so as to more effectively exploit its natural properties to support buoyancy, and so on. Various scholars have followed these kinds of insights to describe how bodies are affected in their relations as they learn how to surf (Evers, 2006:233-35); or how to rock-climb or abseil (Wood and Brown, 2011:529-35). In each case, learning may be shown to involve complex processes of 'becoming sensitive' to signs as bodies encounter and adapt to novel problems.

This privileging of signs is central to Deleuze's assertion of the ontological primacy of events as opposed to substances. Signs are emitted in events, serving as one of the primary mechanisms by which differences are given to experience. It follows that signs and events must always be thought together in the application of a Deleuzian ontology to the problem of 'real experience'. This proviso has further implications for the ways subjects and bodies may be studied in life, in their actual encounters. Neither signs nor events happen to individual subjects, or put another way, it is not the subject that experiences signs and events, but rather it is signs and events that produce the *effects of subjectivation* in the intensive and extensive individuations that signs and events unleash (Rolli, 2009). "Sense" is the proper outcome of these encounters, serving also to explain how signs are expressed in events in ways that open up the possibility of ascribing meaning to experience (Deleuze, 1990:17-22). Signs and events furnish the conditions necessary for subjects to establish meaning, provided they may *unlock the sense* of 'real experience'. Even so, it is not yet clear how this process unfolds in the generation of meaning in experience. In assessing this problem, Deleuze (1990:149) proposes an ethics of signs and events demanding an ongoing struggle to become "worthy of the event". This is an ethics that requires subjects to become more responsive to the sense of signs and events, such that they may accelerate or harness the forces of becoming available within them. It is a question of sensing signs and events in order to extend the array of bodies and entities that one may enter in relations with, and thus affect and be affected by.

Deleuze's (1988) complementary study of ethology offers a host of valuable insights into this process. I will briefly review Deleuze's ethology before turning to consider how the ethics that emerge in this ethology may inspire novel

strategies for making sense of life, or meaning of experience. I will contextualise this discussion in terms of the 'real experience' of individuals recovering from mental health problems. Based on the 'ethico-ethology' of signs and events thus extracted from Deleuze's thought, I will argue that recovery involves a process of becoming sensitive to signs and events emitted in place, in the varied territories and milieus in which recovery 'takes place'. *One, in this sense, learns how to recover from mental health problems as one becomes sensitive to the signs and events of recovery in place*. Picking up recent discussions of the importance of belonging and social inclusion in the course of recovery from mental illness (see Boardman, 2010), it is arguable that the process of 'becoming included' requires that individuals in recovery acquire a sensitivity to the signs and events of social formation. One learns how to be included in the body-politic to the extent that one senses the signs of this body's emergence. Drawing from Deleuze, it may be said that recovery requires an ethics of the sign involving the very practices by which individuals cultivate the experience of being included. This suggests a novel ethology of place, and a novel ethology of recovery.

STEPS TO AN ETHOLOGY OF PLACE

The notion of 'place' is an increasingly salient theme in international debates regarding the role of community participation and social inclusion in promoting recovery for people living with a mental illness. This is largely the result of studies highlighting the array of formal and informal resources or assets available in the community to facilitate 'recovery work' (Andresen et al, 2011:45-52). Interest in social inclusion also reflects decades of research indicating that people experiencing mental illness are at greater risk than other groups of being excluded from full participation in community life. This includes exclusion from education and employment opportunities; diminished social, peer and intimate relationships; and reduced participation in civil associations (Boardman, 2010:22-5). In seeking to combat these risks, policy makers and service providers have supported initiatives designed to mitigate the effects of social exclusion and promote community participation for people living with mental illness. Social inclusion and community integration are thus regarded as critical both in terms of the health and wellbeing of individuals experiencing mental health problems, but also in terms of their broader social and 'existential' recovery. This apparent conflation of recovery and social inclusion nonetheless opens up the question of how communities – and the places that sustain them – promote recovery from mental illness. It is equally unclear how social inclusion actually transpires as a feature of everyday life; how individuals become more or less included; and what kinds of affective and experiential benefits follow from increased social inclusion. Each of these questions has inspired a bourgeoning literature, including a small but rapidly growing literature applying various of Deleuze's concepts to the study of mental illness, place and social inclusion (see Tucker, 2010:435-39). I wish to add to the latter literature by concentrating on

the conditions of real experience, in terms of the signs, affects and events immanent to the process of recovering from mental illness, including the signs and events by which social inclusion emerges in the territorialisation of place. With a particular focus on *urban places*, the goal is to sketch a place-based, ethico-ethology of recovery equal to the varied lines of 'becoming-healthy' in the city.

Deleuze's (1988) ethology highlights the mutually reinforcing and recursive connections that enmesh bodies in diverse places or territories, as they are composed in diverse assemblages. Drawing together material and corporeal elements, the human and the nonhuman, objects and spaces, signs and values, organs and functions, assemblages define what an ethological body 'can do'. A body's affects, capacities, functions and relations are not fixed in this sense, but rather are forever becoming according to the specific assemblages a body is capable of entering into. Applied to the study of urban place, Deleuze's ethology highlights the body-becoming-city-becoming-place characteristic of the everyday experience of city life. The *quality of this life*, its concrete richness, is enhanced in the provision of new affective sensitivities and new relational capacities which extend the spatial and temporal range of the body-becoming-city-becoming-subject. These conclusions have important implications for the study of health and recovery in the city, in ways that are more sensitive to the signs and events of social inclusion in urban space.

More directly, Deleuze's ethology emphasises the composition – the assembling or 'acting together' – inherent in city life, including the organisation of infrastructure, the assembling of bodies and the modulations of movement and rest typical of these bodies. This analysis hinges on the novel characterisations of the 'individual' contained in Spinoza's ethics and developed in Deleuze's subsequent readings. Following Spinoza, Deleuze (1992:201-4) notes that an individual body is composed of an "indefinite" number of "extensive parts" connected in "characteristic relations". These parts include the body's anatomical and physiological systems, such as the circulatory system and the musculoskeletal system, as well as the accretions of habit, practice and language. The extensive parts that make up the complex body are constantly entering into relations with other 'external' bodies, insofar as the extensive parts that make up the complex body routinely pass through relations of composition and decomposition as certain parts of this complex body are lost while others are added. These kinetic relations are unique to each body and so determine its 'individuality'. This individuality extends to the unique combination of affects and sensations that inhabit individual bodies. Affects are an emergent effect of the body's manifold encounters, with each encounter transforming the nature of the body's characteristic relations and hence its manifest capacities. Given the dynamic character of these encounters, a body's "capacity to be affected does not remain fixed at all times and from all viewpoints" (Deleuze, 1992:217). It follows that a body's power grows as it becomes more capable of entering into

novel relations with other bodies, and thus more capable of affecting and being affected by these bodies.

As such, the ethology that emerges in Deleuze's reading of Spinoza provides a basis for identifying the mechanisms of the body's capacitation; or the specific means by which bodies acquire new capacities or powers as they acquire (or affect) new 'extensive parts'. In proffering such an account, Deleuze's reading of Spinoza further facilitates the development of an ethological account of urban life. Rather than distinguish bodies from the complex places they construct (subjects from their contexts), Deleuze's ethology offers a processual vision of city life, highlighting events and encounters and the signs, affects and relations by which these events compose or construct the manifold bodies that comprise the city (see also Grosz, 1995). Ethology further suggests that subjectivity emerges in the city-becoming-subject of bodies in their assembling. In so doing, ethology spatialises subjectivity, distributing it among and between the diverse objects, encounters and bodies that characterise urban life. Ethology discovers an ontological place for all bodies, the sentient and the inert, considering the affective and relational significance of their encounters in producing the *effects* of subjectivity (Grosz, 1995). I will now apply the tools provided in Deleuze's ethology to a study of recovery from mental illness, concentrating on the signs, affects and events that promote recovery in place.

LEARNING TO BE INCLUDED (BECOMING WELL)

The ideas assembled below are drawn from a series of qualitative studies recently completed in Melbourne, Australia among individuals and groups living with a mental illness. Each study has sought to identify and explore the ways in which place, social inclusion and community participation may support the process of recovery from mental illness. Each moreover, has sought to document the 'real experience' of place, community and belonging for individuals in recovery, consistent with the theoretical resources described above. A fuller account of the research methods, procedures, ethical approvals and analytical strategies deployed in these studies is available elsewhere (see Duff, 2011; Duff, 2012).

The primary aim linking each study has been the effort to describe some of the conditions of recovery as they are experienced in the places, relations, encounters and affects that comprise the assembled city. For a long time now recovery from mental health problems has been understood as an ongoing process of 'becoming well' in multiple 'life domains', including personal and family relationships, community participation, employment and education, housing security, physical and emotional health, identity and self esteem (see Andresen et al, 2011). It is further understood that recovery in each of these domains is a daily 'project' greatly facilitated by the kinds of assets or resources

that individuals are able to access locally to support the 'work' of recovery. This incidentally is the primary rationale underpinning efforts to enhance the social inclusion of individuals living with mental health problems. It is typically argued that enhanced social inclusion is associated with increased access to varied community assets or resources useful for the everyday work of recovery (see Boardman, 2010). Recovery, in this sense, is presented as a kind of instrumental calculus in which 'proximity to resources' figures as the primary variable determining an individual's likely progress towards, or retreat from, their stipulated 'recovery goals'. The example of social capital is a useful indication of the extent to which this calculus dominates contemporary thinking about recovery. Social capital is typically regarded as a store of social resources – like trust, reciprocity, mutuality, respect, care or empathy – that individuals accumulate in the cultivation and maintenance of social ties (Almedom, 2005). Like financial capital, social capital is regarded a fluid and potentially transferable resource useful for the realization of varied goals, actions and behaviours, including goals related to health and wellbeing.

As applied in the mental health literature, this logic treats recovery as the outcome of the allocation, cultivation and deployment of social resources, inasmuch as greater access to these resources is associated with improved health outcomes (Almedom, 2005). Yet this logic reveals very little about the 'real experience' of recovery in terms of the actual conditions in which social ties are cultivated in support of recovery. This is where the concepts furnished in Deleuze's account of signs and events may prove most valuable. At issue is the task of explaining how social inclusion advances and retreats in the experience of people living with mental health problems. The job is to explain how social inclusion works (or fails to work) in experience, and how social inclusion may be cultivated. It is all very well to argue that increased social inclusion is associated with improved recovery outcomes, yet in the absence of a comprehensive account of how people living with mental health problems actually work to cultivate social ties, it is simply impossible to conceive of meaningful strategies to enhance social inclusion among the mentally ill. Recovery and social inclusion must be explained in other words. The various studies I have conducted in Melbourne suggest that social inclusion ought to be regarded as a function of signs and events, inasmuch as individuals *must learn to sense the signs of sociality*, the signs of social processes in their formation; as well as the ways in which sociality is related to particular places of socialisation, and the varied events by which sociality is cultivated or attenuated in such places. It follows that recovery and social inclusion each involve convoluted processes of learning in and from real experience, as individuals slowly orient themselves to the signs and events of social inclusion, and the ways sociality may support (or indeed fail to support) the work of recovery.

Some examples from the data should help to flesh these arguments out. Participants in each study endorsed the importance of social inclusion and community participation in support of their ongoing recovery. Most identified

strong links between place and social inclusion, with most describing an array of local places vital to the everyday experience of recovery. This included sites long known to support sociality and/or social inclusion like cafes, restaurants, parks, gardens, shopping malls and community centres, as well as less familiar sites like suburban street-scapes, cemeteries, public transport and car-parks. Most often, place was found to shape the character of social interactions, affording opportunities either for greater intimacy with friends or family, or for novel connections with peers and strangers. At bottom however, sociality was found to involve a slow process of cultivating and developing social ties as one becomes sensitive to the signs and events by which sociality may be said to accrue. *One must, in other words, learn to sense the signs of sociality in cultivating a literacy of the social event*. The signs involved in such events were found to be diverse, ranging from sketchy indications of a willingness among others to engage in conversation; a sense of the appropriate time and place of sociality; greater sensitivity to the signs of social interaction and engagement (does that person want to talk to me? when has the conversation begun? when is it my turn to speak? what does silence 'mean'? how are the array of corporeal gestures common to sociality related to the mechanics of social discourse?); as well as a sense of the affective depth of friendship and/or intimacy. A number of participants spoke of acquiring these sensitivities – of learning how to be social – by observing the signs and events of sociality in 'social' spaces like cafes, restaurants and shops, without actually engaging at that time in social interaction themselves. The point was to observe sociality from a "safe distance", present within the social without necessarily being a part of it, acquiring a sense of the signs and events of interaction. Summing up this experience, one participant (Robert)[1] noted,

> I just like being around people not necessarily having to talk to people, just watching them you know, how they talk to each other, what they do when other people come along, trying to imagine what they're talking about. I spend hours doing this sometimes and it's amazing how no one seems to notice. I feel invisible sometimes I suppose but I just like watching everything.

In the observational activities conducted with Robert it was noted that he would often watch people engaging with one another, observing where they sat, whether they had any physical contact and so forth. Robert would then use these observations as the basis for speculation about the topic of the observed conversation and the nature of the relationship between the interlocutors. Quite unselfconsciously, Robert added that these experiences were all part of his recovery, helping him learn the norms of social etiquette, consistent with the ways "healthy people, you know the ones that aren't mad" socialise. Again, the primary purpose of such observations seemed to be the opportunity to survey the varied signs and events of sociality, such that one might become more sensitive to these signs in one's own subsequent interactions.

Another participant, Cheryl, disclosed varied signs in describing the place of public transport in her recovery. Cheryl identified Melbourne's train network as one of the most important places or supports in her "recovery journey". Cheryl spoke of long trips on Melbourne's trains observing people coming and going, speculating about their purpose and their lives. Mostly however, Cheryl spoke of observing people's interactions; the ways school students gossiped, argued, flirted and misbehaved; how city bound office-workers protected themselves from apparently unwelcome social interaction by hiding behind sunglasses, headphones and a book; or how elderly commuters seemed intent on talking to strangers regardless of their enthusiasm (or lack thereof) for the conversation. She added that,

> The train is amazing really because it's like everyone from Melbourne is here in one place, normally I guess we try and avoid each other. But here on the train you have you know the unemployed next to office workers and city-types and kids and families and everyone is trying not to speak or something. So I just love watching people, how they try and avoid talking or how the oldies want to start talking to you about the footy or their grandkids or something.

The point once again is that the signs of sociality (the rudiments of social interaction) may be learned in these quotidian events. Like Robert's observations, Cheryl's experience appeared to function as an apprenticeship in the signs of sociality. Each such sign affords further lessons in the art of the social; and so one learns if a stranger is likely to be receptive to a friendly chat; what kinds of things friends talk about on the train; whether or not the train is a public or a private place for the purposes of sociality; or the proper etiquette of a polite conversation should one happen to encounter a little known acquaintance. Moreover, each of these signs serves as a potential opening out into a wider social network, furnishing opportunities (should one wish to take them) for the kinds of social networking by which social inclusion may be lived as a tangible feature of one's recovery. These are the actual conditions of recovery as they pertain to the roles of sociality and social inclusion.

Marie identified quite a different set of signs and events in describing the role of handstands in her recovery. Marie regarded handstands as critical to her recovery, likening the handstand to a contest or battle with her fears and anxieties. She added,

> (m)ental illness is about feeling fearful or afraid a lot of the time and a handstand is like that, you are afraid of falling or hurting yourself. So the handstand has taught me how to live with fear, to do things anyway and then to prove that you can beat that fear.

Marie's favourite places included sites near her home that afforded the right material conditions for practising handstands. In describing these affordances

(signs, affects, events, relations) Marie highlighted the importance of walls and a space to move.

> The wall is very important when you are learning handstands. The wall takes away the fear of falling, so it kind of soaks up your anxiety. I've started seeing more walls now and going, just trying them out, looking for that feeling.

While Marie's handstands may seem incidental, her experience dramatises what is at stake in any ethological account of cities, bodies and subjects. It also highlights the kinds of insights Deleuze's work may afford in the effort to rethink learning and practice enjoined above. As much as it solicits the expressive force of muscle, bone and desire, Marie's handstands also rely on the reassuring stability of the city's streetscapes; a wall, a locked door, a flat expanse of concrete, children's playground equipment. In learning how to do handstands, Marie has necessarily become alert to a wide array of signs and affects, and the ways these signs manifest in particular material spaces. All of a sudden, the right assemblage of wall, concrete, solitude, space and temperament is encountered as so many signs that the handstand is feasible. Each such sign is experienced as an affective and relational force; an opportunity to join a society of bodies (human and nonhuman) resonating together, acting together, affecting one another, insinuating themselves into place, into life.

RECOVERY AND A LITERACY OF SIGNS AND EVENTS

Earlier I described recovery as an open, extended event, punctuated by the signs, affects and percepts of health, sociality and life. The advantage of such a characterisation lies in the attention it calls to the conditions of real experience by which recovery advances (or stalls) in ordinary life. If recovery is now understood as a process without a determinate objective (see Andresen et al, 2011), then the problem for scholars, practitioners, clinicians and 'consumers' alike is one of discerning the actual conditions in life, in social interaction, clinical interventions and support, which promote recovery understood as some incremental advance in the quality of life. Recovery, as such, ought to be construed as part of the affective, relational and intensive fabric of everyday life, expressed in moments of self-efficacy, connection and rapport; in the growing awareness of one's power of acting. *Recovery is an affective and relational achievement*. The signs of this achievement were everywhere apparent in the research data all too briefly introduced above. The intimate conversation in a cafe that strengthens an emerging friendship; travelling amiably without a destination on the city's trains; the thrill of the handstand on a city street; each of these places and activities were described as therapeutic insofar as they manifest the signs, affects and forces of recovery. Recovery traces a line of 'becoming healthy' in each of these signs, as 'health' is composed or assembled from among the affects, signs, forces and events that manifest one's power of acting.

It is equally apparent that recovery from mental illness involves a struggle to harness or cultivate this power in order to reterritorialise the fragments of subjectivity assembled for the 'ill' subject. These fragments include the mental health 'consumer'; the 'patient'; the 'survivor'; the formerly well; the becoming healthy. Each is territorialised in an ethological assemblage that must be reassembled (reterritorialised) in the effort to live one's recovery and become well. In each instance the signs of recovery must be learned in the course of this becoming-well.

Recovery has to be 'invented' in other words in each life so affected by the biological, cultural, social and existential experience of mental illness. Recovery requires an ethological transformation of the myriad assemblages by which the 'recovering subject' is expressed; the assemblages of family and home; the social assemblage; the citizen assemblage; the employment assemblage; and the affective and relational assemblages pursuant to love, intimacy and friendship. In the course of becoming well, each assemblage must be transformed in a reterritorialisation of the affects, percepts, gestures, forces, signs, utterances, expressions and events by which subjectivity is composed. The argument I am advancing here is that a literacy of signs and events is central to this ethological praxis; a literacy that in every instance must be learned before it can be expressed. Recovery advances or retreats in the innumerable signs and events of everyday life; the interaction with the barista at the local cafe; the comportment of passengers on a train; the tactile feel of concrete pressing into palms in the moment before one launches into the handstand. Each such sign or event presents a pragmatic interval in which social inclusion may be expressed. This suggests, in turn, that social inclusion primarily entails the composition or enactment of affective and relational connections between subjects, bodies, places and milieus. One must *feel connected* to the socius after all. And so, the signs and events of social inclusion are expressed in diverse milieus by which the subject's 'becoming included' advances; so long as the subject is able to discern these signs and then harness them in its own 'becoming well'. Such are the lessons of Deleuze's ethology and the literacy of signs and events presented above. Social inclusion is a relational force between bodies in place, expressed in signs and events which bodies must learn to identify, and then learn to affect and be affected by.

This introduces finally, the problem of whether such a literacy of signs and events may be formally taught or inculcated in subjects. While the evidence assembled here provides little basis for a definitive response, I would like to close with a necessarily speculative assessment of the prospect of a creative literacy of recovery and social inclusion. I would argue that the literacy of signs and events alluded to above (and its role in the lived practice of social inclusion more directly) suggests novel grounds for innovative community based mental health interventions. While it is tempting to suggest that the signs and events identified by my research participants are inclusive or therapeutic precisely because participants have cultivated them for themselves – that is to say that it is

the *activity of working* on one's own recovery that is critical – it is nonetheless evident from the sketch presented above that participants who described a sensitivity to the signs and events of recovery also reported greater confidence in their recovery, and greater hope and optimism for the future. This suggests that there may well be a pedagogical role for community based mental health services in advancing the affective, relational and practical learning essential to the everyday work of recovery. This will require much creative contemplation such that the signs, affects, relations and events central to recovery and social inclusion alike may be assessed in ways that lend themselves to an *affective pedagogy of recovery*. It will no doubt be difficult to carry the notion of a literacy of signs sufficient to the work of recovery, and yet the qualitative data presented above suggests that this kind of literacy is an inescapable part of people's recovery, whether they are conscious of this effort or not. Such a literacy draws one into the real conditions of mental health, recovery and social inclusion, forging meaning in the experience of recovery while cultivating an art of becoming well. This perhaps, is one more "apprenticeship to signs" occasioned by Deleuze's ethology. If only we may discover the affective and relational force to pursue this apprenticeship in the articulation of novel assemblages of health equal to the promise of recovery.

NOTES

[1] Note that participants in all studies were invited to nominate their own pseudonym or 'nickname' in the interest of preserving their anonymity in the presentation of research findings.

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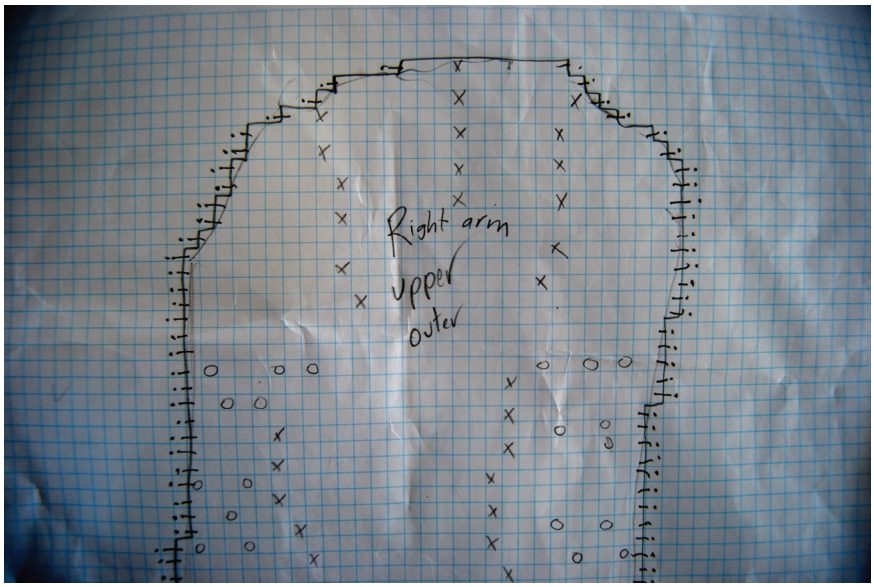
LINDA KNIGHT

16. KNITTED IMAGES

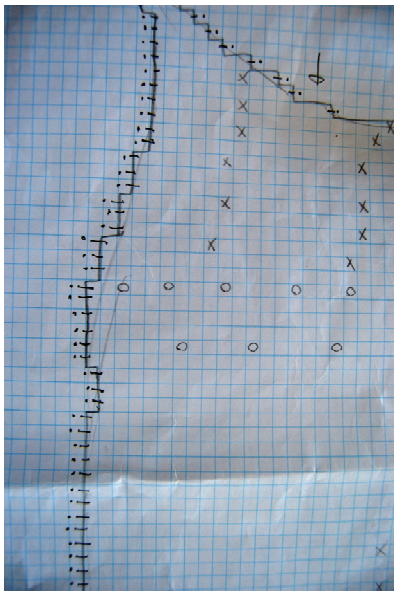
Drawing Patterns

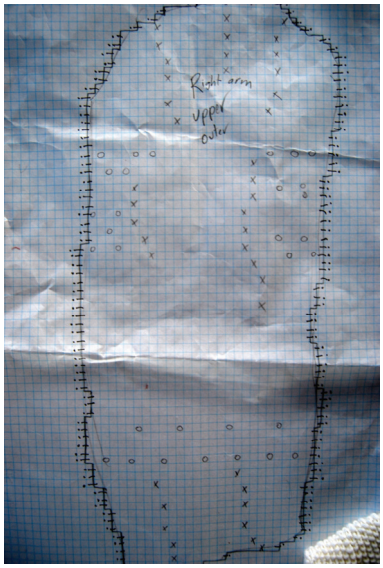
This Arts Based Education Research (Eisner 2008) work provides potent opportunity to consider different problems and challenges that impact on the progress of research (art as data making) and the theories being explored. It provides opportunity to transport ideas across between research activity, and teaching practices.



D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 209–211.

KNIGHT





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INTERMEZZO

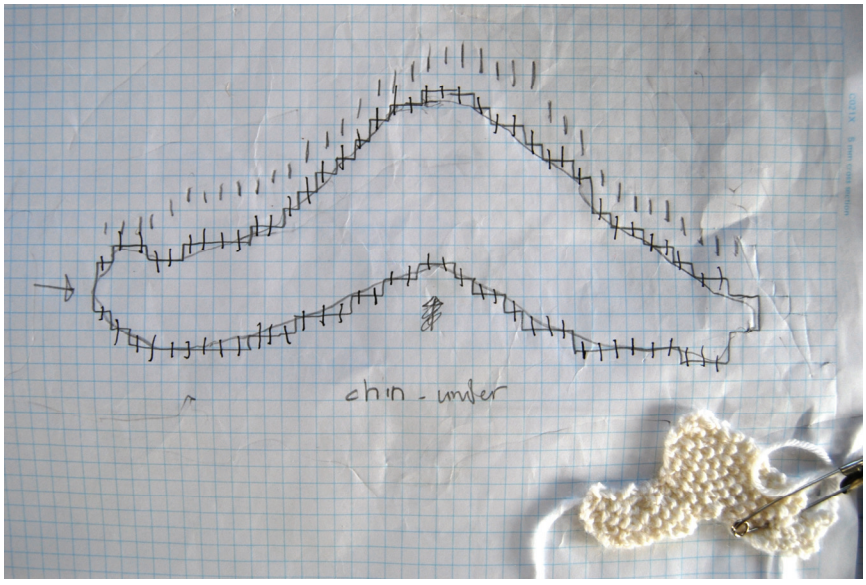
"Where are you going? Where are you coming from? What are you heading for? These are totally useless questions. … Another way of traveling and moving: proceeding from the middle, through the middle, coming and going rather than starting and finishing" (Deleuze & Guattari, 1987, p.25).

LINDA KNIGHT

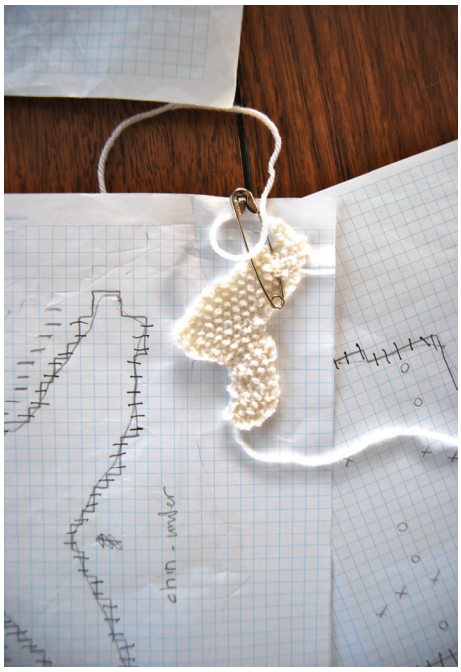
17. KNITTED IMAGES

Cartographies

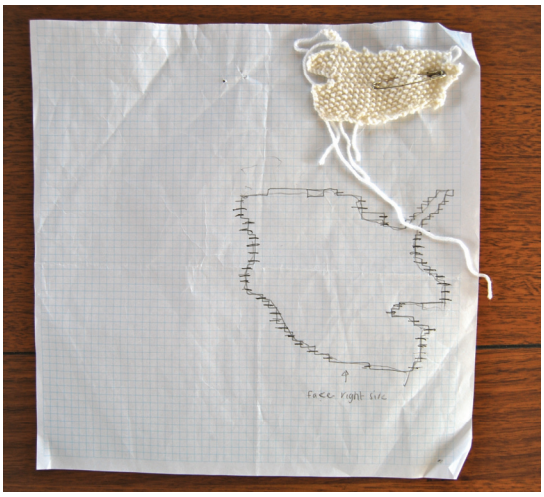
Through the making of these works I research teachers. Here, I push a/r/tography (Irwin & Springgay 2008) into ca/r/tography - a process of mapping that is multitexural, mutable; moving between theorization, creation, process, research, and mapped by me as I wander between artist, researcher, teacher.

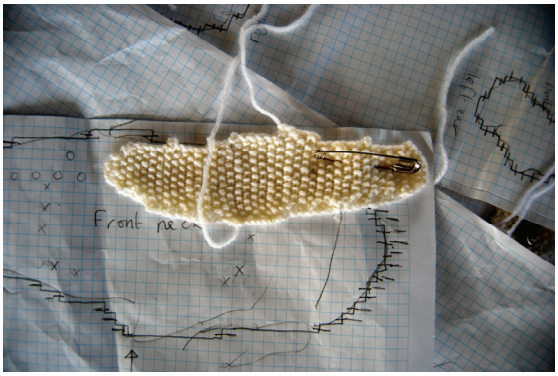


D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 215–217.


chin - under


left ear





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POSTSCRIPT

DIANA MASNY

18. BECOMING THOUSAND LITTLE SEXES

This is not my Father's Paradigm

This contribution concerns an experiment in conceptualizing educational research differently. It is a response to an accident that has become an event. The accident comes in the form of reviews/evaluations provided by peers when submitting a text on rhizoanalysis for publication to journals and edited volumes. This chapter became a way of explicating 'doing empirical research' with Deleuze's transcendental empiricism. This chapter became a research-event, a combination of all that exceeds what is presented here that allows lines of flight to take off in different and untimely paths in research: rhizoanalysis. This chapter is a rhizome with multiple entryways, segmentary rigid lines, molecular lines and lines of flight. Accordingly, the following paragraph focuses on a brief account of the Science Wars, an element of the assemblage research-event.

The years 2000 to 2002 might be considered the time of the Science War. AERA sponsored a much anticipated symposium with panelists: Donmoyer, Dillard, Lather and Wright. It was a panel on "Paradigm Talk Revisited: How else might we characterize the proliferation of research perspective within our field?" Educational researchers were already beyond the quantitative and qualitative debate that took place around the mid-80s. What happened in 2000 was a move away from conventional qualitative research in the classical tradition (presenting hypothesis, research questions, triangulation, etc.) to a proliferation of paradigms. Validity became a terrain on which to contest new paradigms in research. The new paradigms were reviewed according to my father's paradigm, such as invoking the concept of validity to demonstrate rigor. The Handbook of Qualitative Research by Guba and Lincoln (2000) and later, Denzin and Lincoln (2011) were widely consulted (and still are). The proliferation of paradigms in qualitative research becomes an issue concerning what gets funded. In 2004, Lather published a text entitled: This IS Your Father's Paradigm: Government Intrusion and the Case of Qualitative Research in Education. The article focused on the role government plays in dictating the kind of research that can be done through the research it is willing to fund.

What has transpired in the past decade has been an exploration in educational research that highlights the contribution to conceptualizations from Foucault, Derrida, Lyotard, Baudrillard, Irigary, Lacan, Kristeva, Butler, Blanchot and Clough to name a few. More recently Deleuze and Guattari have been included. What is interesting in the proliferation of paradigms is the contribution from

D. Masny (ed.), Cartographies of Becoming in Education: A Deleuze-Guattari Perspective, 221–235.

literary theory, feminist theory, psychoanalytic theory, and film studies. Much of the educational research linked to these authors has remained conceptual. In addition, this conceptual work has shed light on ontology, epistemology and methodology. For example, Deleuze places importance on ontology. He, more than Derrida and Foucault, was ontologically driven (May, 2005). Deleuze's stance on ontology led to his concept of transcendental empiricism (TE) (more will be said later about TE). TE underpins methodology whether you are involved in conceptual research and/or "empirical" data involving participants (human, animal, vegetal). When conducting research with participants, I have worked with TE to create concepts in MLT (Multiple Literacies Theory) that link into the data collection.

As my "empirical" work has been submitted to various edited volumes and journals for publication, peer-reviewers have gone to considerable effort to read and review a submission. This article attempts to explicate the challenges in walking the talk in educational research, in this case, that of transcendental empiricism, MLT and rhizoanalysis[1]. To what extent does ontology play a role in disrupting/deterritorializing and being deterritorialized through theory and data?

From the outset, rhizoanalysis is considered a non-method. There are multiple ways to rhizoanalyze. Since many of my publications are "empirical" which calls upon a rhizoanalysis with which I have been experimenting, there might be unknowns about the rhizoanalysis I have created for the reader. Therefore, concepts created and the format adopted in reporting data are explicated. I will present some major issues with an audience that may plug-in with assumptions that belong to different paradigms, some with a minimal concern for ontology. The concept of plug-in needs to be addressed.

> "doing philosophy is like reading a book. . . . and the only question is 'Does it work, and how does it work?' How does it work for you? . . . something comes through or it doesn't. There's nothing to explain, nothing to understand, nothing to interpret. It's like plugging in to an electric circuit" (Deleuze, 1995, p. 8).

In St Pierre's terms (1997), such a quote has reduced the anxiety level in many readers who do not grasp aspects of Deleuzean philosophy at some point or other. Therefore the reader is invited to plug-in.

This rhizomatic chapter...Deleuze and Guattari" is to be substituted for the following paragraph:

This rhizomatic chapter has multiple entries. The first cluster of an entry falls under the rubric of Transcendental empiricism: immanence, palpation and representation. The next entry focuses on the rhizome, a non-metaphor. The rhizome entry creates a link to multiplicity for the rhizome is made of multiple lines. Then the chapter introduces an experimentation with the concept of MLT (Multiple Literacies Theory). The following entry deterritorializes methodology by first presenting a brief received view of methodology: objectives, research

questions, theory, method (data collection), data analysis (interpretation of findings), and conclusion. In conventional reporting of a study, it is important to establish its significance/relevance. And through the offshoots or line of flight rhizoanalysis is created. An important aspect of this article is that there are multiple ways to do rhizoanalysis. The rhizoanalysis presented here involves creation and experimentation within an assemblage not pre-given but coming together at a particular time and space. In addition, this chapter stands as an alternate way to do research, one that does not function in relation to "my father's paradigm". The next entry becomes an exit, an intermezzo that opens up educational research and exceeds anything lived, a becoming-research event. Throughout the chapter, readers will find reviewer inserts, that is, paraphrases or indirect passages of reviewer comments that have nourished the assemblage. While these reviews of articles I submitted are authentic, they are not attributed to a particular person, journal or book. They are however, reviewers who should/might be familiar with the work of Deleuze, Deleuze and Guattari.

Transcendental empiricism: immanence

Immanence exceeds what is directly perceived, given or experienced. Moreover, immanence refers to life not pre-given; it is pre-personal. It is virtual which is then actualized and assigned presence. Both actual and virtual are real. It is virtual thought and when actualized, thinking happens to us. It is an event filled with experiences that opens thinking into unpredictable directions. One example is when Deleuze speaks of affect: Affects are no longer feelings or affections; they go beyond the strength of those who undergo them. …affects are beings whose validity lies in themselves and exceeds any lived. They could be said to exist in the absence of man because man …is himself a compound of affects. (Deleuze and Guattari, 1994, p.164).

Transcendental Empiricism: palpation

Transcendent Empiricism in the context of this book chapter refers to research that is grounded in foundationalism. It must be perceived, received and comprehended, "bringing it within our intellectual control" (May, 2005, p. 20). Transcendental Empiricism transcends the experiencing subject. It is a creative endeavor that focuses on thoughts and ideas that may be produced *by* experiences, by an event. In transcendental empirical research, the concept to palpate data has been created within the context of the current rhizoanalysis for it is not empirical data in the sense of transcendent empiricism. Instead, a reader of "data" called vignettes in this research are part of an assemblage. The data cannot be apprehended and understood in terms of an authorial stance and provide an interpretation. In transcendental empiricism, data is palpated; sense emerges "without it directly experienced" (May, p.20). If it were directly experienced, this would be in the realm of transcendent empiricism.

Representation

In Deleuze's transcendental empiricism, anti-representation is key. Representation limits experience to the world as we know it – and not a world that could be. The act of representation also considers that there is an object present, and that it has another meaning. An example is looking for meaning in a piece of abstract art (what does it represent? Or giving it a meaning) instead of looking at the painting purely in terms of the power of affect. Representation and interpretation are closely linked. Deleuze and Guattari (1987) refer to interpretation as an illness: interpretosis. Instead, they favor the rhizome and pragmatic experimentation in which sense emerges.

Rhizome

What is a rhizome? The following quotes are taken from *A Thousand Plateaus* (Deleuze & Guattari, 1987):

> A rhizome as subterranean stem is absolutely different from roots and radicles. Bulbs and tubers are rhizomes (6)…Any point of a rhizome can be connected to anything other, and must be…A rhizome continuously establishes connections between semiotic chains, organizations of power, and circumstances relative to the arts, sciences, and social struggles: (7). There are no points or positions in a rhizome, such as those found in a structure, tree, or root. There are only lines. (8)

There is some confusion about the use of the rhizome as an image, as a metaphor:

> Deleuze's renunciation of metaphor flows from some of the most fundamental commitments upheld throughout his philosophy: his rejection of the representational image of thought, his pragmatism, and his long-standing interest in the mobility of philosophical concepts (Patton, 2010, p.21).

> The rhizome is a *map and not a tracing.* … The map is entirely oriented toward experimentation in contact with the real. …The map constructs the unconscious… The map is open and connectable in all of its dimensions… It can be drawn on a wall, conceived of as a work of art, constructed as a political action or as a meditation…Perhaps one of the most important characteristics of the rhizome is that it always has multiple entryways. (Deleuze & Guattari, 1987, p. 12)

Multiplicity

My father's paradigm is interested in binarism and the centered subject.Instead, the thousand little sexes take their cue from Deleuze and Guattari's discussion of breaking away from the disjunctive binary (or) and supplant it with a conjunctive

binary that is multiple: AND. In Lather's words (2006), "such nomadic rather than sedimentary conjunctions produce fluid subjects, ambivalent and polyvalent, open to change, continually being made, unmade and remade".

With Deleuze (1987), it is the subject who is the product of events in life. Such reversal about the subject forces a change in discourse structure and conceptualization about the subject (cf. St Pierre, 2004). The individual is part of an assemblage (*agencement*), no more, no less important than the other elements in the assemblage. The elements in the assemblage construct relationships to each other. There is no *a priori* relationship.

> Multiplicities are rhizomatic and flat (non-hierarchical).
>
> Multiplicities are defined by the line of flight or deterritorialization according to which they change in nature and connect with other multiplicities…A rhizome may be broken, shattered at a given spot, but it will start up again on one of its old lines, or on new lines. …Every rhizome contains lines of segmentarity according to which it is stratified, territorialized, organized, signified, and attributed, etc., as well as lines of deterritorialization down which it constantly flees. There is a rupture in the rhizome whenever segmentary lines explode into a line of flight, but the line of flight is part of the rhizome. (9)

MLT (Multiple Literacies Theory)

MLT, developed by Masny (2006, 2009, 2011) is a construct, an assemblage. Literacies consist of words, gestures, sounds, that is, human, animal and vegetal ways of relating to the world: ways of becoming with the world. They are texts, broadly speaking (for example, mating rituals, music, visual arts, physics, mathematics, digital remixes). Literacies can be taken up as visual, oral, written, tactile, olfactory, and in multimodal digital. They produce different vegetal and animal mutations, speakers, writers, artists and digital avatars. Literacies are actualized according to a particular context in time and in space in which they operate. Given the nomadic tendencies of literacies; they are not wed to *a* context, but are taken up in unpredictable ways. MLT refers to reading, reading the world and self that create potentialities for transforming life. Accordingly, MLT is interested in how literacies function and how they change bodies, communities and societies (human, animal, vegetal).

In terms of concept creation, *reading,* according to Deleuze (1990), is asking how a text works and what it does or produces. MLT has conceptually created reading as (1) intensive and (2) immanent. (1) To read intensively is to read disruptively and to deterritorialize. (2) To read immanently refers to the virtual thought of … in reading and it is from investment in reading that a reader is formed (cf. Masny, 2012a, 2012b).

Deterritorializing methodology: Rhizoanalysis

In order to deterritorialize methodology in the manner of My father's paradigm, it might be important to present a perspective of My father's paradigm. The latter is concerned with:

> knowing the world directly as it is given, or experienced. It emphasizes the centered subject in that the data collected is grounded in the subject. It is the subject who does. This approach to research is foundational in that the research seeks to discover essences or origins that contribute to the interpretations of data as findings or results. Moreover, in the data analysis, the notion of representation allows for analyzing the data to determine what it represents and this is performed by way of interpretation of the data, again the centered subject (the researcher) becoming the voice of the data, in which case it is reading the data and discovering truth(s) through interpretations. In transcendent empiricism, there is world out there to be discovered and experienced. (Masny, 2012a, p.21).

The following quote comes from St Pierre (1997a) in relation to dissertation writing. It appears not only as a rite of passage; this format has become the norm in any research endeavor that claims rigor and scienticity, "a normalizing gaze of the institution".

> Dissertations are about backgrounds, problems, positionings, literature reviews, methodologies, validities, conclusions, and even implications, for Heaven' s sake all constituting a carefully staged academic *ficti*o, a construction approved by the authorities, a rite of passage into citationality, a normalizing function of the gaze of the institution. I would rather speak for a time about the book I wanted to write when I returned to Ohio after I interviewed all those southern women and studied their place but I didn't because I had to save my energies for this overcoded dissertation. (p. 407)

Rhizoanalysis

A concept has no representational relationship to the old term, rhizome, but is invented and deployed differently in a different assemblage (Waterhouse, 2011). In the words of Deleuze and Guattari (1987): "there is no like, like an electron, like an interaction, like a rhizome."

The following reviewer asks for clarity regarding the proposal that methodology is deterritorialized. She/he asks whether this would disrupt the "normal idea of method" and questions whether rhizoanalysis is still a methodology even though I say that it is a non-method. What is the difference between method and methodology? The reviewer questions the usefulness of avoiding methodology altogether.

Commenting on a vignette, a reviewer asks for a "richer rhizoanalysis". Up to now an account of the data is given, theories and questions presented. At this point, the reviewer would like the author to do an analysis.

Methodology: My father's paradigm

In any approach for research funding, presentations, publications, the requirements for submission remain the same: Objectives, research questions, theory, literature review, method (data collection), data analysis (findings), conclusion. For instance, there is the objective(s): Prior to setting goals, a statement of the problem is issued that contextualizes the objective(s) of the project. In stating objectives, the project is set with an attainment, a fixed determinacy. Then follow research questions, and theory, not necessarily in that order. In selecting a theory and constructing research question(s), researchers set out to look for in relation to the objectives. The literature review is sometimes the litmus test to see how much the researcher knows and how up to date the researcher is about the field. A literature review can also be construed to point to a knowledge gap that needs to be researched, in which case knowledge is viewed to be cumulative. Then comes the method to be applied. Qualitative research in general requires thick rich descriptions. The data has to be rich in details for the reader to perceive and comprehend directly in the absence of being at the research site. This is the realm of transcendent empiricism. Data analysis can be based on codes developed *a priori* and modified along the way or codes established as the analysis progresses. The results might be presented simultaneously with the analysis, in other words, the interpretative phase. At this point, the researcher takes on an authorial stance and expert role. Research questions were formulated that must be answered by way of interpretation of the findings. Then in the conclusion, there are the implications of the research, the significance/relevance of the findings for the field. This brief exposé of qualitative research in the received view is not intended to reify nor reduce the complexity of what might happen at the time of conducting a research study.

Rhizoanalysis: becoming thousand little sexes

Research methodology is a concept and a territory. Within a rhizome, it constitutes segmentary lines. The latter emits lines of flight that disrupt methodology and at the same time the concept of methodology itself. Methodology disrupts and is disrupted in a process of deterritorialization and reterritorialization brings on the creation of a different concept in research and a different territory: rhizoanalysis. What happens in rhizoanalysis? What is a rhizomic approach to research? Questions and concept creation take on considerable importance. They are a way to respond to a problem. Concepts "are not labels or names that we attach to things; they produce an orientation or a direction for thinking" (Colebrook, 2002, p.15). A concept is a territory in the actual. It has traces of the virtual, that is, the concept itself can deterritorialize and be deterritorialized and become a different concept. There is always the potential. There is neither reification nor essentialization. The stance is anti-foundational and the virtual-actual interaction combines with experimentation to create different concepts.

A reviewer raises concerns of essentialism regarding a conceptualization of multiple literacies provided. The reviewer sees new concepts in place of the old ones and possibly reducing the complexity of a concept. The reviewer read dualism in an "or" system. The concept of becoming implied a "cause-effect relationship".

Deterritorializing coding

In coding data, categories are set up and the data is analyzed and interpreted accordingly. Identifying a category is grounded in the subject. In the current rhizoanalytic setting, vignettes are part of a research assemblage. A vignette foregrounded for analysis is selected on its *power to affect* the assemblage and be affected by the assemblage. Affect is not an empirical category to identify and select a vignette to be interpreted. Affect is virtual and affect relates to becoming that exceeds whatever is lived through the assemblage and thereby becoming other, a different configuration of the assemblage.

> We know nothing about a body until we know what it can do, in other words, what its affects are, how they can or cannot enter into composition with other affects, with the affects of another body, either to destroy that body or to be destroyed by it, either to exchange actions and passions with it or to join with it in composing a more powerful body. (Deleuze & Guattari, 1987, p. 257; see also Deleuze, 2004, p. 39–41)

Because there is no coding and that vignettes are selected on the basis to affect and be affected in an assemblage, a reviewer interpreted affect to be a different coding

Deterritorializing interpretation

Rhizoanalysis eschews interpretation. To seek interpretation would be asking what something means. In rhizoanalysis, sense expresses not what a text means or is, but rather its virtual potential to become. The reading that goes on is the result of relationality within an assemblage in the actual. The questions are what vignettes do/produce and how they function. The analysis "is reported" in indirect discourse, that is, the subject is decentered and so interpretation by the subject is abandoned. Concepts are created and introduced through questions and indirect questions for there is no one way to look at vignettes. The data in the words of St.Pierre (1997b) become transgressive. The highlighted parts open up the vignettes to disrupt and affect the research assemblage. The combination of disruption and affect or reading intensively and immanently is a rhizomatic process that creates a line of deterritorialization and becoming other. What transpires is immanence. It is the ability of the vignette and affect to bring forth the virtual *thought of*…what could happen in an analysis.

VIGNETTE

This research study focuses on the perceptions of young children who are learning multiple writing systems simultaneously while attending a French-language school in a French minority context in Canada. The vignette that follows involves Estrella who participated in a two-year longitudinal qualitative research study exploring multilingual children's perceptions of different writing systems. Estrella was 6 years old. She was filmed in class (language arts, mathematics, science, and social sciences) and at home (meals, homework, reading, recreational time). Each filmed session was followed by an interview. In addition, Estrella was filmed participating in a mini-lesson in which she gave a lesson on how to write in her home language, Spanish. Finally Estrella received a disposable camera and she took pictures of people, places and things that were linked to her perspective of literacy (music, road signs, animals, flags, etc.). Each filmed session and the photo session were followed by an interview. Each of these activities happened twice during the school year. The vignette presented below is from Estrella, a self-selected pseudonym. In this vignette Estrella is watching and discussing video footage of her mini lesson on Spanish pronunciation. Estrella is 7 years old and uses French, Spanish, and English.

R (Researcher): You write in several languages. Can that be confusing sometimes?
E (Estrella) : No
R No? How come?
E Because Spanish is a little different
R What makes it different, that it is not confusing.
E **It is not the same thing as in French; it does not sound like French**.
R When writing, is it the same thing or is it different in your head?
E **It's the same thing.**
R It is the same thing in your head when you write in French, in English and in Spanish?
E Yes.
R Do you sometimes make the mistake of inserting a Spanish word when you write in French or perhaps when you write in Spanish you insert a French word?
E **Sometimes, it can happen**
R When you were perhaps younger?
E Me, no.
R **How is it you did not mix then up ?**
E I don't know, it is very different. It's the same thing with words.
R What are you saying?
E **The words are different except for the articles « le » and « la ».**
R **Ok, the words are different.**
R Now , let's look at something you said yesterday. You said there are no accents in Spanish. What is that about?
E **She said « que » (pronounced the French way) and I said no, « que » (pronounced the Spanish way)**
R **But you said accents do not exist in Spanish. You put one on que on the board.**
E **Where? Yes, because é, can you imagine that it is in French « qué ».**
R When you were working on the board, you showed different accents. In Spanish are there many accents?
E No.
R No?
E Uno, dos, tres, cuatro. I was doing it the same way starting with accents at the same time. It is soft, it was doing: « uno, dos, tres, cuatro », now it begins to get soft « cinco, seis, siete, ocho, nueve, diez », et here you begin very very high.
R OK!
E **Océano, look! Océano.** [comment from researcher : e with an accent was to show the pronunciation of e in Spanish using an accent from the French system that would get at the desired pronunciation in Spanish]
E [in Spanish, Estrella reads her sentence about Oceano from the whiteboard in the video]

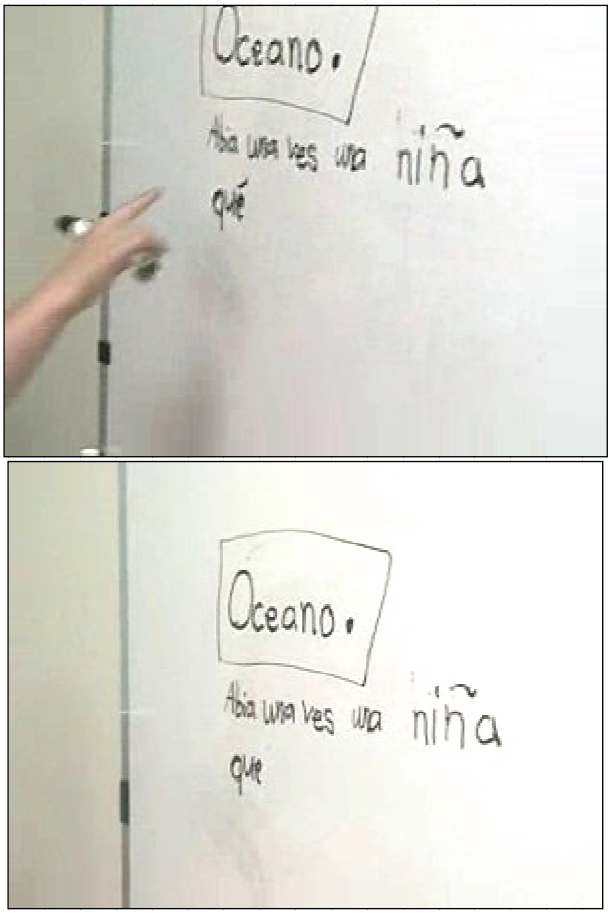

Figure 1: Writing in Spanish during Estrella's mini lesson

Estrella begins by emphasizing the differences between languages, between French and Spanish specifically, in terms of the words and pronunciation. In her

> In a similar vignette from the same study on writing systems and young children, another reviewer states that I ask a number of questions which I do not answer. This is confusing to the reader. The reviewer asks what my main argument is coming out of the data. Sounding frustrated, the reviewer suggested that instead of asking questions, it would be helpful if I did "conventional data analysis" and invited me to interpret the data through a Deleuzian perspective.

mini lesson, she focuses on Spanish pronunciation by explaining to her classmate-students that the Spanish "e" in "que" and "Oceano" are pronounced as if the letter had a French accent (e.g. "qué" and "Océano"). The que and Oceano examples point to creativity and inventing new ways connecting the prepersonal asignifying French writing system (accent) and Spanish words and effectuating a different word (Spanish-French) for purposes of pronunciation. The assemblage is reconfigured. What is also interesting is how writing systems, as part of the social machine, are used for oral purposes. Does the order word (writing system) as a territory in the assemblage deterritorialize as a partial oral system? Is it the potential for lines of flight to shoot through molar lines? Does the reliance on the written system to help us understand how to pronounce a word suggest the power (pouvoir) of writing systems to territorialize oral language?

In conventional research, questions are posed in order to obtain answers. The answer can perhaps confirm a reader's response, perhaps call into question the author's interpretation. In this instance, we are dealing perhaps with a centered subject, an authorial stance. To put it in question form: does the response/answer represent an author's point of view? What is the importance of getting a sense of what the data mean? Is this related to the hierarchical arborescent tree of knowledge? Enough of questions! Enough of Trees! Transcendental empiricism, rhizome, MLT, rhizoanalysis cannot operate in a vacuum devoid of a certain ontology that underpins this research approach. Questions in this rhizoanalysis are research events, the juncture where and when theory-practice meet vignettes. Questions open up to the potential that might become. In the received view of research methodology, research questions call for answers. What does this mean requires interpretation and some form of empirical predictability. There is seemingly no real virtual-actual interaction. Answers shut down potentialities.

A reviewer proposes that I should answer the questions instead of asking questions. The key point of data analysis is to offer an analysis. The reviewer focuses on one particular question and asks whether my research has answered the question highlighted. The reviewer's response is a resounding no. For the reviewer, it was an important question that needed to be answered.

Judgment

Data is analyzed purposefully with questions. In the analysis, there is no explanation/interpretation of data.

> Actually, there is no longer even any need to interpret, but that is because the best interpretation, the weightiest and most radical one, is an eminently significant silence. In truth, significance and interpretosis are the two diseases of the earth or the skin, in other words, humankind's fundamental neurosis. (Deleuze and Guattari, 1987, p. 144).

Scheurich (1997) remains unsatisfied and apprehensive that "what was once raw, polyvocal, and above all, different (Other) becomes through the research/theory process cooked, unified, and above all, the Same" (p.86). Scheurich's response: "simply present raw data and leave the researcher ―stunned into silence – literally, into silence" (p.90).

A reviewer understands that my approach to research vignettes is one that does not engage in judgment and asks whether eschewing judgment means that there is no analysis. This prompts another question concerning the relevance of this position in relation to my research, analysis and findings.

Significance/Relevance

Significance/Relevance is to show, illustrate, demonstrate belonging to the realm of transcendent empiricism. It is seeking interpretation and empirical reasons for relevance/significance. Rather, to plug-in becomes important in that plug-in will be different in different ways for different persons. To plug-in is unpredictable.

Intermezzo

In 2004, Lather produced a text entitled: This IS Your Father's Paradigm: Government Intrusion and the Case of Qualitative Research in Education. The article focused on the role government plays in dictating the kind of research that can be done through the research it is willing to fund. She concluded her text stating that there does not seem to be a consensus among scientist, philosophers, about what might constitute research except to view research to be "a cultural practice and a practice of culture". Lather concludes with Foucault suggesting "our constant task is to struggle against the very rules of reason and practice inscribed in the effects of power of the social sciences" (Lather,2004). A decade later, is research a cultural practice? Is it a practice of culture? Perhaps a deterritorialization of cultural practice can transform into pragmatic practices that engage macro and micro politics of doing educational research.

Within this assemblage, the experience is imbued with much more institutionalized power (*pouvoir*) than creative power (*puissance*), one in which a cultural practice of methodology remains steadfast and inscribed in the effects of power (pouvoir) of educational research thereby shutting down alternate research. Rhizoanalysis unfolds in uncertainty, messiness and instability, and the uncomfortableness that flows through an assemblage of which a reviewer is a part. In short, rhizoanalysis, in relation to transcendental empiricism, abandons the given and invents different ways of thinking about research through immanence, that is the virtual *thought of* what might happen when thinking data differently. Moreover, rhizoanalysis is an antidote to interpretosis and alleviates Scheurich's wariness of the "resourcefulness of the Same to reappear with new masks that only seem to be Other" (1997, p.90). Rhizoanalysis is a research event asking different questions that creates thinking in different directions.

NOTES

[1] Another way of raising the issue is what happens when master narrative meets counter narrative in the review process? This was the question put forward by Stanley (2007) in an article appearing in an AERA journal, Educational Researcher. Counter narratives "run opposite to the presumed order and control" (p.14). She submitted for publication a qualitative study on teaching experiences of African American faculty at two predominantly white universities from the perspective of Critical Race Theory. According to Stanley, master narratives impact what and how educators are socialized into research. Stanley refers to the "standard model". The author provides recommendations for the review process that includes an openness for multiple research paradigms and to consider a different way of thinking about reviewing research for publication that questions the master narrative of rigor and the consistent request for relevance of the research in question.

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