

## **Fabrication of Times and Micro-Formation of Discourse at a Secondary School**

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**Key words:** time, temporal devices of control, discourse micro-formation, materiality, Actor-Network-Theory, difference, control, private-public relationship, professional orientation at school

**Abstract:** The paper presented here starts with a reference to modernist time theories, followed by a presentation of alternative views in the works of FOUCAULT, DELEUZE, LATOUR and others. The study concentrates on the concrete context of an experimental school aiming at incorporation of excluded students into society. Based on the synthesis of discourse analysis and Actor-Network-Theory, the study puts forward a twofold question: a) whether and how the "fabrication of times" is interrelated to micro-formations of discourses and b) how micro-formations of discourses emerge as processes in the concrete setting of a school in regard to their temporal and other aspects. To answer this query, I combine some critical ethnographic work with an Actor-Network-Theory methodology—an approach which could be regarded as "rhizomatic analysis" (DELEUZE & GUATTARI, 1980). Examining discursive and non-discursive action with a particular focus on materialities (sites, students' documents, educational reports, CVs, and files), I introduce the notion of "temporal devices of control" and map two of them: that of synchronicity and that of convergence. In this way, I propose a new understanding of time and relate it to discourse formation. This, in turn, reveals a new potential for critical reflection on theories of time as well as on all action taking place in the school.

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## 1. Introduction

"What is an organism? A sheaf of times.  
What is a living system? A bouquet of times".

Michel SERRES (1982)

Over the last decades, after the works of FOUCAULT<sup>1</sup> and DELEUZE, the concept of difference has become an issue in philosophy and the social sciences. We know, for example, that discourses are not homogeneous entities and that differences develop within discourses over time (FOUCAULT, 1969). Although the works of FOUCAULT and DELEUZE did not aim at a theory of time, their focus on the emergence of difference provokes the conceptualisation of time as an arrow (PRIGOGINE, LUHMANN) and corresponds with the theoretical work of STENGERS and LATOUR on the issue of time and difference. As I will point out, such a conceptualisation of time emphasises the material and relational aspects of discourse formation and leads to questions about the extent of freedom or limitations and constraints reflected in and generated by a given situation. [1]

This article presents a kind of "rhizomatic analysis" of the data based on my field notes and of documents produced at the specific setting of an experimental school aiming at incorporation of excluded students into society, where I did ethnographic research for a year. The question I examine here is how the micro-formation of discourse emerges on the basis of the fabrication of times. Drawing on the theoretical work on time of STENGERS and LATOUR, I introduce the notion of "temporal devices of control" to describe complex material relations which fabricate times so that no difference in discourse formation emerges. Two different temporal devices of control to be found at school are presented: the device of convergence and that of synchronicity. I investigate the function of these devices in relation to the discursive micro-formation and the emergence or exclusion of difference. Special attention is given to translation and critical-ethnographic aspects of the research. [2]

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1 For details and bibliographical references to the works of the authors referred to in the introduction, see Section 2. Relations, Times and Difference.

## 2. Relations, Times and Difference

While NEWTONian physics was "in a sense timeless and reversible" (HESS, 1997, pp.130-1), in the 19<sup>th</sup> century the concept of irreversible time entered physics through thermodynamics. Linear thermodynamics describes a stable, predictable behaviour of systems which tend towards the minimum level of activity possible. The concept of the irreversibility of time depicted symbolically—i.e. translated—as an arrow is part of the legacy of this approach. This concept has been spread out to a number of disciplines which conceptualised the world in evolutionary terms (biology, geology, anthropology, sociology, political economy, developmental psychology, etc.). [3]

A quite different scientific movement emerged in the 1960s: Ilya PRIGOGINE and others studied non-linear and non-equilibrium phenomena in physical and chemical processes and argued that the processes governing the emergence of life are not simple and linear, but dialectical, involving sudden leaps where quantity is transformed into quality. In this sense the concepts of "dissipative structures" and "self-organisation" have been introduced (GLANSDORFF & PRIGOGINE, 1971; NICOLIS & PRIGOGINE, 1977; KONDEPUDIM & PRIGOGINE, 1998). The work of PRIGOGINE seemed to revolutionise natural sciences and was awarded by the Nobel Prize in 1977. The concept of self-organisation has been extended to the study of the so-called dynamic behaviour of complex neural, biological and social systems—the most well-known theories are those of MATURANA and VARELA (1980) and LUHMANN (1987, 1990). [4]

However, as the philosopher Isabelle STENGERS points out in her work about "le défi de PRIGOGINE", the concept of self-organisation failed to conceptualise the emergence of difference and novelty because PRIGOGINE's theory departs from the concept of irreversible time rather than challenging it. Past and future are presupposed and time is conceptualised as an arrow connecting both, so that it is impossible to create a situation with new properties; the concept allows only for the maintenance of already-known properties in new ways (STENGERS, 1997, p.66).<sup>2</sup> How could time be considered differently, and what would be the consequences of a different time concept for social and political action? [5]

Time is not conceptualised as progression in the work of FOUCAULT (1969, 1975), who, in contrast to the chronological principle, established a "spatial approach" to study discursive formation in relation to "the distribution and arrangement of people, activities, and buildings" (SØRENSEN, [in this issue](#)). FOUCAULT's spatial or relational approach enabled the study of the emergence of difference: discourses no longer appear as homogeneous entities; a discursive

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2 Although PRIGOGINE focused on non-linear dynamics, he did not challenge the concept of irreversible time and did not concern himself with uncertainty and otherness. PRIGOGINE's theory could, in this sense, be considered as modernist. As David HESS argues, "modernist sciences tended to share a few general patterns: they developed theories that conceptualized their objects in terms of closed system dynamics, often with equilibrium principles" [...]. This "modernist style in science was consistent with the modernist culture of the surrounding societies" (HESS, 1997, pp.131-2).

formation continually generates new statements, and some of these usher in changes in the discursive formation that may or may not be realised. [6]

In a similar way, DELEUZE and GUATTARI's (1980, 1987<sup>3</sup>) notion of "rhizome" tried to avoid focusing on chronology and the idea of beginnings and endings, which form an arrow of time. They shifted the emphasis to conjunctions (i.e., and, and, and ....) in terms of additions and diversity, rather than being and hierarchy. The rhizome, a whole of various invisible relations moving non-linearly in all possible ways and directions, could be regarded as an alternative model to the arrow of time. The first two principles of the rhizome are the principles of "connection" and "heterogeneity". These two principles require that any point of a rhizome system can be connected to any other point. The third principle of the rhizome is that of "multiplicity", indicating that two different entities interact together to form a multiplicity, i.e., a unity that is multiple in itself (DELEUZE & GUATTARI, 1987, p.8). The fourth principle of the rhizome is called the "principle of asignifying rupture". According to this principle, the rhizome may be "shattered at a given spot, but will start up again on one of its old lines, or on new lines" (DELEUZE & GUATTARI, 1987, p.9).



Picture 1: Rhizome: an alternative model to the arrow of time? [7]

Thinking rhizomatically, one could argue that there is no *a priori* objective time (neither reversible nor irreversible). In other words, events happen but there is no time unless relations among objects "bring together, routinize, stabilize and institutionalize events" so that times emerge (LATOURE, 1994, p.209, also LEIBNIZ, 2000). In this way, LATOURE introduces the notion of "fabrication of times", i.e. the specific material and relational creation of times, which is interrelated to the fabrication of places:

"In a world made of intermediaries [...] there is a time separated from space, an immutable frame to measure displacement and, by definition, no process. In a world made of mediations [...] there are a lot of times and places" (LATOURE, 2005b, p.178). [8]

3 Paying so much attention to the theoretical, methodological and political implications of translation (see the later parts of the paper), I have been reading my literature in original—whenever possible. However, the extracts cited here are taken from English translations.

Discourse can also be treated in these processual and relational terms; as LAW suggests: "we should treat discourses as ordering attempts, not orders; [...] we should explore how they are performed, embodied and told in different materials; and we should consider the ways in which they interact, change, or indeed face extinction" (LAW, 1994, p.95). [9]

Referring to the issue of difference in discourse formation in relation to the fabrication of times, and following the approach of DELEUZE and GUATTARI, STENGERS (1996) and LATOUR (2005b) conceive time in terms of "virtualities" and "potentialities". Virtuality, as seen by BERGSON and later by DELEUZE and GUATTARI, is always richer than the actual reality (BERGSON, 1999, 1939, DELEUZE & GUATTARI, 1980, 1987). Whereas potentiality is the realisation "in time" of what was already there in potential—and this is exactly how PRIGOGINE conceived time—virtualities relate to many, possibly unidentified, differences: "Virtuality is something altogether different. It depends on the *otherness*, on the fifth dimension of process, on this quality of connection with other actants [...] that is, the intensity of time and space" (LATOUR, 2005b, p.185-6). [10]

Such a differentiation raises the question of "whether time is the realization of potentialities, or if it emerges from the eliciting, the education of virtualities, of surprising differences". According to LATOUR, in order to examine such a question, we need to explore it in terms of "otherness" of the "quality of connection with other actants"—in other words, "the sorts of connections, short-circuits, translations, associations and mediations that we encounter daily" (p.181). [11]

Using this theoretical background, I investigated the fabrication of times in the concrete context of a school. The questions I asked were: how are times fabricated and performed through material relations, connections and mediations in this specific context? How is discourse performed in relation to the fabrication of times? Is there a formation of discourse, or are there various separate discursive actions? What are the qualities of discourse micro-formation in regard to the (possibility for the) emergence of difference?<sup>4</sup> [12]

I focus on performance, assuming that time, the same to all other entities, not only achieves its form as a consequence of the relations in which it is located (LAW, 1999, p.3) but is also "*performed in, by, and through those relations*" (LAW, 1999, p.4, italics mine). My approach is relational (LAW, 2004, 1999; SØRENSEN, [in this issue](#)). I have paid particular attention to the relations between discursive and non-discursive action and investigated the rhizomatic relations between various bodies and materialities, as to explore the role of these relations for the fabrication of times and discourse micro-formation. [13]

A term used in this sense in Actor-Network-Theory is the "actant". While "actors" are normally understood as conscious beings, actants comprise all sorts of

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4 My research posed the issue of the emergence of difference at school in relation to many phenomena (e.g., human development, social mobility, etc.) However, in this article, I will focus on the issue of the emergence or exclusion of difference in discourse formation.

autonomous figures which make up our world (both terms are, however, occasionally used interchangeably). They can denote anything endowed with the ability to act, including people and material objects: statements, inscriptions (anything written), technical artefacts, entities being studied, concepts, organisations, professions, money, etc. (see CALLON, 1991, pp.135-142; LAW, 1992, pp.381-384). Because the term "actant" refers to a general position all humans and non-humans can probably take, here I will be using the term "mobile materialities" to refer to documents, files and other mobile actants/objects, whereas the term "sites" will refer to socially constructed/fabricated places (non-mobile material actants)<sup>5</sup>. Although theoretically humans could be seen as actants, this has not been of particular interest in regard to the material presented here. To refer to humans, I will be using the term actors or subjectivities. [14]

Such an emphasis on non-discursive action does not exclude the study of discursive action; rather, the latter is a necessary further aspect, since every kind of action could be considered as both discursive and non-discursive, and in this sense as performative (BROWN & MIDDLETON, 2005; SCHEFFER, 2004; WULF, 2001, 2004, pp.173-190). I use the term "to objectify" to indicate the translation of something vague (e.g., a discursive event) into something visible in a way that is accepted as objective and embodying materiality, such as a document (BROWN, MIDDLETON & LIGHTFOOT, 2001; BROWN & MIDDLETON, 2005). Through objectification new objects, i.e. materialities which can be actants, are created<sup>6</sup>. [15]

### 3. Critical Ethnography and Rhizomatic Analysis

I was interested in the (possibility of the) emergence of difference and put forward the political question: does this situation reflect and generate freedom, imagination and movement, or are there limitations and conflicts? This latter part of the question has been of particular importance to me, and it was the reason why I combined Actor-Network-Theory methodology with critical ethnography. This resulted in an approach that could be defined as rhizomatic analysis. [16]

As THOMAS and O'MAOLCHATHA point out: "Critical ethnography refers to the reflective process of choosing between conceptual alternatives and making value-laden judgements of meaning and method to challenge research, policy and other forms of human activity" (1989, p.147). [17]

In this sense, the interpretation of data cannot be regarded as neutral or objective; critical ethnography relies, among other things, on translating the words the researcher listened to, the movements s/he saw, the interactions recorded,

5 One essential difference between the terms "actant" and "materiality" is that "actant" refers to actual performance and "materiality" to a general state; a materiality is not always acting. I use both terms here as synonyms implying a performative understanding of materiality. It would require a separate article to differentiate more clearly between the terms "actant" and "materiality" and clarify them (see SØRENSEN, [in this issue](#)). I use both terms here as synonyms implying a performative understanding of materiality.

6 "A discursive utterance becomes non-discursive when it is treated not as a linguistic production, but as a material artefact that is to be placed and ordered within an existing network of related materials and equipment" (BROWN, MIDDLETON & LIGHTFOOT, 2001, p.129; see also LATOUR, 1994, 1996).

his/her experiences in the research field, etc. into something new: a rather abstract account raising issues of power and control, or of freedom and imagination (see THOMAS, 1993, p.43). [18]

Translation *creates a map* and does not just *represent* something already existing; in this sense, representing does not mean creating something new—it means following the lines that are already there. Mapping, on the other hand, constructs the research issue by orientation "toward an experimentation of contact with the real" (DELEUZE & GUATTARI, 1987, p.12). That is, maps can exist on their own, linking matters of concern to matters of fact, or actually creating both—to borrow the LATOUR's terminology (2005a, pp.87-120)—without the need for anything outside the map to exist, while tracings can only exist as representations (DELEUZE & GUATTARI, 1987, p.12). The notion of mapping goes together with the model of the rhizome presented above, which has initially been suggested as a way to describe theory and research that allows for multiple, non-hierarchical entry and exit points in data interpretation. It is opposed to the arborescent conception of knowledge, which was based on dualist categories and binary choices. In this context, the fifth and sixth principles of the rhizome are those of "cartography" and "decalcomania". These principles state that the rhizome is not a mechanism of linear representation, but a map with multiple entry points.<sup>7</sup> [19]

In this sense, as LAW points out, method "is performative. It helps to produce realities" (LAW, 2004, p.143). Realities could be imagined as indefinite, so that ways of knowing and reality-making "that allow the creation of many possible, more or less real, worlds" should be found (LAW, 2004, p.153). The research presented here is exactly such an experiment intending to create maps and rhizomes connecting matters of fact to matters of concern and challenging research, policy and education<sup>8</sup>. [20]

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7 In order to perform rhizomatic analysis, i.e. to create a map, one should not presuppose pre-given structures or relations of any kind. This is particularly helpful in posing questions about the existence of time as such and in mapping the connections, mediations, and relations through which time emerges. Such a focus is in strong contrast, among others, to approaches to time perception, which presuppose either an objective time outside of the human subject (Cognitive Psychology, e.g. DROIT-VOLET, 2000) or a temporal mechanism in it (Psychophysics, e.g. GRONDIN, 2001; see KONTOPODIS, 2005).

8 I wanted to challenge the concept of objective and irreversible time and explore the issue of times, which has social, historical, cultural, and thus political dimensions. As a PhD student of Psychology, I also wanted to challenge mainstream psychological accounts and practices based on quantitative or experimental research (psychology of temporal perception, universal developmental theories) and create an account that could lead to political action. When I started working on my project, my interest in discursive and non-discursive action was rather general. I did not start with any *a priori* theory to be applied. The account presented here did not develop until later, during and through my work, which was explorative and in itself constituted a "mapping".

It is of great importance to me to render all translations I have made visible<sup>9</sup>, and to demonstrate how my observations on the fabrication of times and its connection to discourse formation are related to the methodology used. (This creates a "risky account" as John LAW would name it [2004].) For this reason, I will now digress for a moment to discuss the selection of my research field and then give an account of my methods. I will then turn to the results related more directly to the research questions posed at the beginning. My interaction with the subjectivities participating in this field is presented in the [Appendix](#). [21]

#### **4. Selecting the Research Field: "An Integration School for Hopeless People"**

In the context of critical ethnography, I selected a critical research field: I conducted research in a state institution where youths participate obligatorily—a school. The school I investigated is an experimental secondary school (*Hauptschule*) for "Learning-in-Practice-in-the-City". The older, deeply engaged teachers who founded the school gradually developed this school model, facing many bureaucratic constraints on the way. This school was supposed to provide an alternative solution to abstract teaching and learning in classrooms. [22]

Against the teachers' intentions, the administrative authorities set up the school exclusively for students who have been "treated unfairly in the context of the normal educational approach", i.e. students coming mainly from lower social classes and subcultures: predominantly, they they come from migrant families or have been raised in problematic family environments, in which they were affected by alcoholism and/or unemployment. The main aim of the "School-for-Learning-in-Practice"<sup>10</sup> is to enable these students to find employment after finishing the school, so that they can be incorporated into society (see ROSE, 1999, p.204). For this reason, the students of this school spend two days per week at school, and three days in other institutions/organisations, in order to complete practical courses/internships. This is called "Learning in practice"/"Learning in the city"—which is the central pedagogical practice in the School-for-Learning-in-Practice, as reflected in the school's name. [23]

Male German students reacted with irony to the contradiction between their positioning in the school/the school's discourse and their perception of their low prospects on the job market and defined the school as "an integration school for hopeless people:

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9 Of course, what emerges at this point is the question concerning the audience for whom my account is written and, consequently, the (social) language into which events and actions, field notes and recordings have been translated. I have tried to create multiple written or oral research accounts, so that the different subjectivities of my research and work field understand my research—an attempt not yet terminated and rather difficult to achieve, considering the fact that the students of this school are not used to thinking in abstract terms, while the teachers have no time for reflection and must always "move on", as they say. However, the main part of my work, and obviously the account presented here, is directed toward an international academic audience and even written in English—not at all in the national and social language of the teachers/students discussed here.

10 The name of the school has been slightly changed for purposes of anonymity.



"Once, during the break, an English-speaking person asked the students smoking in the street in front of the school if their school was a School for Integration. Ronald [pseudonym], a German student, who often speaks English for fun, answered ironically, in what he meant to be a joke for everybody listening: 'yeah <it is> *an Integration-school for hopeless people*'" (Extract of field-notes translated from German by M.K.)

Extract 1 [24]

In this school, there are roughly equal numbers of male and female students, as well as students of German and other (mainly Turkish) ethnicities. The students in the school are about 18 years old—some are slightly older or younger. [25]

Although all the teachers claim that they would not rather work in a traditional school, they also wish that they could work with students who would achieve better results. They also often complain that the students have no lobby, which mirrors the absence of interest on the part of parents, politicians, etc. The teachers of the School for Individual Learning-in-Practice are mainly middle class. One of them comes from immigrant background. However, they perform different subjectivities. They are men and women; broadly speaking, some teachers have a "traditional" family life and do not display any critical reflection on their life-style. On the other hand, other teachers are single and live alone or in collective housing projects, some are homosexual or have no "traditional" personal relationships, and are artists. Many of the teachers of the school perceive themselves as "alternative". As can be easily conjectured, I have noticed that this division between teachers can sometimes lead to conflicts<sup>11</sup>. [26]

## 5. Methodological Options in the Research Field: Prolonged Participation, Sensitivity and Openness

While conducting psychological student counselling alongside my research as a student in psychology (see [Appendix](#)), I was often alone with teachers or students (either one-on-one or myself and two collaborating teachers/two students being friends), but I also participated in a variety of group activities. I followed actants and actors at (and sometimes invited actors to) the school, the locations of the students' apprenticeships, or semi-public sites such as cafes. [27]

Regarding my access to different sites and different subjectivities, I tried to be very sensitive and open in order to best approach them (see also [Appendix](#)). My preferred method was video-recording. If video-recording was not possible, either because the research subjects (students or/and teachers) refused/would refuse, or to ensure anonymity, I tried to make audio-recordings. If audio-recording would "destroy" the spontaneity of the situation or make people feel uncomfortable and sceptical towards my role, as well, field notes were my last resort. Specific aspects were explored through expert interviews. All the participating subjects'

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11 These conflicts are nicely exemplified by the following single observation: while one of the more "conservative" teachers measured every minute of the students' tardiness and kept a statistical record to control this, another teacher did not pay attention to time—in fact, so little that he was usually late to classes and appointments himself.

wishes regarding my research activities were taken into consideration with utmost sensitivity. I had a special interest in materiality, and so I collected/copied as many documents, files, etc. as possible. Participation in interviews and video-recordings was optional—only a few students, e.g., the girls from Turkish families did not participate (see [Appendix](#)). [28]

To sum up, the body of my material consisted of:

- a. Video-recordings of the meetings of the "communication group", of mathematics classes and of learning activities at apprenticeship locations (about 40 hours)
- b. Audio recordings of teachers' discussions about the students (about 10 hours)
- c. Field notes of directed observation of five students and broader observation of 20 students outside the classroom,
- d. 17 Semi-structured, open-ended expert interviews with students; pictorial, metaphorical tasks assigned to the students,
- e. Various school documents (e.g. learning materials, apprenticeship reports, etc.). [29]

As I will extensively present below, while involved in critical ethnography, I tried to expand the limits of my research activity in all possible directions: participating in different activities, visiting different sites (Multi-sited ethnography, see NADAI & MAEDER, 2005), transcending the public and the private, using different research methods and technologies (DENZIN, 1978), interacting with all the subjectivities of the research field (see [Appendix](#)). For this reason, I preferred a long-term study of just one school, and even one school-class, to producing "generalisable" results. The research took place during regular school hours, almost every day for one school year. During this year, specific choices and selections regarding the materials collected in the field were privileged, while the research unfolded as a sequence of inquiring phases: each next phase investigated the hypotheses which resulted from the previous one. My presence in the field was thus the first step in translating the data already. Regrettably, the choices I made cannot be presented here. [30]

## 6. Fabrication of Times I: Connecting Events

Being present at the research field almost every day for one school year, I had the opportunity to map relations between different discursive events and thus to speak about the "sequences of discourse formation", applying the trans-sequential analysis of Thomas SCHEFFER (2006), i.e. "the analysis of sequences within production phases and between them".<sup>12</sup> In the following part of this paper, I map relations which emerged out of this analysis and relate them to my initial questions—the fabrication of times and the emergence of difference. [31]

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<sup>12</sup> The trans-sequential analysis comprises diverse modes and materials while (a) following the practical course, (b) keeping to the current state of the succession, (c) reconstructing the interim products that are (made) available to move on, and (d) accounting for the dynamic context as resulting from the formation (SCHEFFER, 2006, p.3; see also SCHEFFER, [in this issue](#): Conclusions).

## 6.1 Self-reflection: In quest of "my desired profession"

Participating in school life, I saw students writing alone—not discussing or engaging in some class-teaching activity very often. This action could be regarded as discursive insofar as a student performs discourse—a discursive action that teachers called "self-reflection". The non-discursive aspects of this action, however, seem even more interesting: Students write daily and weekly reports on the learning-in-practice project, which they gradually bring together to create the "grand" work, the "*Documentation*". What happens during this writing? [32]

In the beginning, students translate the events happening outside the context of discursive action into shorts accounts: the daily and weekly reports, e.g., a report in which a student narrates a day of the learning-in-practice project (a kind of internship organised through the school). Even though the daily and weekly reports remain within the school—which generates stability for the students' sub-cultural life outside school—they are not yet to be accessed and assessed by any teachers. [33]

For the purpose of self-reflection, each student owns keeps and fills two files: a paper one and a computer one in the school computer network. While the Official Personal File keeps rigid and closed documents (see below, Section 6.2), the student's files are an open source to work with. These files, as well as the daily and weekly reports materialise events taking place in the different contexts in which the student participates. They are situational, informal and multi-directional. They include a variety of independent tasks and papers, which do not follow each other and are not connected in any way. There is no single narration; rather, the narrations in these files shape a written and oral dialogue between the student and the concrete and personalised school authorities. The students' files provide the material for his/her potential narrations and for potential dialogues between the student and teachers (see below, Section 7.3). It will be decided later which of these events should be connected with one another and how. [34]

At the next stage, a long and detailed account is produced (it usually is as long as 20 pages—which is the reason why it cannot be presented here in full). In this phase, the student also remains mainly alone. However, s/he moves back and forth between public school places where s/he meets teachers, and private sites where s/he retreats. The student writes "his/her story": the "*Documentation*" of the learning-in-practice project, which must be submitted to teachers until a certain deadline. In this narration a mainly qualitative, continuous and coherent story is produced. While writing this narration, students—and the invisible but present teachers (see below)—translate the accounts produced in the daily and weekly reports into something new: they slowly begin to translate the narration into a decision about their further occupational activities. This translation is demonstrated in the following extract, the final part of such a *Documentation*<sup>13</sup>:

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13 The original spelling and format of all the extracts presented in the article in German have been retained; [...] = "Text quoted [...] the rest of the text quoted".

<b>Bilanz</b>	<b>Conclusion</b>
<p><i>Was hab ich für mich gelernt?</i></p> <p>Ich habe an meinem Praxisplatz als Koch eine ganze Menge gelernt. Ich kann mehrere Gerichte auf einmal zubereiten [...]. Ich habe außerdem schnelles Arbeiten gelernt. D.h. ich trödel nicht beim Arbeiten. Ich denke das Praxislernprojekt hat mir viel gebracht. Der Servicebereich war mir ja schon bekannt. Aber als Koch in der Küche zu arbeiten war für mich ganz neu. Ich muss dazu sagen, dass es mir, obwohl es neu für mich war, Spaß gemacht hat.</p> <p>Ich würde sogar eine Ausbildung als Koch anfangen. Beim nächsten Praktikum als Koch würde ich nicht viel anders machen, außer dass ich versuchen würde, schneller und mehr zu lernen. Da ich den Anfang nun gemacht habe, wird es mir beim nächsten Mal nicht äußerlich schwer fallen. Der Beruf als Koch ist für mich in diesem Praxislernprojekt zum Wunschberuf geworden.</p>	<p><i>What have I learned for myself?</i></p> <p>I've learned a lot during my apprenticeship as a cook. I can prepare several meals at once [...]. In addition, I learned to work fast. I.e., I don't waste time during work. I think the learning-in-practice project has given me much. The field of service (in a restaurant) was already well-known to me. But it was completely new for me to work as a cook in the kitchen. I must stress that I enjoyed it, although it was new for me.</p> <p>I would even like to begin a professional training as a cook. During the next apprenticeship as a cook I would not do many things differently, except that I would try to learn more and more quickly. Since I've made a start now, it won't be too difficult for me the next time. In this learning-in-practice project the profession of a cook became my desired profession.</p>

Extract 2<sup>14</sup> [35]

With the extract presented here, a student ends his Documentation, i.e. the long autobiographical narration produced during the discursive practice of "self-reflection" on events happening during an internship in a restaurant (learning-in-practice project). We could divide the extract into two parts<sup>15</sup>: In the first part ("I've learned ... new for me"), the student writes in both past and present tenses. He translates events (invisible here, but presented before in the long narration) into utterances, so that connections emerge between what he did and what he is now able to do (e.g., "I learned to work fast. I.e., I don't waste time during work"). [36]

In the second part ("I would ... desired profession"), a future is being foreseen. The conclusion, titled "what have I learned for myself?"—i.e., not for school or for others—, is that he would like to begin professional training as a cook. He speaks about working in the same field another time and ends by stating: "in this practical learning project, the profession of a cook became my desired profession". The presented past events that are in the first part translated into present and past tense utterances are now translated into future tense utterances, particularly in the last statement, referring to a very concrete action: professional training as a cook. [37]

14 The extract was not originally separated into two paragraphs.

15 See Footnote 12.

The following questions present themselves with regard to the first part: is this the only thing that the student has learned during the practice learning project? Where are the various events, the internship-colleagues, and the places presented in autobiographical narrations accompanied by photos before this conclusion? [38]

Another set of questions emerges with reference to the connection between the first and second parts: Why did no single student conclude that s/he would like to prolong the practical learning project, to gain more experience or that s/he learned about other people or about some subject? Why did no single student state whether or not a given work field is recommended for him/her is of no interest to him/her? What does the word "became"/"geworden" that the student used at the end of the conclusion indicate? [39]

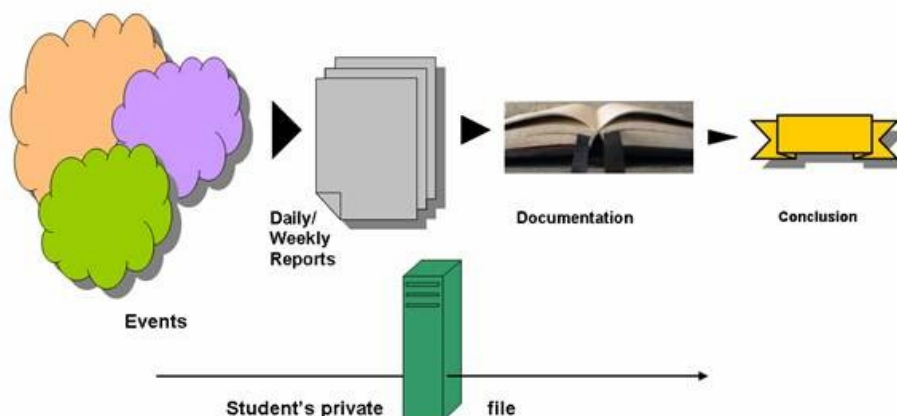
The Documentation is constructed in such a way that it leads to a conclusion. If nothing had been written, if no daily reports had been saved in the personal files and transformed into Documentations concluding in similar ways to the one presented above, discursive events would be visible, but not necessarily a process. [40]

Writing the Documentation on the basis of the students' files brings various events together and puts them in a sequence. "Self-reflection" emerges then as the entire lengthy process of discourse formation, lasting one school semester. In this sense the Documentation fabricates *the linear and continuous time* of the process of the student's self-reflection, connecting and translating different events. The translation takes place while events are transformed into narrations and saved in the personal files to be further translated into a story, which, then, in a compact way, is translated into a few statements, as seen in the extract above. [41]

In addition, materialised translations connect different sequences and events and fabricate a *convergent time* so that the self-reflection leads to a clear conclusion. The process of discourse micro-formation is highly selective and reductive: experience is filtered again and again and possibilities are reduced. Long descriptions become increasingly dense and different voices are excluded so that a restricted number of statements come into view at the end. In the end, a work field is either assessed as "not recommended" for the student or as the "desired profession". Events and long narrations are thus translated into a few utterances that could be considered as statements. This convergence is fabricated through the materiality of the Documentation<sup>16</sup>. Time is fabricated and performed as an arrow and nothing absolutely new is generated. Although this spatial depiction is an abstraction, the fabrication of convergent time could be depicted as shown in Map 1:

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<sup>16</sup> The Documentation appears thus to be a "fluid materiality defined by its ongoing transformation" (see SØRENSEN, [in this issue](#)).



Map 1: Translation and fabrication of convergent time during "self-reflection" [42]

In this time, the micro-formation of discourse emerges as teleological—it leads to a predetermined and clear end: the choice for (or against) a profession. The further the micro-formation proceeds, the more convergent the discourse becomes. [43]

## 6.2 Evaluation: Giving orientation

Another kind of discursive action at the School-for-Learning-in-Practice has been the so-called "evaluation". In this activity, it is the teachers that are working alone (i.e., without students, in groups of cooperating teachers). They meet regularly once per week to assess individual students and exchange information and views about student's public activities, or what students recorded reported of their private activities in their daily reports. The non-discursive aspect of this action is of particular interest again: two materialities take part in the evaluation: the "Educational Report" on individual students and the School Official Personal File (each student "has" such a File). [44]

The Official School Personal File includes documentation of the student's admission to the school, grades, absences, certificates, commentaries about the student's performance since the beginning of schooling, letters to the student's parents, correspondence between different school authorities, various results in special tests and assessments, as well as protocols of authorised committees' meetings about the student's non-standard behaviour. The power of the File is profound and rigorous: the Official Personal File individualises, quantifies and objectifies events. It fabricates an objective and public individual past, connected to the present and determining an individual future. Through a lot of translation work, the File fabricates a continuous, coherent, objective, comparable, and mainly quantitative time. In accordance with the bureaucratic function of the File to define the next step, i.e., the kind and level of the next educational or vocational stage to be entered, the student's biography is reconstructed as a continuum leading to a single end. The student's past should not be subjected to different interpretations: there is only one right way to "read" the student's past

through the File, and there is always just one end that appears to be the "best" (possible) choice. Students' biographies are thus seen as continua conducive to a particular conclusion. This "mono-logic" of the File is exactly the same logic as reflected in the "Educational Report". The Official Personal File is used in writing the Educational Report, mediating other events and enabling comparisons with the past. [45]

The Educational Report is an official school document referring to everything the student did during the school semester (a kind of biographical discourse). This document undergoes a significant transformation: in the beginning, it emerges as a bundle of unofficial notes and memos each teacher draws for him/herself before the discussion and exchange with colleagues. It proceeds with notes on the discussion recorded by the teacher primarily responsible for a particular student, then as a draft report, and finally as an official school report given to the student at the end of the school semester. This document is still in the process of being made while it already intervenes in the student's performance, i.e. it does not aim at an assessment at the end of semester but provides continuous feedback, which is not crystallised in a few written statements until the very end. In this way, it gains gravity and becomes more powerful. [46]

The following extract from a discussion about a student introduces the translations taking place before the Report is written (W, M are teachers).

*W: Na ja, er muss ja auch gucken, welcher Beruf passend für ihn [ist], weißt du.*

*[Well, yes, he must also find out which profession would suit him, you know]*

*M: Na ja, ich hab schon gesagt, wenn Computerei ist ein Thema von ihm, <und wenn> dann ist die Qualität bei ihm gerade dieses langsame [...]*

*[Yes, I have already said that, if computers are the subject for him then this is his qualification, exactly this slowness (...)]*

*M: Also er müsste sehen, dass er in den Jugend Bereich kommt mit Computern.*

*[So he must try to enter the field of youth services (dealing) with computers.]*

Extract 3 [47]

Here, after a long discussion about a student, two teachers agree that he should now decide which profession would suit him and suggest that it can have to do with computers. What is summarised and translated in the utterances audio-recorded, transcribed and presented here, into something new—the profession involving computers—is not only the teachers' discussion that has just taken place; all the events that occurred outside the context of the discursive action but pertaining to this student are also mediated here—they are not explicitly presented but taken for granted, and the way in which the teachers interpret them is considered the only possible/right one. [48]

The discussions and evaluations of the students are materialised and objectified by the "Educational Report". Such a Report is presented in its final version in the

following extracts<sup>17</sup>. The report refers to a student who has not yet chosen a profession/vocational training. (There have also been different reports, which I cannot present here, referring to students who have chosen a profession and are congratulated on this.)

<p>Lieber #Hask#, das vergangene Halbjahr wurde von dir sehr zögerlich und unentschieden begonnen.</p> <p>Deinen Praxisplatz hast du Mitte September in # Praktikumsplatz #. Du fühltest dich sehr wohl dort, deine Kollegen und dein Chef waren mit dir sehr zufrieden. Du warst ein zuverlässiger und fleißiger Mitarbeiter, sowohl in # Arbeitsbereiche #. Es wird über einen Ausbildungsplatz für dich nachgedacht.</p>	<p>Dear # Hask #, you began the past semester very slowly and hesitantly. You began your apprenticeship in the middle of September in # place of internship #. You felt very comfortable there; your colleagues and your boss have been very pleased with you. You have been reliable and hard working in both the # working domains #. A professional trainee position has been considered for you.</p>
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#### Extract 4 [49]

The Report refers here to Hask's past presenting the very beginning ("slowly"/"hesitantly") and then a later period (since "September") which is indicated by highly positive aspects ("comfortable", "very pleased", "hard working" etc.). The various events which happened in the given period and the context the Report refers to have already been translated into arguments and notes by the teachers, and they are further mediated and translated into a few utterances in past tense ("began", "felt", "were" etc.) here. Through the narrative ("beginning", "September") and material structure of the Report (first, i.e., upper paragraph, continued by the second etc.) events are composed in a sequence. Let us now see how the Report proceeds:

<p>Eine Dokumentation wurde von dir nicht vorgelegt. Deine selbständige Aufgabe sollte die Herstellung eines kleinen türkischen Gerichtes sein, welches du in der Cafeteria für die Lerngruppe zubereiten wolltest. Du hast zum entsprechenden Abgabetermin und auch später nichts vorgelegt. [...]</p> <p>In English hast du selten am Unterricht teilgenommen. Wenn du mitgearbeitet hast, bist du auch zu einem Ergebnis gekommen. [...] Leider reicht das noch nicht zu einem positiven Ergebnis. In Mathematik [...] hast Du den Unterricht nur sechsmal besucht,</p>	<p>You have not submitted your Documentation. Your independent task was to prepare, in the Cafeteria, a small Turkish meal for your study group. You did not submit anything, neither at the appropriate deadline nor later.</p> <p>[...]</p> <p>You attended English classes only rarely. When you worked with (the class), you achieved some results. [...] Unfortunately, this is not enough for a positive grade. In mathematics [...], you have attended classes only six times; you did not work,</p>
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<sup>17</sup> The original structure (paragraphs, sequence etc.) has been retained. The pieces of information related to the type of internship the students did have been omitted or changed to ensure anonymity



<p>nicht gearbeitet, aber häufig gestört. Ein Lernzuwachs konnte nicht festgestellt werden. [...] Deine Motivation, das Angebot der #Name der Schule# für deine Entwicklung zu nutzen, scheint mir kaum noch vorhanden zu sein.</p>	<p>but disturbed the class frequently. No learning development has been acknowledged [... ] I do not notice any motivation on your part to utilise the offer from the #name of the school# for your development.</p>
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Extract 5 [50]

Here further events are mediated, all of which are translated in negation ("have not", "did not", "is not" etc.) and seem to have happened after the ones presented above (see Extract 4). Then there is a paragraph in present tense: "I do not notice your motivation to ...". Not only are past events presented in sequence, but they also lead to a statement about the student's present situation. The Report continues:

<p>Lieber #Hask#, wenn du deine Anstrengungen in der Schule nicht erheblich steigerst, ist ein erfolgreicher Abschluss am Ende des Schuljahres nicht möglich. Ich bitte dich, eine Entscheidung zu treffen, ob du noch Schüler dieser Schule sein möchtest. Ich halte es für notwendig, dass du dich sofort um einen Ausbildungsplatz kümmerst, du kannst die Zeit in der # Name der Schule# dafür gern nutzen.</p>	<p>Dear # Hask #, if you do not increase your efforts at school substantially, successful graduation at the end of the school year will not be possible. I ask you to decide whether you would still like to be a student of this school. I find it necessary that you immediately look for a place for your vocational training; you are welcome to use the time in the #name of the school# for this purpose.</p>
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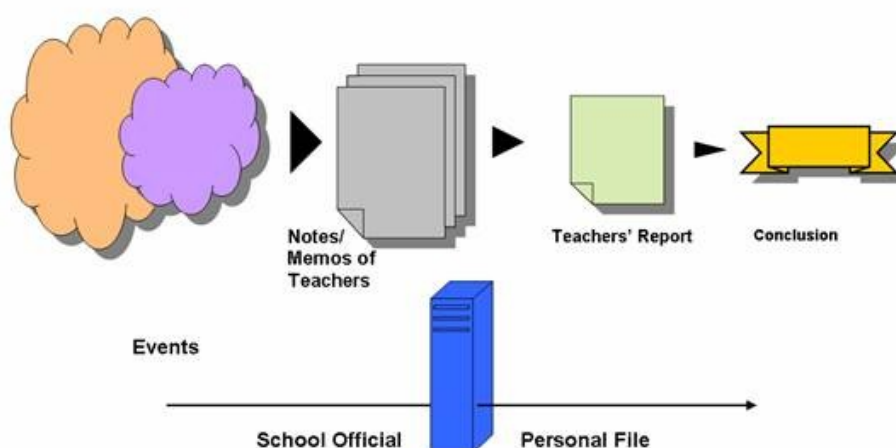
Extract 6 [51]

Following the Report, we now read statements referring to the future: "if you do not ... will not ..."/"I would like to ask you to ..."/"I find it necessary to ...". The Report comes to an end here: the utterances in past tense have been set in a sequence leading to a statement in present tense and finally to pieces of advice, remarks or threats formulated in future tense or conditionals<sup>18</sup>. While events are mediated and translated, the past, present and future emerge i.e. time is fabricated as an arrow. [52]

In addition, similar to the writing of Documentation, the Report concludes with reflections on a student's professional future and pieces of advice in regard to the choice of profession/vocational training, "witnessing the future" (see ELGAARD

18 SCHWARZE ([in this issue](#)) reveals how specific temporal points are marked through the use of numbers in discussions. What matters in my examples is not the distinction between separated temporal points but their linear connection.

JENSEN, [in this issue](#)). The Report, translating both events happening outside the context of the discursive action of teachers and discursive events happening in their meetings, interrelates past and present and translates this relation further to the possibilities and ways of changing/improving a student's present situation. All translations are done from the perspective of the student's professional orientation. The translations materialise and objectify not only many events related to a student, but also the entire process of evaluating a student, and, in this way, they fabricate a *convergent time*:



Map 2: Translation and fabrication of convergent time during evaluation [53]

In this time, the micro-formation of discourse emerges as teleological. Just like the Documentation, the Educational Report leads to a clear conclusion in regard to the occupational activities and the professional identity of the student. Through the teachers' evaluation, the discourse micro-formation directs the student to the concrete choice for professional training or an occupation. I will now try to explore other kinds of time that are fabricated within the school. [54]

## 7. Fabrication of Times II: Connecting Sites

In his book "Reassembling the Social" (2005), Bruno LATOUR claims that two actions taking place in two different sites are mutually related and connected through mediators. To reveal these mediations is a task for the researcher (LATOUR, 2005a, mainly pp.219-246). [55]

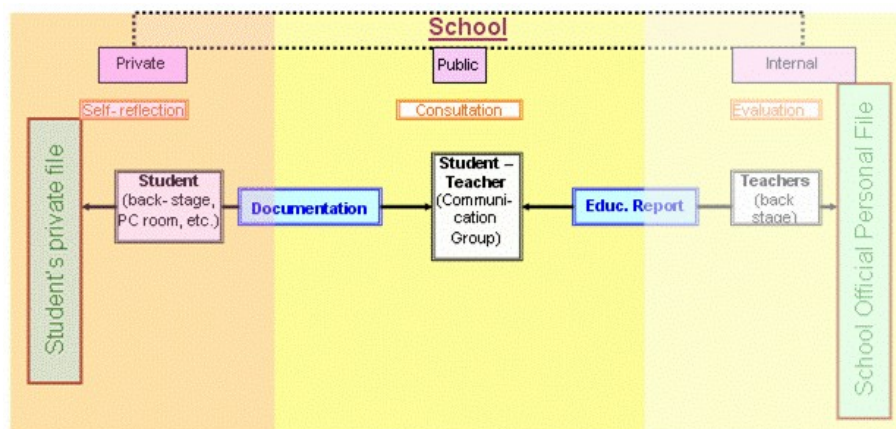
Following actors and actants in the School-for-Learning-in-Practice, I "discovered" three interconnected categories of sites officially designed for the discursive actions presented above—although, of course, a variety of events and discourses also occur there: the sites where a student is alone, the sites where only teachers are present, and sites accessible to everybody<sup>19</sup>. I define the first category of sites as private, the second as internal public and the third as public

19 There are obviously many more interconnected sites that I cannot present here. The most important is the place of the internship, where students accomplish internships three days per week throughout the school semester, during what is called "Learning in Practice" (see Section 5).

(see below). Private and internal-public sites can sometimes be found within the school building, in other places where school institutional activities occur, and sometimes outside them. [56]

As I already mentioned, teachers call self-reflection a discursive action taking place when students are alone, while evaluation is their own (teachers') discursive action. Teachers call this public discursive action communication, while the students perceive it as a means of control—the analyses of video-recording of these sessions lead me to categorise this discursive action as "consultation". [57]

The sites I entered were not connected through actors, since not all actors could be present in all of them. While moving back and forth from site to site almost five days a week throughout one school year (in contrast to the teachers and students, I had access to all the three kinds of sites), I started to notice, at first intuitively, then more consciously, the movement of documents among sites and began to reflect on the relevance of this movement for my question on the fabrication of times. The sites then appeared to be connected through the actants I followed: Documentation, Educational Report etc. Observing which actants and actors participate in which sites and how they circulate from one site to another, I drew up the following map:



Map 3: Connecting Sites at the School-for-Learning-in-Practice (blue frames/letters: mobile materialities I, red frames/letters: types of discursive action, black frames/letters: actors and sites for discursive action; green/grey frames/letters: mobile materialities II, i.e. files. Background colours indicate the different categories of sites involved) [58]

I would now like to present this map, i.e., the relations between mobile materialities and sites, and then focus on my initial question on the fabrication of times and the emergence of difference. [59]

### 7.1 Bringing the private and the public together: Documentation

As already claimed, the School-for-Learning-in-Practice is an unusual school. The action at school takes place mainly "back stage", i.e. in a space which is fabricated and performed as "private" in ROSE's (1989) sense. This private

discourse should then "return" to the public space at school and later outside it for two institutional/official purposes:

- a. the assessment of a student by the school authorities
- b. the assessment of a student in interviews given after the end of school by the authorities providing professional training. [60]

Specific materialities have been established in this context and move between public and private local sites, bringing these together: the above-mentioned daily and weekly reports on "Learning-in-Practice"<sup>20</sup> and the "Documentation". [61]

Teachers pose questions, give tasks and wait for answers; but then they retreat and remain invisible, so that the student seems to be the main actor. Both inside and outside of school, the students remain alone and "reflect on their self-processes", as the teachers call it. Then they move forward to the public, and present their writings. Teachers take these further to the internal public, come back and give feedback. Students receive feedback and go back in private again—all over the school year. The discourse the student performs at this stage is autobiographical. On the other hand, students should use the language of the school and answer the questions posed by the teachers, i.e. follow concrete rules and norms of writing to be positively assessed. The discourse is thus semi-formal: photos and private narrations, official information on the internship and formal tasks all come together and bring together the institutional discourse and the student's autobiographical discourse. This mix of genres and discourses is what FAIRCLOUGH (1992) defines as interdiscursivity. The discourse of the Documentation is autobiographical and in this sense private. On the other hand the discourse is also official and refers to the teacher and the next probable employer and in this sense is addressed to a public audience. [62]

Thus, the Documentation seems to be a new speech genre and materiality, involved in educational practices, an interdiscursive and translocal product which establishes a materialised and long-termed connection between private and public local sites<sup>21</sup>. [63]

## **7.2 Viewing the public and the private from "inside": Internal public communication and Educational Reports on individual students**

Another "backstage" for discursive action is the school internal public designed for the regular evaluation of students. This process is internal; neither is the student present here, nor will all utterances be revealed in the external public. However, the discourse produced concerns the student and his/her performance in the public and private sites. This discourse also concerns further institutions and authorities which (will) deal with the student, and aims at providing

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20 The discourse which the student performs at this stage concerns his/her experience during the "Learning in Practice", see Footnote 15 and Section 5.

21 The Documentation connects sites and mediates the presence of invisible actors analogously to the way in which the use of video mediates the presence of children in the courtroom (see MOTZKAU, [in this issue](#)).

information which is more qualitative and personalised than the data presented in school certificates. The internal public should thus be connected to both the external public and to the student's private space. [64]

These connections are performed through the already presented Educational Report on each individual student, which turns to be a *mobile materiality*. The Report mediates events from the public to the internal public (in the unofficial form of drafts or notes) and brings the discourse performed by the teachers in the internal public back to the public (in the official form of the Educational Report). Teachers retreat to the internal public and view students, who in turn are not visible but are made present through written notes/reports and oral discussions<sup>22</sup>. Similarly, later, students retreat in private but are influenced by teachers who are not visible but are made present through their reports. These movements back and forth take place continuously all over the school year, as far as evaluation and feedback to students are planned to take place regularly on a weekly basis. [65]

In order to allow for just this connection between the public and the private, the Report is written as both official and unofficial. While the well-known abstract and objective school certificates materialise events by translating them into numbers only at the end of the school year, the Teacher's Report presented here appears to be a new educational speech genre—intervening in the private and translating events into narratives in a highly individualised way. It is directed towards the student and has the form of a letter to the student addressing him/her in singular second person (in German "Du ..."). The discourse produced here is biographical: the teacher reveals his/her interpretation of the student's past, connects various events and explains his/her perspective. However, the Report follows an established pattern, it is official and leads to an assessment. [66]

### 7.3 Consultation in attendance of all actors and actants

One category of sites remains to be examined: the public sites. A front stage and a major site for discursive action is the so-called "Communication Group", an official institutional public context designed for the communication between teachers and students. A group of all the students supervised by the same Personal Teacher meets for an hour and a half twice a week in "their" classroom in the School-for-Learning-in-Practice. [67]

The major discursive action performed here could be defined as consultation. Teachers consult students about their professional interests. Here, all actors and all actants are present. At this site, the internal public and the private "come to meet each other" through mediations. As we have seen, Documentation is prepared mainly by the student on his/her own (private backstage, see above, Section 7.1), and evaluation is carried out by the teachers (internal public backstage, see above, Section 7.2). Consultation brings both actors and their

<sup>22</sup> The employed materialities enable remembering and forgetting so that the communication process unfolds. BROWN and his colleagues use the term "Performing the Past" to concern such "interdependencies in the discursive and non-discursive action in the social ordering of remembering in [...] [institutional] settings" (BROWN, MIDDLETON & LIGHTFOOT, 2001, p.124).

separate discursive actions together and proceeds towards the final stage: as a result of the public discursive actions of consultation, a CV and application letters of the student are produced. [68]

The discourses produced at the private and internal public backstages are mediated in this public place for the purpose of consultation. The discursive action taking place in the communication group is only made possible and successful due to the mediation of the students' self-reflection in private, and it is based on the evaluation of the teachers. Through the employed mobile materialities all sites become connected. The public site of consultation is thus performed as the *centre* of the continuous and even endless movements back and forth between private, public and internal public (see Map 3). New mobile materialities are produced during this action, the students' CVs and application letters, in order to connect two further sites: the school and the job market—a relation I will discuss later. [69]

#### **7.4 Files: Holding the process together**

There are two more mobile materialities playing an important role for the interconnection of public, private, and internal public sites: the Official School Personal File and personal files each student owns. In contrast to the other mobile materialities, the files are not bound to actors using them: while the Documentation is the student's responsibility and the Educational Report is the teacher's and both can be taken and worked on outside school, the files are bound to the school establishment and always remain there. There are specific rules determining access to them and the way in which their contents can be altered. As indicated, at the School-for-Learning-in-Practice there are two kinds of files: the ones available to the teachers and the ones available to the students—but not to the teachers; both of them refer to students' performance. Files seem to be "always there", in case the discursive and non-discursive action presented above cannot proceed on the basis of the other actants and actors present, e.g. if a draft of a Teacher's Report does not provide enough information for the evaluation or the consultation to proceed. The student's personal file usually functions as a place to store those parts of the Documentation which have already been written/worked out—or their drafts. In this sense, both the School Official File and the student's files hold the translocal discursive action together. [70]

#### **7.5 Synchronicity and discourse formation**

The question could be now posed whether the discursive formations of self-reflection, evaluation and consultation presented above are separate, or if there is an holistic formation of discourse. Discursive action is translocal. At particular sites, it takes place without the teachers and at others without the students. However, all sites are interconnected through mobile materialities. The relations are multiple and rhizomatic and do not form a circle or a line. There is communication between all the sites in all possible directions when actants and actors enter a site and then return to or enter another one. While writing the account I just presented, I was not sure which kind of discursive action (self-

reflection, evaluation, consultation) to present first. I couldn't decide because neither of them is first, second or third. [71]

Through the continuous movement of reports-, documentations- and files-in-progress back and forth between public, private and internal public sites, a *synchronic time* is fabricated. In this way, the discourse formation emerges as a whole: self-reflection, evaluation and consultation are all linked together in the discursive formation of professional orientation. The discourse formation appears to be taking place synchronously at many different sites as permanent movements connecting the private, the public and the internal public, while a variety of actors and actants perform their respective parts. These movements could be considered reversible, as far as everything can "be taken back" and worked on again. The synchronic time has no sequence. Everything is simultaneous,<sup>23</sup> and in this perspective it lasts forever. A metaphor which could help us to imagine this endless time, coming from the field of music, is the "simultaneity" i.e. more than one complete musical texture occurring at the same time, rather than in succession<sup>24</sup>. This synchronicity is not given or pre-existing, but it results from all the above-mentioned connections and mediations between private, public and internal public. [72]

I was able to map the fabrication of synchronic time (see Map 3) because I had access to all the sites (in contrast to teachers and students), and I moved in a way similar to that of the actants—but not of the actors!—back and forth between all sites for a year. [73]

## 8. Monological Order of Discourse Formation

The following question now arises: if all time is synchronic, then how does schooling come to an end? One could, however, also pose the question: if all time is convergent, then how do the discursive formations taking place in different sites come together? The answer would be: there is more than only one time—it is the combination of the synchronic and the convergent times which makes schooling what it is. [74]

As has been thoroughly demonstrated, the discursive action takes place in the vague private or internal public spaces and—much later—in the transparent external public, and it unfolds as a combination of separated procedures—all of which lead to clear conclusions. But it is not just the discursive procedures themselves (self-reflection, evaluation, consultation) that are converging, but the whole emerging synchronic micro-formation of discourse, which follows a monological order: All the procedures and their combination lead to a predetermined and clear end: the selection (or not) of a profession. This is the result of combining both synchronic and convergent times. The entire discursive micro-formation is teleological. The further it proceeds, the more convergent the discourse becomes, transcending

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23 SØRENSEN ([in this issue](#)) uses similar terms ("co-presence") to describe the temporality of the network materiality of a bed-loft in a school setting.

24 Such a composition first appeared in the classic music of Charles IVES (1874 -1954), and is common in the experimental music of Conlon NANCARROW (1912-1997) and others.

and mixing up: self-reflection, evaluation and consultation all over the various sites. Long descriptions (File, Documentation) become more and more dense (Conclusion of the Documentation, Educational Report) and different voices are excluded so that a limited number of statements come into view in the end<sup>25</sup>. [75]

Now, I am going to focus on these very last statements and examine whether novelty is created or not. In the end of the entire process of micro-formation, two new kinds of materialities emerge: a CV and a few application letters. Most CVs contain qualitative information about a student, e.g. about one's personal strengths, hobbies and preferred classes. They enumerate all the different apprenticeships a student has accomplished—parallel to, or within, school training—and present the student's professional goals/objectives. The application letter presents the CV and explains how it relates to the specific position the student wishes to apply for. While the CV is rather fixed and objective, many different application letters can be made out of it. [76]

Both materialities move between the private and the public and bring together processes of self-reflection and consultation. Their emergence is not sudden, i.e., they do not only appear in the end; they are made up slowly in relation to all the other materialities already presented. However, they differ from the other materialities because they will perform a connection between the school and a non-school site: the job market. In this way, they both manifest a clearly professional orientation. What is particularly interesting here is extract no 7, presenting a draft CV, where, under the subtitle "preferable career", the student typed a series of question marks in boldface (see Extract 7).

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25 To understand this reduction, it is useful to apply Thomas SCHEFFER's distinction between utterances and statements: "Utterances, on the one end of the gradation, are local and momentary (often misleadingly called 'natural' or 'informal'). Statements or discursive facts are placed at the other end. They are translocal and lasting: utterances drive conversations, while statements make (e.g. the procedural) history" (SCHEFFER, forthcoming). According to SCHEFFER (forthcoming) the main mode of transformation of utterances into statements in the School-for-Learning-in-Practice would be mobilisation. Mobilisation indicates all the transformations of utterances during communication and/or interaction with/production of written sources (Documentation, Educational Report) and takes the form of a) documentation/reflection, b) evaluation and c) consultation. Mobilisation begins and ends inside the school, which in this sense is a kind of "moratorium" preparing the discourse taking place outside school (e.g. Interview).



<i>German (original)</i>	
Persönliche Stärken:	teamfähig, ebenso selbstständig
	Verständnis für Arbeitsabläufe, Organisation, Planung
	flexibel, gute Auffassungsgabe
Hobbys:	Schwimmen und Fitness
	Computer
Berufswunsch:	????????????????????
Ort, Datum:	#Stadt#, den 08.02.2005
<i>English (M.K.)</i>	
Personal strengths:	able to work in team and also independently
	understanding for work processes, organisation, planning
	flexible, good talent of perception
Hobbies:	swimming and fitness
	computer
Preferable career:	????????????????????
Place, date:	#city#, 08.02.2005

Extract 7 [77]

In the draft CV presented here, the translation process addressed earlier has not yet been accomplished. The direction in which the discourse formation should further proceed is, however, very clear. CVs and application letters are mobile materialities and link the school institution to the job market and to tertiary (non-state) vocational education in an atypical—supposedly "innovative"—way. In the next extract, showing a typical application letter, a student applies for an internship as a policeman and writes: "I have been interested in the work of the police for as long as I can think":

*German (original)*

Durch ein Praktikum bei Ihnen möchte ich Einblick in die Arbeit eines Polizisten gewinnen. Ich interessiere mich für die Arbeit der Polizei seit ich denken kann. Daher würde ich mich sehr freuen, wenn ich mich so bald wie möglich bei Ihnen vorstellen könnte. Das Praktikum könnte ab sofort jederzeit außerhalb der Schulferien bis zum Ende des Schuljahres 2003/04 beginnen und bis zu einem halben Jahr dauern.

*English (M.K.)*

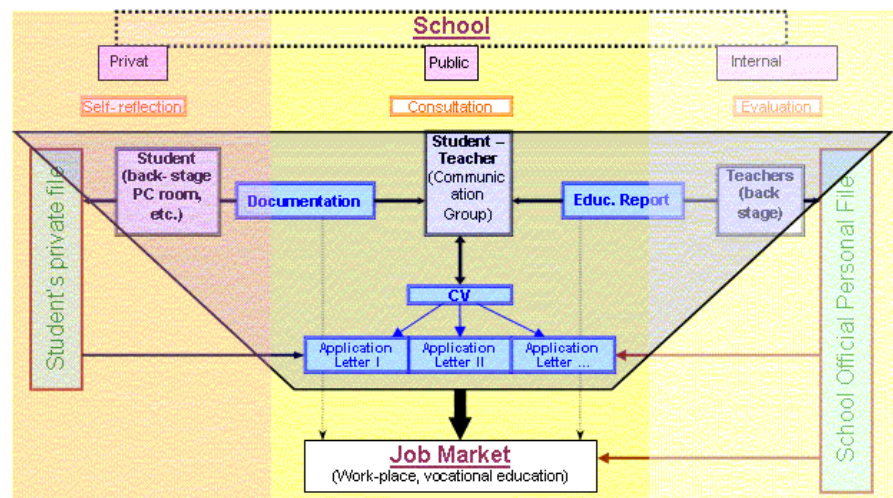
By undergoing an apprenticeship in your office, I would like to learn about the work of a policeman. I have been interested in the work of the police for as long as I can think. Therefore, I would be very pleased if I could introduce myself to you (participate in the interview process) as soon as possible. The apprenticeship could begin

immediately at any time, except the school vacations, up to the end of the school year 2003/04 and (could) last up to one (school) semester.

Extract 8: [78]

Here, events happening in private, in public, and in the internal public, longer and shorter narrations, conclusions and pieces of advice—everything that has been presented above—is further translated into a few utterances in present perfect tense referring to the past (in original German): "I have been interested in the work of the police for as long as I can think" being connected to a few utterances in conditional form referring to the future: "Therefore I would be much pleased, if I could introduce myself to you (participate in the interview process) as soon as possible".<sup>26</sup> [79]

It is interesting to compare the long discourse of the Documentation to the shorter discourse of the Educational Report and the application letter and further to the even shorter discourse of the CV<sup>27</sup>. Events happening in the student's life and discursive events taking place at school are now translated into a few statements. Thus, the monological order of discourse formation at school can be schematically illustrated as in the map below (Map 4):



Map 4: Monological order of discourse formation at the school-for-learning-in-practice (blue frames/letters: mobile materialities I, i.e. documents, red frames/letters: types of discursive action, black frames/letters: actors and sites for discursive action, green/grey frames/letters: mobile materialities II, i.e. files. Background colours indicate the different categories of sites involved) [80]

26 The emergence of such a "durable inscription" out of "ephemeral conversational moves" is only possible because of duplicity (see SCHEFFER, [in this issue](#)).

27 The words "long" and "short" are understood here both in temporal and spatial terms, exactly because these materialities spatialise time, i.e. translate temporal relations in spatial ones: a file is long-lasting and "heavy", a Documentation takes one semester to be written, provides detailed information about the process of learning and is long (about 30 pages) while a CV or report are shorter, sum up the process, or merely present its results. A short and clear conclusion is valued as important for both the student and the work-providing authorities.

## 9. Temporal Devices of Control

Reflecting on the connections between private, public and internal public sites and on the long-lasting movements back and forth between them, one could pose the BACHTINian question: who is doing the speaking? (WERTSCH, 1993) I leave this—rather rhetorical question—open to ask instead: why is the speaking done in this particular way? [81]

What follows—if the process is convergent enough—is an interview between a student and his/her potential employer/vocational instructor. The Documentation (produced mainly in private), the Educational Report (produced in the school internal public), and mainly the CVs and application letters flow into the job market, as to enter further discursive practices (e.g., a job interview). After the school year, the formerly excluded students "have discovered their desired professions and their talents". They write CVs and application letters, portray and advertise themselves and apply for various routes of professional education. Now they will be "normal" and active citizens—no longer non-standard, subcultural individuals, women who "only wanted to be married", etc. This is guaranteed by a behavioural and cognitive technique that Nikolas ROSE calls "technology of activity". Control operates

"through the rational reconstruction of the will, and of the habits of independence, life planning, self-improvement, autonomous life conduct, so that the individual can be re-inserted into family, work and consumption, and hence into the continuous circuits and flows of control society" (p.270). [82]

In this sense, the materialised relations fabricating synchronic time and convergent time appear as *temporal devices of control*, which establish orders and exclude difference. Synchronicity is fabricated so that the private is steadily open to access by the public—or, more precisely, so that the micro-formation of discourse in private is steadily influenced by the micro-formation of discourse in public. Furthermore, materialised relations fabricate convergence and govern the private so that the students' discourse is professionally oriented. The first device brings the private self into the public, whereas the second shapes the subjective in institutional norms. It is exactly in this manner that control functions nowadays, as shown by ROSE<sup>28</sup>: "Control is not centralized but dispersed; it flows through a network of circuits that are rhizomatic and not hierarchical" (ROSE, 1999, p.234, see also DELEUZE & GUATTARI, 1980, pp.9-37). [83]

Let us not forget here that the students of the School-for-Learning-in-Practice in the highly selective and hierarchical German educational system will mainly

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28 Similarly to ROSE (1999), PAPADOPOULOS (2005) describes how control is being performed nowadays through the composition of the institutional and the subjective. MOREIRA ([in this issue](#)) also explores how in another institutional practice—that of health service—epidemiological calculations and the management of the self are interrelated—bringing together the institutional and the subjective—through the productive opposition of different forms of what is called "qualculation" (s. MOREIRA, [in this issue](#)). While MOREIRA studies how the "temporal space of health is specifically organised" from a rather macro-political perspective, my paper rather explores micro-political aspects of temporal organisation in a specific institutional context.

graduate as "Hauptschüler/-innen"—the state will give them access only to the lowest positions for vocational training or work. [84]

## 10. A Kind of Epilogue

Drawing on the synthesis of the approaches of FOUCAULT and DELEUZE & GUATTARI and Actor-Network-Theory, my research portrayed a very specific institutional setting, an experimental school, as unique with regard to its times. Rhizomatic material relations have been the focus of this study, and have led to the conclusion that the micro-formations of discourses are interrelated to the fabrication of times in the school setting. Therefore, the practice of professional orientation and integration of students into society has been presented in very different terms to those of educational sciences, developmental psychology, etc. [85]

However, as has been noted from the beginning, this article is only a short account on a messy reality (LAW, 2004). Even if this is not quite obvious, many actants, actors, sites, events, and connections remain invisible in my account. Others become visible through translation. For a year, I circulated among sites, selecting material; then I moved "synchronically" through this material to analyse it in a "convergent" way. I translated events into processes, abstractly depicted in diagrams or summarised in narratives; I have also translated documentations, files and reports into extracts and narrations, and sites into narratives and diagrams. With these translations I could perform a rhizomatic analysis and map relations, connections, translations, borders and limits, which I translated into "temporal devices of control". One should, however, bear it in mind that these connections, translations, etc. are not simply "there" but develop only when and if they are performed during actual events. Through my paper, I probably institutionalised these relations, creating a topos, a map where these relations are to be found even when they are not performed (see also LATOUR, 1994, 1996). [86]

My mapping could thus be translated into a few utterances building a statement: Time is not *a priori*—times are fabricated. Through the fabrication of convergent and synchronic times, discourse formation appears as an entirety, as an organised process; the better the temporal devices of control function, all the less difference emerges in the end. Students select a profession, probably either that of hairdresser or cashier in a small shop—this is their "free choice"... [87]

Conceiving time as fabricated and perceiving times in plural, one could critically reflect on the relations between actants (sites and mobile materialities) and actors within a concrete institutional context—and probably engage in Politics of Nature (LATOUR, 1999, 2004) or Outside Politics (STEPHENSON & PAPADOPOULOS, 2006): How could times be alternatively fabricated? Why should various sites be synchronously connected and present in each other so that one discursive formation results (events are put together)? Why should discourse formation be continuous and convergent (events put in sequence)? Why is there one discursive formation and not more? Does the invisibility of the fabrication of times as an arrow and as simultaneity restrict alternative formations of discourse and/or the emergence of difference in general? [88]

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## **Appendix: The Others and I: Performing Subjectivities**

As argued in my article, I have not presupposed the existence of groups, subjects or subjectivities during my research, but I have tried to investigate their emergence during discursive or non-discursive action. I have been much more interested in performance than in groupings and categories (WULF, 2001, 2004, pp.173-190; LATOUR, 2005a, pp.27-42) treating subjectivities and objectivities in similar terms (LAW & MOSER, 2003, p.16). A brief narrative on this performance during my interaction with different subjectivities in the research field follows:

I entered the School "Learning in Practice in the City" as a trainee—a very usual position in Germany. As a result, both teachers and students were able to attribute a role to me: from their respective standpoints, I was perceived as somebody in-between, and this double role was highly beneficial for my research. For the students, I was not a teacher while for the teachers, I was—especially after the first two months—a colleague. Of course, such a role required maintaining confidentiality regarding information that teachers or students trusted me with. Starting as an apprentice for one semester, I was sure I wanted to do my PhD research in this school after a very short time—a fact accepted by the teachers as an honour for the school. I did not highlight the status of the PhD title to the students—I feared that such a step would probably position me as highly successful in their eyes, in contrast to themselves—so I just explained that I did some research for my studies.

Having grown up in Greece and having arrived in Germany as a student in my early twenties, I was perceived as somebody different by all research subjects (students and teachers, male and female), someone they cannot understand nor classify according to the categories they had already had. This fact enabled me to be very flexible and made many relationships possible that would not have been possible in a similar way if I were either a Greek emigrant living in Germany or a German citizen.

For the teachers I was—and that is absolutely true regarding the initial phases of my research—a potential supporter of the school, or at least a young romantic person coming from far away to spend his research time in a school nobody

cares about, and practically to support students, who are also of not much interest to anybody in particular.

For the male students showing non-standard or deviant behaviour (mainly German), I was a young man they did not compare themselves to because of my "difference"—which they sometimes saw as inferiority, in contrast to the superiority attached to German citizens (this visible inferiority for them was exemplified by my pronunciation or my grammatical errors).

For the non-deviant male students I was an older student who supported them at school and someone they either trusted (partially because of my gender), or someone they were not really interested in. The male students of Turkish ethnicity identified me more with the teachers, although due to my own Mediterranean ethnicity and deficient linguistic performance I was not really "one of them".

For the young German women I presented a potential object of amorous interest (because of my age) that they either played with or preferred to avoid. In both cases, my attempts to clarify my role as a trainee and/or a researcher were rather misunderstood. For the women of Turkish ethnicity I was not "different" but a "stranger". As both a man and a non-Turkish person, I was a somewhat strange character willing to interview them without the presence of others or to film them, which they regarded as an interest in their appearance. Consequently, these requests were rejected by the majority of these students.

Every one of the students I examined appeared to me as someone very different from myself, a person whose situation I was curious to experience. At the same time, both sides, the students and I, had a lot in common: we were facing similar macro-social problems, i.e. suppression and exclusion, translated specifically into financial problems and unemployment. Despite having a university degree, coming from a rather middle-class family and a country with a peripheral role in the world economy (Greece), I often felt even more insecure than the students at the school—as someone whose situation is worse than that of a young German person: in Greece, there are no social funds to support me in case of unemployment and there is no effectively functioning scholarship system for students, which was the reason why I, too, experienced hard economic problems during the time I was carrying out my research.

No student was ever aggressive to me or even angry with me—a fact which was appreciated also by the teachers, who felt supported in their work, respected me and allowed me access to all the resources I asked for.

Towards the teachers I felt solidarity regarding their difficult work and everyday life in their school, which I shared with them for a year.

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