Making History

The enactment of historical knowledge in the classroom

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Abstract

This thesis investigates the enactment of historical knowledge in the classroom. Situated in the field of Science and Technology Studies, it applies Actor-Network Theory, Estrid Sørensen's typology of classroom knowledge and Helen Verran's notion of ontic-epistemic imaginary to the analysis of classroom situations. This thesis defines historical knowledge as an actor-network, the result of practices and associations of human and nonhuman actors while also itself acting.

Based on six months of ethnographic fieldwork in a Berlin high school, this thesis describes how two different types of historical knowledge were enacted in the classroom. The knowledge enacted in accordance with the History curriculum is identified as representational knowledge (Sørensen 2009), and is understood as being based on spatiotemporal particulars (Verran 2001). The enactment of another type of knowledge, communal knowledge (Sørensen 2009), is also identified and discussed. Instead of ordering historical reality solely around spatiotemporal particulars, as Berlin's History curriculum demands, the teenagers also ordered this reality around moral and other particulars. As such, this thesis demonstrates how teenagers' enactment of communal knowledge challenges the ontological basis of the historical knowledge enacted in and through the History curriculum. Moving beyond local knowledge practices, the thesis scrutinizes the enactment of historical knowledge in its spatial and temporal expansion. It identifies teachers, teenagers, classroom design, power and previously enacted knowledge as actors involved in the enactment of knowledge. It traces the origins of previously enacted knowledge circulated in the classroom and describes the History curriculum as acting as an 'immutable mobile' (Latour 1986b) in the classroom.

The thesis illustrates how these different types of historical knowledge co-exist in the classroom, overlapping and in tension with each other. It shows the impact of the co-existence of these types of knowledge on classroom activities,

and identifies the ordering practices that structured and stabilised classroom situations when tension between the two types of knowledge occurred. Based on the results of the research undertaken in this thesis, it is suggested that History should be taught in a modular way rather than chronologically, thereby acknowledging the legitimacy of communal historical knowledge. Finally, this thesis reflects on its own enactment and points to possible areas of further research.

Acknowledgements

In this thesis I argue that knowledge is an effect of the collaboration of different actors. So, this thesis itself is a result of my research and the support, inspiration and comments of other people and institutions. This research would not have been possible without the financial support I received from the Swinburne University of Technology and the Australian Research Council (ARC)[1]. I thank my supervisors Vivienne Waller and Julian Thomas from Swinburne University of Technology. Vivienne's encouragement guided me through the process of writing this thesis and her insistence on clarity and accessibility shaped my arguments and my writing immensely. Julian encouraged me to follow new paths when analysing the data. He also introduced me to the politics of writing.

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I thank Estrid Sørensen for asking thought provoking questions and for providing me with literature from the Science and Technology Studies (STS) that guided my early analysis of these experiences. She commented on a draft of the thesis and has inspired and supported me in numerous ways.

I am also grateful to Helen Verran. Overall, I am indebted for the inspiration that I found in her ideas about imaginaries and particulars. But I am especially grateful for her generous support and her clarity when discussing my data with

Declaration

I declare that this thesis contains no material which has been accepted for the award to me of any other degree or diploma, except where due reference is made in the text. To the best of my knowledge this thesis does not contain any material previously published or written by another person except where due reference is made in the text. The results of my research presented in this thesis are not based on joint research or publications.

Josefine Raasch

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PART 1 - Beginning

1. Introduction

In recent years there has been much debate about what school students should learn in History, and how this subject should be taught. Despite this, it remains that little is known about how teenagers actually deal with historical knowledge in the classroom. In this thesis I begin to fill in this gap by demonstrating that diverse types of historical knowledge co-exist in the classroom. These different types of historical knowledge differ in the practices through which they come into being, in the associations and attributes that attach to them, and in their ontological basis.

The thesis is situated in the field of Science and Technology Studies (STS). In it I apply the methodologies and analytical tools of STS to history education in the classroom. As such, it contributes to discourses both of researchers concerned with the enactment of knowledge in Science and Technology Studies and those engaged in history education.

What follows is a brief description of an exchange that I observed as part of my fieldwork, one that took place in a History class conducted in Berlin, in 2010. My elaboration of this scene helps define the possibilities and limitations of the analytical tools that I use throughout. Under the sub-heading 'Knowledge about Historical Knowledge' I suggest that recent research in history education overlooks a crucial aspect of History classes. Under the sub-heading 'Doing Research on the Enactment of Historical Knowledge' I reflexively discuss a methodological decision I made in the course of my research that shaped the results of my analysis. And under the sub-heading 'Organization of the Thesis' I outline what I do in the following five chapters of this thesis.

1. 1. Starting point

When I began my PhD I intended to conduct research into German teenagers'

notions of historical justice. I wanted to know how teenagers respond when learning of past injustices. I developed a research design, applied for and received approval from the ethics committee of my university, as well from Berlin's Senate and from its privacy commissioner. In doing my fieldwork, for six months I joined a class of Grade 9 high school students in Berlin, participating in and observing their lessons and behaviours both in and outside the classroom. As I sat in their class, rather than develop a growing sense of clarity about the teenagers' responses to historical injustice, I instead felt increasingly confused by what I observed.

Often when the teacher and the teenagers talked about an historical topic other non-historical elements were intrinsically entangled with the students' knowledge of the past. Increasingly, I came to think of these exchanges in terms of different layers of actions.

In one History lesson, for example, Mrs. Züge[2], a History teacher in her mid-fifties, taught the teenagers about living conditions in Germany during the Weimar Republic. Two teenagers, Karl and Richard, responded to her account, though they and Mrs. Züge all seemed to be talking about something very different. The following is a description of their exchange taken from my field notes.

> This afternoon, when the History class was scheduled, the class discussed the shortage of food during the Weimar Republic. Mrs. Züge, the History teacher, asked the students to compare the amount of the food they eat with the amount of food that people were eligible to buy in the post-war years, during the time of hyperinflation. The teenagers started to make jokes. Without addressing anyone in particular, Karl said the people could have made chips from their few potatoes. Some of the boys laughed loudly.
>
> 'I don't think you can imagine how little they had', the teacher replied. Looking up from his drawings, Richard called loudly from the back of the room: 'I'll start to live on that [amount of food] today if I get a good mark.'
>
> (Field notes 09/03/2010)

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[2] All names are pseudonyms.

These remarks relate to the past, to the present, to other teenagers, to the teacher, to proceeding food, to school assessment, to what is to be taught about the past and to concepts of how to teach and how to learn about the past. This list is far from exhaustive, as the various elements contained in this scene seem almost endless. Not everything in this list is interrelated. In fact, the three speakers were talking about different things, yet they somehow managed to still communicate with each other. The freedom to relate to different things and to talk about different things seemed to be restricted. For example, Karl and Richard might have talked of their shared interest in computer games, but they didn't, they responded to their teacher's comments. Mrs. Züge, in turn, responded to them. Mrs. Züge, Karl and Richard related the historical knowledge circulating in the classroom to very different things, but in an interactive way. Given the diversity of student responses to discussions of such historical events, I wondered how I could properly analyse the teenagers' notions of historical justice. The more I observed these History classes the more I realised how many different and complex elements were involved in the creation of classroom-based historical knowledge.

Managing the everyday requirements of school life had a huge impact on the teenagers' notions of historical justice. Teachers and other teenagers, administrative regulations and the physical layout of the school framed and formed activities within the classroom: Agreements made between the teenagers one day had no validity the next; at very short notice the teacher responsible for the class was seconded to another school by the Berlin government; a classroom used one day was being renovated when we went to it the next; other rooms too were suddenly unavailable to us. In fact, the whole period of my fieldwork was characterized by instability and high dynamics. I became convinced that what I was observing in the classroom was, at least in part, a response to those changing circumstances. In response to this, I decided to investigate knowledge processes, to enable me to understand the making of knowledge more broadly than just its occurrence in History classes.

As my research progressed, I also noticed that the teenagers dealt with knowledge in general and historical knowledge in particular in ways that I found confusingly experimental. For example, when required to engage with historical knowledge they did not utilize a lot of the information they were given, but instead drew on fiction and facts from other times and contexts. They did not in any obvious way follow a discussion or a line of argument. Often I wondered whether the teacher made her point clearly enough, if the teenagers understood what was being asked of them, and, more often, whether or not they knew what was actually going on in the classroom. In trying to understand what all this meant in terms of their attitudes to historical justice I became aware of two things. Firstly, that many different elements were involved in all classroom activities and that each of these had a certain impact on how historical knowledge was known in the classroom. Secondly, that there are major gaps in our understanding of what happens to the creation of knowledge in History classes. This, I believe, is due to the fact that the different elements involved in the enactment of historical knowledge that I observed have been largely neglected in educational research.

It became clear to me that in order to understand these teenagers' notions of historical justice I would first have to understand the dynamics of what happens in their classroom. To do this I would have to pay attention to *all* of the activities that formed the knowledge in the classroom, rather than deliberately ignore the majority of them. Instead of interpreting teenagers' knowledge about the past, I decided to see what forms historical knowledge in the classroom, to investigate how it is 'enacted'. Also, I wondered what and who is actually involved in the enactment of historical knowledge in the classroom.

I discovered that these teenagers not only use a range of different practices to enact historical knowledge, but that as a result of this the historical knowledge enacted in the classroom has specific associations, attributes and ontological assumptions. Different types of historical knowledge were enacted in the classroom and in this thesis I will explore two of them: the type of historical

knowledge that emerged through the teacher's references to the curriculum, and a type generated by some of the teenagers themselves.

1.2. Knowledge about historical knowledge

Analysing recent trends in history education in Germany, I argue that the lack of knowledge about the complex dynamics operating in History classes is related to the researchers' choice of specific topics. I will then briefly outline the methodology that I found best elucidated the enactment of historical knowledge. I will introduce this methodology and its key concepts in more detail in the following chapter.

1.2.1. History education researchers

My thesis is premised on the belief that in Germany conventional research in history education does not take adequate account of the complexity of classroom dynamics when investigating the process of the creation of historical knowledge. I do not intend to diminish the work of these researchers, but rather to enhance it by re-contextualising it, filling in some of the gaps in our understanding of the enactment of historical knowledge in the classroom.

In Germany, a wide variety of people is covered by the henceforth employed term 'History education researchers'. All history education researchers — academics and non-academics, individuals or organised in groups (such as the Konferenz für Geschichtsdidaktik e.V. or the Verband der Geschichtslehrer Deutschlands e.V.) — discuss how best to teach history and to learn about the past. Researchers working in this field are often, but not always, associated with universities and the academic discipline of History Education. While the institutional location of knowledge production about history education is rather indistinct, the geographic location of German History education research is clearer as it is largely confined to the German-speaking regions of Europe. The field of history education is itself divided into two groups: those researchers who work theoretically (Jeismann 1977, 1988; Jeismann & Schönemann 1989;

Pandel 1976, 1987, 2005, 2006; Körber, Schreiber & Schöner 2007; Kuhn & Rother 1980; Bergmann et al. 1985; Schönemann 2005; Kölbl 2002; Rüsen 2001; v. Borries 2008), and those who try to combine theoretical with empirical research (Gautschi 2007, 2009, 2011; Hasberg 2007, 2008; Günther-Arndt 2006; Kölbl 2010). Furthermore, this empirical research itself became a topic of research among history education scholars (Hasberg 2001, 2002; Beilner 2003; v. Borries 2011). Most of the work of history education researchers theoretically elaborates what students are required to learn (Criblez et al. 2006; Landesverbände der Geschichtslehrer Deutschlands 2001), how they should learn about the past (Hamann 2007; particular in multicultural societies, see Alavi 2001; Bade 2001; Körber 2001; Körber and Feldner 2001; Lange 2001; v. Borries 2001), and the expected learning outcomes (Sauer 2006; Schreiber 2001, 2007; Schreiber et al. 2006; Verband der Geschichtslehrer Deutschlands 2006, 2010).

Typical empirical research in history education focuses on particular aspects of classroom dynamics in History classes. For example, researchers have asked how teenagers create historical meaning by narrating history or asking about it (Barricelli 2005; Mehr 2010; Serwuschok 2011; Billmann-Macheda 1998) or writing about the past (Hartung 2008, 2009); how they acquire competencies according to competency-models existing in history education (Martens 2010); or the basis upon which they judge a History class to be successful (Meyer-Hamme 2010). Other research has investigated the pre-conditions of historical learning (Zülsdorf-Kersting 2007); social phenomena that might influence the learning process, such as migration (Körber & v. Borries 2008); and teenage attitudes towards history (Angvik & v. Borries 1997; v. Borries 1995, 1997, 1999; Rüsen 1991; Rüsen et al. 1994). Despite the broad range of these important research topics, their focus on historical learning meant that the actual activities and dynamics of the classrooms in which historical knowledge is created have been overlooked.

In order to do these various research projects the researchers involved

necessarily highlighted particular aspects of history education that they deemed of interest to history didactics. Generally what guides the design of such research projects is the potential for their results to contribute to the discourse on history education. As such, they are often selective in highlighting particular participant discourses and deliberately exclude a vast array of classroom dynamics and behaviours, thereby excluding these factors from our understanding of how teenagers participate in the creation of historical knowledge. Aspects of that process that cannot be directly related to the teenagers' learning about the past or their thinking about and reflecting on the past are not collected in the research data and therefore remain unanalysed, are neglected and rendered invisible.

Conventional research accounts of the above example of Mrs. Züge's teaching about food shortages in the Weimar Republic and Karl's and Richard's remarks would place little emphasis on the jokes, the relations between the teenagers, the school assessment, and the power relationship between the teacher and the teenagers. As such, the effects of these aspects on the forming of historical knowledge would also be neglected. I suggest that these practices are not recognized as knowledge producing practices, as they cannot be analysed by concepts that were circulated in history education research.

It is worth noting, however, that history education research often distinguishes between the world, the knower (e.g. students and teachers) and knowledge (e.g. between students' and teachers' knowledge) and take this separation as a given rather than understanding it as a result of ordering practices (Verran 2001, p.33). In contrast, in Science and Technology Studies knowledge is understood as inseparable from both the knower and the context in which it emerged. One exists through the other. Any separation of world, knower and knowledge is understood as a result of translation processes through which the world, the knower and the knowledge came into being. Investigating only one of the three aspects, neglects and/or denies the constitutive interdependences between them and misses important aspects of the 'realness' of knowledge

(Verran 2001).

This narrowing of the focus of empirical history education research and its implicit aim to improve rather than to understand the dynamics of History classes excludes vital aspects of knowledge creation not directly linked to explicit historical learning. By investigating presentations of historical knowledge rather than the processes of historical knowledge creation, such research limits its focus to objects of knowledge rather than the practices of History classes.

Approaches to situated learning as, for example, described by Jean Lave and Etienne Wenger (Lave 1988; Lave & Wenger 1991) assume that knowledge is not situated in the mind but in practices. Although this approach can involve *all* of the activities occurring in a classroom situation, it still does not account for the fundamental differences between Mrs. Züge's, Karl's and Richard's statements. In that particular classroom situation, Mrs. Züge explained that at a certain time in Germany's past the government restricted the amount of food people could buy. Karl joked about people making chips from the few potatoes available to them and Richard stated that he would happily live on such rations if the sacrifice would guarantee him good grades. These three statements reveal three different ways of ordering reality, from which three different kinds of historical knowledge emerged, each confronting the other. I argue that the concept of situated learning is too general to effectively define such differences in the ordering of reality, conflating them as practices within different communities. The tension between such differences and the creation of fundamentally new knowledge that results from this is therefore difficult to analyse using the concept of situation learning.

In this thesis I will pay attention to elements of classroom interaction that do not appear to be related to history education. By highlighting these I will demonstrate that in fact they have a significant influence on the process of enacting historical knowledge. In doing this I will also investigate different practices for the ordering of reality.

1.2.2. Analytical tools applied in this thesis

I found three analytical tools within Science and Technology Studies (STS) beneficial for the investigation of how historical knowledge is enacted in the classroom: Actor-Network Theory (ANT), Estrid Sørensen's (2007a, 2007b, 2009), typology of classroom knowledge and Helen Verran's concept (1998, 1999, 2001; Verran & Christie 2007) of the ontic/epistemic imaginary. I will describe these approaches in detail in Chapter 2. Here I will merely introduce them and gesture to the possibilities inherent in applying them to my area of research.

Developed in the discipline of STS, ANT was originally used as a methodological approach to investigate the practices that enacted, shaped and circulated scientific knowledge and their effects on knowledge. During the past two decades this methodology has increasingly been used to investigate processes of knowledge enactment beyond the field of science (). According to ANT researchers such as Michel Callon (1986, 1987, 1991), Bruno Latour (1986a, 1986b, 1997, 1988b, 1993, 1999b, 2005), Annemarie Mol (1999, 2002, Mol & Law 2002) and John Law (1986a, 1999, 2004a, 2004b), knowledge is in a continuous process of enactment. It is an effect of actors assembling and various practices that connect or disconnect at least some of those actors. As the name suggests, actor-networks are central to Actor-Network Theory. Annemarie Mol (2010, 255) describes an actor as any phenomenon that does things, that makes a difference. An actor does not only act but is also itself enacted by other actors who form a network. This double function is crucial to my analysis, as historical knowledge is enacted by actors, which are themselves emerging from a network of other actors. Actors do not necessarily have to be human. Instead, ANT-analysis emphasizes the need to investigate material object and conditions and how these affect interactions and associations. ANT allows for the analysis of both human and non-human actors in the enactment of knowledge. By applying ANT methodology, the classroom situation described above can be analysed as being enacted by the teacher, the

teenagers, the classroom, as well the information about the shortage of food in the Weimar Republic. It can also elucidate the enacting of specific types of historical knowledge, can account for the varied dynamics and instabilities that I experienced in the classroom, and can investigate different ways of ordering realities.

In her work on the materiality of learning Estrid Sørensen develops a methodology to study learning not merely as a social phenomenon but as a socio-material one (Sørensen 2009, p. 5). I will categorize the emerging types of knowledge that I observed in the classroom in terms of Estrid Sørensen's typology of classroom knowledge, situated at the intersection of the sociology of knowledge and cultural psychology. Researching types of knowledge that emerged through the use of IT in classrooms, Sørensen observed three categories of knowledge, which she called: representational, communal and liquid (see p. 55). Adopting Sørensen's typology will enable me to categorize the differences in the enacted knowledge as various outcomes of knowledge practices.

Helen Verran's (1998, 2001, see p. 59) concept of the ontic/epistemic imaginary deems to be among the most prominent concepts in STS. Through an engagement with Verran's concept of the imaginary I analyse the ontological basis of different types of historical knowledge and suggest that different historical realities were enacted based on these different ontics. By applying Verran's ontic/epistemic imaginary to my research findings I hope to increase the practical, policy relevance of the thesis.

1.3. Doing research on the enactment of historical knowledge

Wondering about the teenagers' confusing ways of enacting historical knowledge and coming to understand the importance of the different aspects involved in those enactments were the results of my participation in classroom activities. The methodological decisions that I made in pursuit of answers to my

research questions are discussed under in the following sub-section. In describing these decisions I hope to elucidate the process by which I selected my field, collected my data, and how I chose certain ways of presenting my knowledge while excluding others. I wish to make explicit the fact that the results of my thesis are not gods-eye representations of classroom situations (Haraway 1997), but the effects of certain chosen practices, each with its own associations and attributes.

1.3.1. Data collection

My thesis draws on data collected in the second semester of the 2009/10 academic year in a class of Ninth Grade students in a secondary college in Berlin. For six months I spent four days a week with this class of twenty-three fifteen-year-old teenagers. I attended all of their lessons. I sat with them in the classroom, I followed the teachers' performances, and I also gave three presentations. I joined the class on school trips and spent time with the teenagers in the cafeteria at lunchtime. I observed and participated in conflicts and negotiations. I filled several fieldwork diaries with descriptions of what I saw and heard, thought and experienced. In the students' History and English classes I facilitated them – in cooperation with the teachers – in conducting debates that explored questions of historical justice. These debates were not conducted to teach the teenagers about the past. Instead, they were conducted to reveal the teenagers' approaches to historical injustices. I also made audio recordings of interviews which I conducted with twenty-two of the twenty-three teenagers. During these interviews I asked the teenagers about their understandings of justice, their attitudes towards history and how they would deal with specific historical injustices. To gain a more detailed understanding of the background of the History curriculum for lower secondary schools in Berlin (henceforth referred to as the 'History curriculum'), I also conducted an interview with Dr. Christoph Hamann, who is a history education researcher and referent at the State Institute for Schools and Media (LISUM).

1.3.2. Participant observation

At the beginning of my fieldwork, I made notes on teenagers' remarks and negotiations that bore any relation to issues of a moral or ethical kind. I also made notes about my confusing, amusing and irritating experiences of being back at school and sitting in a classroom. From the outset, I noticed that historical justice as a particular field of justice was not particularly relevant in the context of their everyday experiences of school. I noted that the teenagers' moral and ethical negotiations often grew out of small talk, teasing or ignoring. In order to understand the dynamics among the teenagers and between the teenagers and the teachers, I started recording everything I saw. I wrote about the little paper balls flying from one teenager's hand to another teenager's neck, about cuddles given and received, about a girl resting her head on another's shoulder and about the way the boys moved when talking about Play Station games. As a result, I have a very wide-ranging set of data. It was through this decision to broaden my research perspective and to note every comment and gesture that I was able to later shift my focus from teenagers' notions of historical justice to how classroom activities relate to the enactment of knowledge. Despite collecting a wide-ranging and detailed set of data during my extensive period of participant observation research, what follows draws directly on only a few of my field notes and on transcripts. The criterion for selection of this data was that it revels the ordering practices that enabled the enactment of historical knowledge.

I observed the social relations among the teenagers, and between them and adults in the school. Sudden changes and deep emotional responses characterized most of these relations. Like some others', my position in class was rather unstable. The teenagers carefully observed and tested me. Some of them tested my loyalty, played tricks on me. Some asked me to do their English homework, while others shared with me their pains and troubles. A few did all of the above. The instability in the relations to and among the teenagers made it necessary to adapt my behaviour every day. Disputes and shifting alliances were common. I also observed and experienced aggression. While being an

adult and therefore not 'one of them', I did not intervene in the teenagers' activities. I kept observing even when individuals behaved in ways that I thought unfair. If, however, attempts were made to involve me and to build alliances with me in these situations, I stated my opinion freely. Whenever I was involved in a process of problem solving, I privileged the notion of mutual respect above all else. My writing about classroom dynamics in the Chapters 3, 4 and 5 tends to elide the intensity of these dynamics. This is not intentional and the results of my research should be understood as having been developed in this fragile and unstable social situation.

1.3.3. Interviews

While conducting interviews in the school, I had to adapt my interview technique. Although planned as one-on-one interviews, some teenagers insisted on being interviewed with their friends; a condition to which I complied. I interviewed 22 of the 23 teenagers in the class. One teenager did not agree to be interviewed. In order to allow this teenager's request to remain anonymous, thereby avoiding any possible peer group pressure regarding the matter, I invited the teenager to come to an interview, but, unbeknown to the others, I made no recording or notes of what was said by this teenager. I conducted most of the interviews in an empty staff room.

The semi-structured interviews covered three topics: 1) the teenagers' personal thoughts and feelings about history; 2) their sentiments about justice; and 3) whether or not Holocaust survivors should be compensated (and if so, what form that compensation should take). Before each interview, I reassured the teenagers that there were no right or wrong responses to my questions, because, unlike a teacher, as I was not evaluating what or how much they knew about these topics. Rather, I was interested in how they apply the knowledge they have. When a participant seemed nervous about the interview, I offered for them to read my guiding questions before we began. I also reassured them that it was my responsibility to make the interview a positive experience for them. I began each topic with an opening question, and subsequent questions were

contingent on the teenagers' responses.

In the course of thinking and writing about my research my emphasis shifted from the interview data to that derived from my participant observation, which better enabled me to analyse the enactment of historical knowledge in the classroom. In the end, I did not draw directly on the interviews in writing this thesis, though the interviews significantly shaped my understanding of the enactment of historical knowledge as being inseparably entangled with the institution of school, the classroom and the teacher. In contrast to the teenagers' interviews, I have used the interview with Christoph Hamann extensively. In Chapter 5 I use this exchange to describe how Berlin's History curriculum came into being.

1.3.4. Document analysis of the History curriculum

It is perhaps unsurprising that I have discovered Berlin's History curriculum for the lower secondary school to be instrumentally involved in the enactment of historical knowledge in the classroom. I will investigate the kind of historical knowledge in the History curriculum, how it effects practices in the classroom and how these practices provoke the enactment of a specific type of historical knowledge.

It is not within the scope of this thesis to engage in an in-depth analysis of the academic discourse on history education. Although an important actor in the enactment of historical knowledge in the classroom, I do not analyse the discourse on history education as something separate from its inter-relations with the curriculum, teachers and the students. I do, however, reference it in my discussion of the curriculum (see Chapter 5).

1.3.5. Use of language

In this thesis I attempt to reproduce the language of the teenagers as accurately as possible. During the interviews, I noticed they used language rather

inexactly. While some words were used in a way that conveyed their dictionary meaning, others were used to carry a variety of meanings, which seemed to shift depending on context. I often mirrored their responses in order to confirm my interpretation of the meaning of their statements. I wanted to give them the chance to correct or enhance my interpretation. Sometimes they added seemingly random information, but rarely did they correct my summaries. On a few occasions a person's quiet, hesitant response to my mirroring made me suspect that my summary of their account was more explicit than their intended response to the topic. In the debates, such mirroring of responses was not possible.

When writing this thesis I had to decide whether to refer to the young people involved as 'teenagers' or as 'students'. I will argue that there are ordering practices occurring in classrooms through which the enactment of historical knowledge is stabilized, and that one of these involves the translation of the young people's identities as teenagers to that of students. In order to clarify that I understand the status of being a student as a translation, I refer to the fifteen years olds as 'students' when I highlight their involvement in the process of ordering through which the enactment of historical knowledge is enabled or stabilized. I refer to the fifteen-years-olds as 'teenagers' when I analyse their practices. When writing about the History curriculum or other regulations, I apply the term that is used in the document.

1.3.6. Translation

In translating the statements of the participants from German to English I was not only confronted with the teenagers' imprecise use of language, but also with the challenge of transposing this language into another. I sometimes wondered if the meanings of some terms used by the teenagers had a specific meaning in the context of school that differed from my generalised understanding of them. The language the teenagers used when talking with each other, particularly that used between teenagers from migrant backgrounds, had some specific

characteristics. I have attempted to convey these context-specific, nuanced meanings in the English translation. On the few occasions when an appropriate English word or phrase does not exist this is explained in a footnote. Only slang phrases were not literally translated. If I found an English slang phrase that conveyed the same sentiment, one that English-speaking teenagers would use in a similar situation, I employed that rather than make a literal translation of the German original. The translation of the interview with Christoph Hamann was more straightforward, as the language used was more formal and its meanings more conventional. Again, though, when the translation is problematic, this is acknowledged and explanation provided in the footnotes as to how the particular word is used in German.

1.3.7. Teachers

During my time in the classroom my contact was not limited to that with teenagers, for I was also in regular contact with their teachers. Some teachers accepted my presence as a researcher in their classroom, while others did not actively engage with me. A few teachers made jokes about the teenagers when talking with me, trying to build alliances with me against the teenagers. I refused to enter into any such alliances. Despite my assurances to all the teachers that my research was not concerned with finding fault or identifying 'mistakes', one teacher vented her irritation at my participation in her lessons. Supported by the school principal, I compromised by offering to skip one of her two subjects each week. Overall, I established harmonious relationship with nearly of all the teachers and I am deeply gratefully for their goodwill and patience in allowing me to sit in on their classes for six months.

1.3.8. School

Statistically, every third student in Berlin has a migrant background; that is, he or she or at least one of his or her parents was not born in Germany (Rockmann 2011, p. 8). In planning my fieldwork, I decided to look for a school with a similar proportion of students with migrant backgrounds. Originally intending to

investigate teenagers' notions of historical justice, my assumption was that teenagers with migrant backgrounds would have different notions of historical justice from those expressed by their German peers. I contacted four possible schools, and chose one over the others when its principal granted me approval and assured me I would be supported during my research. Slightly more than fifty per cent of all students at the school had a migrant background, a percentage roughly reflected in the class that I joined. Nine teenagers were born in Germany and had German-born parents. Eleven had a Kurdish or Turkish family background, and the remaining three came from various other countries. This ethnic mixture was expressed in the organization of friendships. Although all the teenagers worked well together when requested to do so, their friendships tended to be organized around a distinction between a Turkish-Kurdish and a German family background.

Besides explaining my project to the teenagers and their teachers, I also organized a parent information evening, in which I explained in detail what I intended to do during the research period and what the collected data would be used for. As well as many of the parents and the teacher responsible for the class, Berlin's privacy commissioner also attended this information session.

1.4. Organization of the thesis

Although I hope to contribute to the discourse in the field of history education, this thesis is primarily situated in the field of Science and Technology Studies. Its organisation follows an analysis of the enactment of historical knowledge in the classroom.

1.4.1. Chapter 2 – Methodologies for analysing the enactment of knowledge

In the second chapter I introduce terms and concepts central to this thesis. I highlight that researchers in the field of Science and Technology Studies do not describe knowledge as something already existing. Rather, they understand it

as being made and held together by and through practices. In this way, History classes are not places where historical knowledge is passed on from one generation to the next, but rather places where historical knowledge is newly enacted. STS researchers describe the enactment of knowledge as occurring through practices of associating, attributing, circulating and adapting certain elements to a network that materializes as knowledge (Callon 1986; Latour 1986a; Latour & Woolgar 1986).

Also introduced is the notion of actor-network, which is always both a network effect and itself enacting within a process. As such, the actors later introduced will be described and understood as network effects that contribute to the enactment of historical knowledge in the classroom. I will propose that historical knowledge is not only a network enacted by actors, but is itself an actor, and that an actor can be either human or nonhuman. Finally, I will introduce two key concepts: Estrid Sørensen's (2009) typology of classroom knowledge; and Helen Verran's (2001) idea of the ontic/epistemic imaginary in which a certain reality is enacted.

1.4.2. Chapter 3 – Enacting communal knowledge in the classroom

Chapter 3 describes how the teenagers enacted an historical knowledge that was fundamentally different from the historical knowledge negotiated for and circulated within the curriculum. It demonstrates the way arguments were made and contradicted, adapted and mixed. Different information was related and adapted to other information, to the classroom activities and to certain points in times. The enacted historical knowledge differed from that made by the curriculum in the enacting practices, in the attributes and in its ontological foundation. I propose that what I observed was an ongoing and open-ended practice of enacting a different kind of historical knowledge. I suggest that the teenagers effectively questioned the ontics of previously enacted historical knowledge rather than merely related to it.

1.4.3. Chapter 4 – Defining the actor-networks involved in stabilizing and destabilizing the classroom practices

In the fourth chapter I look at the enactment of knowledge within a *specific* socio-material environment, namely the classroom. I identify central actors for the enactment of historical knowledge in this environment and argue that the actors order the reality and that this ordering has effects. I describe the classroom as an 'ordered/ordering microworld' (Verran 2001, p. 159). I suggest that different actors shape, cause or influence the enactment of knowledge in the classroom, and demonstrate that the enactment of knowledge is challenged if one of the identified actors fails to be related to the network that enacts the historical knowledge. The enactment of knowledge, I contend, can be understood as an association of materials and activities that academics, teachers and teenagers mobilize and relate in the classroom; it exists in inscriptions, regulations, materials, power, legitimating processes and in classroom activities.

1.4.4. Chapter 5 – Circulated historical knowledge

The debates on how and what teenagers should learn in History classes affected the enactment of historical knowledge in the classroom. I noticed that some past events and some classroom practices were deemed more important than others. In Chapter 5 I demonstrate how the History curriculum is influential in the enactment of historical knowledge in the classroom. I trace the history of Berlin's History curriculum and discuss the actors that brought it into being. In analysing this process, I propose that different kinds of knowledge were negotiated and that one kind of historical knowledge was preferred over another. I analyse these two kinds of historical knowledge not only in terms of the differences in the associations they made, but also in terms of their ontological bases.

1.4.5. Chapter 6 – The co-existence of different imaginaries – a synthesis

In Chapter 6 I synthesize the previous chapters and explain that what I experienced as 'confusingly experimental' was caused by the co-existence of different imaginaries. I gesture to the tensions that emerged through this co-existence and describe ordering practices applied in order to deal with these tensions. Drawing on Verran's (2001, 2007a, 2007b, 2010, 2013) work on generative critique, I argue that the acknowledgement of the co-existence of imaginaries, overlapping and in tension with each other, goes beyond relativist and universalist analysis. I also argue that the acknowledgement of different imaginaries is beneficial for history education and, based on my findings, I provide suggestions regarding history education.

1.4.6. Chapter 7 – Reflections

In the final chapter I reflect on the process of writing my thesis. I highlight my original contribution to the field of knowledge production. Finally, I outline the scope of future research that needs to be undertaken in this field.

2. Methodologies for analysing the enactment of knowledge

2.1. Introduction

In this chapter I outline the theoretical and methodological concepts developed in Science and Technology Studies (STS) and discuss their benefits and limitations and my use of them in this work. I will introduce these concepts in order to situate STS in the wider academic field. Discussing the benefits of applying concepts within STS, I will provide information about which actors will be more highlighted than others and how I cut the network, how I position myself in my research and how I deal with reducing whole personalities to actor-networks in the classroom.

Science and Technology Studies emerged in the 1970s and grew out of a number of different theoretical traditions. Jörg Niewöhner (2012a, p. 52) points out that STS emerged from criticism of existing approaches in the fields of scientific theories and sociology of science, in the work of, among others, the sociologist of science, Robert K. Merton. Merton claimed that the process of choosing research topics is socially and historically embedded and often driven by forces external to science. The discourses that followed Merton's claim raised criticism among scholars. Presenting scientific facts, results of scientific research, as not existing independently of external regulations caused an increased attentiveness to and criticism of mechanisms through which scientific knowledge is refuted or verified. This criticism was directed against the external and internal control mechanisms in science. Among many others were the criticisms of the Hungarian-British chemist and philosopher Michael Polanyi (2000, originally 1962) and those of the Austrian philosopher of science Paul Feyerabend (1976) (Niewöhner 2012b, p. 95). In the aftermath of the Second World War, Polanyi was alerted by the entanglement of scientific, political and industrial actors. In his attempt to situate the sciences more independently from political and industrial influences, he argued that scientific credibility should be

derived from the plausibility of the scientific fact for the scientific community, from its scientific value for the community and its originality (2000). Hence, he claimed that the regulations through which science is controlled must come from within the scientific community.

Paul Feyerabend (1976) also argued for a strict separation between scientific and political actors, but unlike Polanyi he did not place the control mechanisms for science within the scientific community (Feyerabend 1976). Rather, Feyerabend suggested that there are no general criteria for evaluating scientific methods or traditions as true or false. He argued that due to the lack of general criteria no method or theory can be understood as universal or a-historic. He termed the epistemological indefiniteness in science 'philosophical relativism' and proposed to apply a plurality of methods, so that method should be open to further adaption.

Niewöhner (2012b, p. 97) describes these sociological and philosophical discussions of the validity of scientific facts as being shifted from the sociology of sciences to the sociology of scientific knowledge. He points out that the distinction between sciences and social sciences moved into the background, while investigations of the context in which scientific knowledge is produced moved to the foreground. However, the consequences of different attempts to regulate scientific knowledge production on the produced knowledge were little considered in these discussions. Niewöhner (2012b, p. 80) argues that little research was done on comparative epistemology, in which scientific practices were investigated in relation to the gained insights and in which the inextricable entanglement of the gaining of knowledge, science and society becomes apparent.

This entanglement of knowledge practices, science and society was the cardinal point in the work of another scholar who heavily shaped the work of STS, the French philosopher Michel Foucault (1972, 1981, 1991, 1994). Unlike Polanyi and Feyerabend, Foucault did not separate political, industrial and

scientific actors. He described scientific knowledge production as necessarily influenced by power and emerging from forces through which the knowledge production was shaped. Foucault's reflection on knowledge practices described the emergence of scientific knowledge as inextricably entangled with technologies and practices that contribute to the specific situatedness of scientific knowledge in society.

STS researchers have investigated the production of scientific knowledge and technology in a social context and the obverse, the effect of the production of scientific knowledge on the social context. This is the genuine field of Science and Technology Studies. STS researchers have argued that ontological questions about the nature of phenomena and epistemological questions of how we can apprehend them can best are answered through an empirical investigation of the practices through which these phenomena come into being. Through this, the production of knowledge has been understood as being a practical matter rather than an abstract internal process (Niewöhner, Sørensen & Beck 2012, p. 14).

Under the broader banner of Science and Technology Studies, several methodological approaches have been developed, including Actor-Network Theory (ANT), the Sociology of Scientific Knowledge (SSK) and other specific and less broad approaches, such as Helen Verran's (2001) imaginary and Estrid Sørensen's (2009) typology of classroom knowledge. Before discussing the relationship between them, I will firstly outline the distinctive characteristics of ANT.

In 1979, Bruno Latour and Steve Woolgar published the first laboratory study about the production of scientific facts *Laboratory Life: The Social Construction of Scientific Facts*.[3] The study is of particular importance for STS-researchers as it introduced concepts that were later refined into what became known as Actor-Network Theory (ANT). Nowadays, the French anthropologists Bruno

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[3] In 1986 the book was republished without the word 'Social' in its title.

Latour and Michel Callon and the British sociologist Steve Woolgar have been discussed as the pioneers of ANT.

The key concepts of and discourses in ANT have been developed and refined on the assumption that the production of knowledge is a cultural practice. Latour (1999b, p. 19) states that, 'ANT is not a theory of what the social is made of'. Rather it is a method 'to learn from the actors without imposing on them an *a priori* definition of their world-building capacities' (Latour 1999b, p.20). Instead of separating the social from the material, ANT researchers have investigated how the social is enacted in the interaction of human and nonhuman actors. The entities themselves are not the object of ANT analysis, but the dynamics and effects of relations and networks among them. ANT research focuses on observable practices rather than on theoretical concepts. In other words, Actor-Network Theory questions the nature-culture dichotomy beyond social-constructive criticism (Niewöhner, Sørensen & Beck 2012, p. 14).

Jörg Niewöhner, Estrid Sørensen & Stefan Beck (2012, p. 14) point out that the emergence of ANT coincided with second wave feminism, which had a significant influence on cultural anthropology in the United States of America. Feminist critics such as Susan Leigh Star (1991; Star & Bowker 2000), Marilyn Strathern (1992, 1996) and Donna Haraway (1991, 1997) argue that science and scientific knowledge should be understood as an expression of power relations within a society rather than existing somehow before or outside of culture. With their criticism they argue for the investigation of the power relations involved in the knowledge production and align in this with contemporary scholars from other traditions like Foucault.

Since its emergence, many researchers have applied ANT. It has been applied to the investigation of knowledge production in the sciences (Latour & Woolgar 1979; Callon 1986; Latour 1988a, 1999a), in economy (Woolgar 2004) and to an investigation of technology, (Pinch & Bijker 1984, 1986; Bijker 1995; Pinch 1988; de Laet & Mol 2000; Suchman 2000). Other topics include agency and

subjectivity (Law & Moser 1999; Mol 1999, Thrift 2000, 2008), gender (Dugdale 1995), medicine (Singleton & Michael 1993; Mol 2002) and spatiality (Law 1986b; Mol & Law 1994; Thrift 1996; 2002; Callon 2004). Despite the variety of topics researchers often apply the same analytical tools from ANT.

However, ANT is not a 'singular entity' (Gad & Jensen 2010, p. 57) and some academic fields have adapted ANT research without locating themselves in the field of STS. A particularly relevant example of this occurs in the academic field of education, wherein educationalists have applied the ANT methodology when researching: e.g. the effects of affection on education (Mulcahy 2011a, 2011b); learning processes (Fenwick & Edwards 2010); and education policy (Gorur 2011). However, my research is firmly situated in the field of STS through its consistent application of STS questions, methodologies and analytical tools.

In this chapter I explain the three STS methodological approaches that I use to analyse my empirical data, beginning with the key ANT concepts that I apply. These key concepts are: the social, the actor-network, human and nonhuman actors, and the practices of associating, translating and mobilizing. Following this discussion, I provide detailed accounts of Estrid Sørensen's (2009) typology of classroom knowledge and of Helen Verran's (2001) ontic/epistemic imaginary.

2.2. Actor-Network Theory

2.2.1. The social

Bruno Latour (1986a) points to the difference between classic understandings of the social that conceptualize and classify social phenomena, and the ANT approach that focuses on the associations between participants of the social. '[S]ociety is not what holds us together, it is what is held together' (Latour 1986a, p. 276). Proposing that 'the social' results from practices and not the

other way around, Latour argues that social scientists have mistaken the effect for the cause.

Instead of investigating what is 'glued' by the practices from which society emerges, ANT social scientists investigate 'the glue'. Latour suggests that it is of less importance for an understanding of 'the social' to refer to a reserve of energy such as 'capital' or 'power' than it is to refer to its enactment by somebody. He argues, that 'it is always necessary to redefine who is acting to maintain the society' (Latour 1986a, p. 276). In these maintenance actions the social becomes visible.

If resources such as 'capital' and 'power' are enacted instead of acquired or possessed, then the essence[4] of the resources is of no importance for the analysis. I suggest that the same applies to 'knowledge'. If knowledge is enacted rather than acquired or possessed, then the essence of knowledge is not important. Instead, the *practices* that enact 'capital', 'power' and 'knowledge' become the matter of analysis, the *relations* in which they are enacted and the *elements*[5] that are involved in enacting them. In this understanding the social is not an object that includes only humans, but both a movement between and a result of human and nonhuman participants.

In order to investigate the social that results from practices, relations and elements that enact, shape and move within other relations, Latour (2005, p. 165) suggests 'to keep the social flat'. Like a map of a town that shows streets between houses, parks and lakes, the social needs to be understood in its relations, or associations on which elements are moved. The social is both the result of these associations and what is moved in these associations. Latour argues that the social ought to be freed of any overarching structures, such as the 'global'. As the understanding of the social circulated in the ANT tradition is

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[4] I use the word 'essence' in the sense of an attribute or a feature that is attributed to be inherent in entities.
[5] These elements are understood as being enacted themselves. Rather than the essence of these elements it is asked how they came into being.

crucial for this thesis, I will further explore the limitations of analysing overarching structures or reductions, using Latour's example of the global.

According to Latour, the global is an effect of practices rather than their cause. Many practices are necessary to reduce the global to specific characteristics that make it appear to be a purified abstraction. However, an overarching structure like the global has little reality in itself. Rather, for Latour, the global is a hybrid of practices that brings it into being. Associations are made and stabilized and attributes are attached. 'No place can be said to be bigger than any other place, but some can be said to benefit from far safer connections with many more places than others.' (Latour 2005, p. 176).

Similar to the global, the social ought to be freed from reductions such as the 'local'. Latour (2005, pp. 200-201) chooses the example of face-to-face interactions to illustrate the five problems of the concept of 'local'. First, face-to-face interactions are not *isotopic*. 'What is acting at the same moment in any place is coming from many other places, many distant materials, and many faraway actors'. Second, face-to-face interactions are not *synchronic*. What is acting might have different ages, different speeds and different durabilities). Third, no face-to-face interaction is *synoptic*, as most of the other participants involved in a single face-to-face interaction remain invisible. Fourth, face-to-face interactions are not *homogeneous*, as both human and nonhuman actors are involved in carrying out the action. Fifth, face-to-face interactions are not *isobaric*, as different pressures are involved in the interaction. Given that these five features limit the analysis of face-to-face interactions, the investigation of the local offers a very limited account of the social. It reduces the social reality to very few features and neglects a great amount of other actors that act locally without being there. A reduced account like this focuses on *what is* rather than on *how it becomes*.

In contrast, ANT researchers choose to focus on the practices through which reality comes into being and what emerges from these activities. In ANT

research reality is not denied, but rather understood as both an effect of previous practices and a condition for new reality emerging. In 'The Pasteurization of France' Bruno Latour (1988) writes about the real:

> Whatever resists trials is real. […] The real is not one thing among others but rather *gradients of resistance*. There is no difference between the "real" and the "unreal", the "real" and the "possible", the "real" and the "imaginary." Rather, there are all the differences experienced between those that resist for long and those that do not, those that resist courageously and those that do not, those that know how to ally or isolate themselves and those that do not. No force can, as it is often put, "know reality," other than through the difference it creates in resisting others. (1988a, p. 158-159, my emphasis)

Again, ANT researchers do not make essential claims about global or local realities, but investigate how the social is enacted. The social is then not embedded in a pre-existing reality, but is enacted by activities and relations that cause resistances, which in turn are shaped by resistances. In ANT, researchers intend to make visible these activities or relations that create the social and that involve the 'gradients of resistance'. Hence, in ANT the social is understood as continually enacted in networks of relations.

2.2.2. Actor-Network

In ANT the entity that enacts the social is called an actor. Actors can be human, material (such as devices), forms or bodies, inscriptions, discourses or ideas. There is no limit to what can be called an actor; something is an actor as long as he/she/it acts on the phenomenon that is under investigation. Different actors do different things, but what they have in common is that they do not enact something that exists independently from the actors. Rather, the actors make a difference to the social. They relate something or bind themselves to other actors; they add attributes and create or enact a new sociality (Mol 2010).

Early ANT readings originally distinguished between actors and actants. An actant is every entity that acts or shifts actions and that is performed itself, while

'an actor is an actant endowed with a character' (Akrich & Latour 1992, p. 259). Thus, actors might appear as if they have agency, morals or subjectivity. In this reading two entities are acting: the actant that/who is made to be acting and the actors that/who acts. These two actors are related to each other and exist in tension to each other. One actor affords the other, and each of them can bring another actor into being.

> [A]ctantiality is not what an actor does, but what provides actants with their actions, with their subjectivity, with their intentionality, with their morality. When you hook up with this circulation entity, then you are partially provided with consciousness, subjectivity, actoriality etc. (1999b, p. 18)

Because these meanings cannot be separated in reality, as there will never be a pre-existing action that is not a result of other actions, later ANT writings have allowed 'actor' to stand for both 'actant' and 'the actor'.

Actors act within a network of relations of actors known as an actor-network. According to the Dutch philosopher of science Annemarie Mol (2010, p. 258), this actor-network is flowing, emerging, alternating and unpredictable. Being an effect of practices, a network does not determine that actors will act in certain roles, rather, 'while being enacted by what is around them, actors are still active'. In other words, actors constantly make the associations that form networks and other actors.

Just as ANT researchers are not interested in the essence of objects, they are not interested in the essence of associations. Instead, they are concerned with the practices by which the association came into being and in the effects of these associating practices. The focus is on the flow, on the dynamics and the process of enacting. Furthermore, an actor can act differently in different networks. There are not only flows, emergences and changes within one network, but in relations between different networks as well. In this way, different actors can contribute to different networks and a network can enact different actors.

A number of ANT researchers have pointed to the limitations of the term 'network', among them Latour himself. He argues the word is variously applied to 'sewage, telephones and the Internet' (Latour 2004, p. 83). While sociologists generally understand a network as something pre-existing, ANT researchers employ the term with the emphasis on the 'work' rather than the 'net'. In an attempt to underscore this fundamental difference of emphasis, Latour (2005, p. 143) used the term 'worknet' instead of 'network'

The hyphen in 'actor-network' indicates that there is a tension between the actor and the network (Latour 1999b). The tension derives from the fact that the actors and the network enact each other. ANT researchers such as Latour (1999) and Law (2004) contrast the tension between the actor and the network with the tension between actor and structure as understood in classic sociology.

Annemarie Mol and John Law (1994) have analysed the social as space in which practices occur. They refer to the spatial aspects of the social using the term 'topology'. One of the analytical tools that I apply when analysing my empirical data, Sørensen's (2009) typology of classroom knowledge, is based on this spatial approach to the social. For this reason, what follows is a brief overview of Mol and Law's (1994) topology of the social.

Mol and Law (1994) state that the social does not exist as a single spatial type. Rather it performs a variety of kinds of space. Mol and Law identify these as *regions*, *networks* and *fluids*. In order to explain the regions Mol and Law draw on the example of a map. If social activities were read like a map, one could find different regions, for example, the region of gender or the region of ethics. Mol and Law propose that each object in each region is defined and that their differences to other objects and other regions contribute to the distinction. These differences create regional maps. 'It is thus that an "inside" and an "outside" are created. What is similar is close. What is different is elsewhere' (Mol & Law 1994, p. 647).

In contrast to regions, the network brings spaces together that can be far away on a regional map. What creates proximity in a network is not what lies 'inside' or 'outside' a set of boundaries, but rather the semiotics of the elements of the network. 'Places with *a similar set of elements and similar relations between them* are close to one another, and those with different elements or relations are far apart.' (Mol & Law 1994, p. 649, emphasis in original) Differences vary according to the relation of the linked elements. Mol and Law (1994, p. 649) describe networks as a 'series of elements with well defined relations between them'.

Arguing that some spaces have different topological characteristics to those of regions or networks, Mol and Law (1994, pp. 659-662) introduce a third reading of social spaces: fluids. Mol and Law list four characteristics of fluids. Firstly, in contrast to regions, fluids often have no clear boundaries. Secondly, fluids consist of a mixture of elements that can, but do not necessarily, have to be separated. Thirdly, there is no single strongpoint in fluids and, thus, formations in a fluid space do not easily collapse. And fourthly, elements in a fluid are flexible in their relations to each other and the links between them are not stable. While differences within a region are homogenized, they remain heterogeneous in the fluid.

2.2.3. Critiques of ANT

The concepts of the social as enacted in relations, the actor and the network have been severely criticized. In particular the critiques from feminists such as Susan Leigh Star, Marilyn Strathern and Donna Haraway have influenced my approach. I will briefly outline three main critiques before detailing how they have shaped my use of ANT.

Susan Leigh Star's (1991) criticism is directed at the political consequences of conceptualizing the social as resulting from actor-networks. Rather than 'to begin with a celebration of the fact of human/nonhuman mingling', Star (1991, p. 43) finds another question 'more analytically interesting and more political': *cui*

bono? Star argues that leading actor-network theorists such as Callon and Latour focus on heroes or near-heroes such as Louis Pasteur.[6] Star (1991, p. 29) argues against this focus. 'By experience and by affinity, some of us begin not with Pasteur, but with the monster, the outcast'. Not only the highlighted actors are of concern for social researchers, but also the downplayed actors. Star (1991, p. 38) suggests that feminist analysis enables the 'move from the experience of being a non-user' to questioning the presence of a phenomenon. In contrast, ANT does not pay attention to such experiences and their historical contingency. In opening up new fields of research ANT ignores traditional questions of distribution and access (Star 1991, p. 42). For Star, any analysis of the social must include these traditional questions regarding the costs of distribution and access, and also account for the nature of the personal. She suggests:

> One powerful way these two approaches may be joined is linking the 'non-user' point of departure with the translation model, returning to the point of view of that which cannot be translated: the monstrous, the Other, the wild. (1991, p. 38)

Star (1991, p. 44) argues that in this synthesised approach the investigation must begin with an understanding of the multiplicity of humans and objects and with a commitment to do research about practices that stabilizes the network for some but not for others.

Marilyn Strathern's (1996) criticism is directed at the assumptions implicit to ANT. What is heterogeneous (or homogenous) is not a characteristic of the real, of what Strathern calls 'the flow'. Instead, an external factor, the researcher, made the distinction between heterogeneous and homogeneous. Consequently, Strathern argues that it is not the network that is heterogeneous, but the categories in which the elements of the network are ordered. The distinction with which the flow is categorised is premised on ontological differences between domains.

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[6] This refers to Latour's 1988 work, *The Pasteurization of France*.

While Latour describes ANT as being 'a method to learn from the actors without imposing on them an *a priori* definition of their world-building capacities' (Latour 1999, p. 19), Strathern identifies an *a priori* assumption applied in ANT. Describing a network as a 'hybrid imagined in a socially extended state', Strathern (1996, pp. 521-522) argues that the very concept of hybrid necessarily entails endless narratives of mixtures, which itself can be endless. Thus, theoretically a network extends endlessly and networks can be found within networks.

As it is epistemically impossible to analyse these hybrids, as Strathern terms the networks, she raises the question where 'to cut' the network. She claims that the practice of cutting networks is based on a priori assumptions about the importance in social relationships. Comparing Melanesian and Euro-American notions of kinship in order to illustrate different ways of ordering hybrids, Strathern suggests:

> It is thus necessary to spell out the fact that there is a cultural predisposition among Euro-Americans to imagine that social relationships concern commonalities of identity before they concern difference, and that heterogeneity is inevitable in combining the human with the nonhuman. (1996, p. 525)

This focus on ordering strategies in the defining of networks leads Strathern to discuss the method by which a network is defined. She argues that in a Euro-American context ownership is an appropriate concept to set boundaries for hybrids.

> Ownership is powerful because of its double effects, as simultaneously a matter of belonging and of property. Euro-Americans will not have to look far in order to determine network length; they have always known that belonging divides and property disowns. So where technology might enlarge networks, proprietorship can be guaranteed to cut them down to size. (1996, p. 531)

In short, Strathern suggests that an implicit *a priori* assumption, such as ownership, can be used to cut the network.

Finally, Donna Haraway criticizes the view 'from nowhere' or the 'God's-eye' perspective implicit to the network metaphor. She argues that this 'God-trick' is only an illusion that creates a belief in infinite vision. She suggests that the idea of 'objective' scientific theory formulated from the observer's detached perspective is a myth. No researcher sees the world from above, perceiving it as a system with interlocking, neatly fitting parts. Instead, Haraway contends that all perspectives are located somewhere, are taken from a specific vantage point. In this way, all theory is related to the place from which it is seen (1997, p. 285).

Each of these critiques has been influential in the development of ANT in general and in my application of it in particular. In response to Star's criticism, I argue that in order to stabilize the network power becomes important in prioritizing different types of historical knowledge. In turn, I suggest that enacting the power of the teacher and of the school becomes less important if different types of historical knowledge are acknowledged.

I also tackle the problem of limitlessness by describing why I chose the actors that I identified as forming a network in which historical knowledge is enacted. In doing this I justify why I define the network as I did and excluded a variety of actors. In this way I position myself in the research and make my own involvement in the network and my subjective analysis of the data explicit, thereby avoiding any pretence of possessing a God-like perspective.

2.2.4. Human and nonhuman actors

As earlier mentioned, in ANT actors can be human or nonhuman. However, many researchers in the ANT tradition (for example Callon & Law 1995; Law & Singleton 2005; Law 2008, Mol 2011) agree that distinguishing between human and nonhuman actors is difficult as both are involved in an ongoing mutual

enactment. Nonhuman actors shape, regulate or structure human practices. At the same time, human actors shape, regulate and structure practices of nonhuman actors. Both can relate to each other or themselves, both can stabilize the emerging links and can circulate or transform each other. Hence, given the relationality of the social and the refusal to define an object's essence, researchers in the ANT tradition do not separate human and nonhuman actors when analysing the social. Instead, both are understood as enacted in and through relations and it is the enacting practices that are in the focus of these researchers.

In *The Body Multiple* Mol (2002) describes how different kinds of arteriosclerosis were enacted among different sites in a hospital. When talking about arteriosclerosis and how to test for it, the patient and the doctor have different knowledges of the disease. For the patients arteriosclerosis is the pain in their legs. For the doctor, arteriosclerosis refers to the patient's symptoms, but also a clearly defined medical term, with its own history of diagnosis and treatment. The radiology department understands arteriosclerosis as a loss in lumen. The difference in conceptualizing the condition is fundamental. It is not only that arteriosclerosis is presented differently in different sites, the different sites claim that different factors cause it and hence they propose different treatments. Mol suggests that in each site of the hospital a different version of arteriosclerosis is enacted. The practices not only involve humans, but also nonhumans, such as x-rays, microscopes and blood cells. Mol argues that she observed not only different epistemic approaches to arteriosclerosis from which different knowledge about arteriosclerosis emerged. Rather, the actors also enacted different ontologies of arteriosclerosis and with doing so different realities of it. Mol concludes that the body is hence more than one, but less than many – it is a multiple body.

Mol's research indicates the emphasis put on the effects of practices between human and nonhuman actors. Again, arteriosclerosis was not at the centre of Mol's research, but the practices and relations through which it was enacted.

Similarly, I understand historical knowledge as an effect of practices between human and nonhuman actors and will investigate the practices through which it is enacted.

Two main criticisms of making nonhuman entities (en)actors of the social have come from two distinct fields.[7] Researchers in the tradition of Sociology of Scientific Knowledge (SSK) discussed in the early 1990s, which questions the assumption that nonhuman beings can be understood as acting equally to human beings. The second line of criticism aims to save some forms of 'minimal humanism' and was developed in the field of cultural geography. In the following I will discuss both criticisms.

To address the first criticism we must engage with the work of Harry M. Collins and Steven Yearly, researchers in the tradition of the Edinburgh School who have investigated the production of scientific facts by analysing the specific social, historical and organizational context of their emergence. With their article *The epistemological chicken* Collins and Yearley (1992) initiated the so-called 'Epistemological Chicken Debate' (Kehl & Mathar 2012, pp. 117-118). Without delving into the detail of the debate, I wish to outline its central arguments. Collins and Yearley (1992, p. 303) propose that ANT (or 'the French School', as they term it is only radical in its vocabulary, for it is conservative in its implications. They argue:

> Latour's treatment of the technological world fails in three ways. First, it enrols the false ally of the counterfactual method. Second, since the counterfactual method fails, the story of the power of things can amount to no more than technologists' second hand accounts; it is sociologically prosaic. Third, the distinction between human action and the behaviour of things and its significance for the automation of human skills is, ironically, one area where sociologists of scientific knowledge have the ability to speak authoritatively as scientists. (1992, p. 321)

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[7] For more information about criticisms and discourses in this field I suggest Beck, Niewöhner, Sørensen 2012.

According to Collins and Yearly, material objects are already socially constructed. An understanding of constituting a phenomenon by interacting with material neglects the social context in which the material was developed. If the conditions of social construction of this material are not considered the research continues to be self-referring.

Collins and Yearly (1992, p. 311) claim that Latour's lack of understanding of technological devices (as described in Latour's and Woolgar's *Laboratory Life* (1979)) led to an understanding of the devices as acting autonomously. Due to this perception of autonomous devices, Latour misinterpreted them as having immutable inscriptions. Immutable inscriptions, then, were perceived as *autonomous* actors. Collins and Yearly (1992, p. 311) argue that, in contrast to a non-expert like Latour, 'to experts, everything is mutable', and that inscriptions cannot act autonomously.

Collins and Yearly not only criticize the idea of understanding nonhumans as actors. They also argue that the 'French-style radical symmetry draws no boundary between created objects and those that occur naturally' (1992, p. 312). In order to investigate the social symmetrically in the way suggested by researcher of the SSK, one has to use routine methods of scientific research to investigate the potency of nonhuman actors. A single interpretative method is insufficient as nonhuman actors, such as scallops (Callon 1986) or a door-closer[8] (Latour 1988b) have no social life. In the case of Latour's article on the sociology of doors, an investigation of engineering or detailed examination of the use of doors would be more appropriate than identifying the door as an actor. These routine methods of scientific research, however, are not critically reflected upon, state Collins and Yearly. Similarly, with regard to the issue of autonomy, Collins and Yearly (1992, p. 320) argue that the lack of control over methods allows control to be given to objects.

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[8] In his 1986 book on the scallops and fishermen of St. Brieuc Bay, Michel Callon identified scallops as actors. Bruno Latour made a similarly revolutionary claim when he wrote about the sociology of the door-closer.

ANT researchers (Callon & Latour 1992; Latour 1992; Woolgar 1992) counter that SSK scholars only provide asymmetrical explanations when focussing exclusively on social contexts, and that they strengthen already existing dichotomies such as the human-nonhuman when considering objects as being passive and as only representational. In this way, they fail to account for the mutual enactment of human and nonhuman actors and reduce the social to something enacted solely by humans.

Cultural geographers such as Paul Harrison and Nigel Thrift, who criticize ANT's shifting focus from human-centrism towards human-to-nonhuman interactions, level the second, more recent line of criticism. Harrison argues that some phenomena should not be described as enacted through relations. Drawing on Paul Auster's 'Portrait of an invisible man', Harrison (2011, p. 159) discusses that something gets lost in the 'latest expansion of the social scientific "material imaginary"'. He agrees with Jane Bennett (2005) that social sciences reduce the entireness of a person to the social activities of a human. Pointing to the transient aspect of a person's life, Harrison asks

> What place is there for such concerns when everything is of the order of compositions, even decompositions? What reason for mourning when the subject is produced each time on the basis of objects? […] To what reason addressed, to what is it owed, when there are no others? I don't know, but along with Nigel Thrift (2008), John Wylie (2010) and Mitch Rose (2010) amongst others, I find myself wanting to retain or give voice, to save or keep safe, some form of 'minimal humanism' (Harrison 2011, p. 159).

Harrison (2011) claims that there is an essence of a person that cannot be reduced to its activities; that it is not the ever-changing flow in the enactment of and by networks that is of importance, but the fact that something unique results from this enactment. In the case of an individual person, this uniqueness cannot or should not be explained as relationally enacted or as ever changing.

Harrison's (2011) criticism is based on the assumption that the researcher proffers a representation of the reality, of how a person *is*. ANT researchers, in

contrast, make no assumptions of how an entity, such as a person, is. They do not consider intrinsic essence. Rather, a person comes into being through relations and acts in relations as well. An understanding of being emerging in relations or resulting of enactments transforms a person into a human being.

When I reduce the teacher's and the teenagers' personalities to actors in an actor-network that includes nonhuman actors, I do not make assumptions about the essence of any entity. Rather, I assume that my interpretation of an entity is based on a selection of actors and practices that *I* have identified. I identified these actors and practices purposefully to describe how historical knowledge is enacted in the classroom. When attributing the teacher and the teenagers as actors among other actors, I do not make assumptions about their status as entities. In the same way, the knowledge that has been enacted in this thesis does not represent the essence of classroom activities, but is a result of activities, such as associating, translating and mobilizing.

2.2.5. The practices: associating, translating and mobilizing

So *how* do the actors act together? How do they come together and what happens when they come together? In order to address these questions in this thesis I will introduce three key concepts in ANT: associating, translating and mobilizing. I will refer to associating and mobilizing in all chapters. However, the concept of translating will be applied in Chapter 6, the synthesis of the previous analyses.

In ANT, the making of relations is central to enacting the social. The process of relating is sometimes called 'connecting' or 'linking', but also 'associating'. I decided to use the term 'associating' as it does not define the emerging relation and is sufficiently vague to allow for different types of relations. When associating the involved elements, they have to be adapted to be associated; thus they alternate in the process of associating. The elements that form the network differ from what they were before they became part of the network. As this process of associating and alteration is central to ANT research. ANT

researchers like Callon and Latour use the term 'translation'. Investigating the practices of translation is one of the key features of ANT. The concept of translating is so central in the work of ANT that in its early years Callon (1986) even suggested naming this particular methodological approach the 'sociology of translation'. The concept of translation is of particular interest for this thesis as it will be used in order to summarize the practices that were applied by the actors in the classroom when dealing with the differences between various types of knowledge (see Chapter 6).

Investigating 'translation' requires the researcher to investigate the changes that occur among actors and networks when they connect. Callon (1986) states that translation is a process before it is a result. He identifies four aspects in the process of translation, which, he argues, are in reality not as distinguished as in his text: problematization, interessement, enrolment and mobilization of allies. *Problematization* refers to the process of identifying the problem that will be addressed by the association being made. In the problematization process questions are asked that cannot yet be answered. Through the asking of such questions a set of actors is determined. Also, in this process the identity of an actor is defined 'as an obligatory passage point in the network of relationships they were building' (Callon 1986, p. 204). This defining of identities does not occur in an independent way, but in and through action (Callon 1986, p. 207).

Interessement points to the activities through which an actor becomes interested in the process of solving the problem and negotiates the terms of involvement. The defined actor attempts 'to impose and stabilize the identity of the other actors it defines through its problematization (Callon 1986, pp. 207-208).

In the process of interessement actors do not necessarily form alliances. When the actor is in the process of negotiating roles, he/she/it is in the stage of *enrolment*. Callon suggests that 'a set of interrelated roles is defined and

attributed to actors who accept them. Interessement achieves enrolment if it is successful' (Callon 1986, p. 211).

The term *'mobilizing'* describes the process of rendering 'entities mobile which were not so beforehand' (Callon 1986, p. 216). Callon, referring to his own research on scallops and fishermen, claims that the actors were first displaced and then reassembled at a particular place and time. Thus, the term *'mobilizing'* refers to a physical reality, which becomes graspable through displacing and reassembling. It puts the emphasis on the forming of alliances through these processes of displacing and reassembling actors.

Callon substitutes the term 'mobilization' for 'translation', while other ANT researchers, including Latour, use 'mobilization' synonymously with 'circulation'. 'Circulation', however, also has a broader meaning. The concept of circulation also refers to the process of following actor-networks when they move.

The emphasis on concepts such as mobilizing and circulation points to another central aspect in ANT: the investigation of the dynamics through which the social is enacted. Other terms indicating to these dynamics are 'flow' (Strathern 1996; Mol 2002), and 'travelling' (Latour 1986). In order to introduce the concept of an 'immutable mobile', which I discuss in Chapter 5 (see p. 153), I will expand on Latour's notion of travelling objects, which are to be understood as actor-networks. Latour (1986b, p. 20) labels the objects that facilitate this mobilization 'immutable mobiles'.

Latour (1987, pp. 226-227) proposes that objects have different qualifications for travelling, respectively for being displaced. The most stable among the travelling objects is the 'immutable mobile'. The immutable mobile is an object that works at a distance without being changed, and it works only in particular networks. It acts through inscriptions that are mobile enough to travel, stable enough to be immutable while travelling and 'presentable, readable and combinable with one another' (Latour 1986b, p. 7). Among the immutable

mobiles, inscriptions are the most prominent actors. Latour describes the process of inscribing as an ongoing process in which objects are first reduced to sets of figures. In a second step, sets of figures are extracted from the object of research. As a result of this process of reducing and extracting the object no longer circulates, but the sets of figures that carry figuratively the attributes and qualities of the object.

Drawing on his work on botanists and biologists, soil and the rainforest in Boa Vista in Brazil, Latour (1999a) explicates the practices of inscribing and their results: the inscription. In an earlier article he describes the inscription as:

> *the fine edge* and *the final stage* of a whole process of mobilization, that modifies the scale of the rhetoric. Without the displacement, the inscription is worthless; without the inscription the displacement is wasted. This is why mobilization is not restricted to paper, but paper always appears at the end when the scale of this mobilization is to be increased. Collections of rocks, stuffed animals, samples, fossils, artefacts, gene banks, are the first to be moved around. What counts is the arraying and mustering of resources (biographies of naturalists, for instance, are replete with anecdotes about crates, archives and specimens), but this arraying is never simple enough. Collections are essential but only while the archives are well-kept, the labels are in place, and the specimens do not decay. Even this is not enough, since a museum collection is still too much for one "mind" to handle. So the collection will be drawn, written, recoded, and this process will take place as long as more combinable geometrized forms have not been obtained from the specimens (continuing the process through which the specimens had been extracted from their contexts).
> So, the phenomenon we are tackling is *not* inscription per se, but the *cascade* of ever simplified inscriptions that allow harder facts to be produced at greater cost. (1986b, p. 16, emphasis in original)

Thus, inscription is a process and a result of practices of reduction. This reduction enables ideas, concepts or regulations to act at a distance without changing. It enables immutable mobiles, such as inscriptions, to travel at great speed.

In terms of my own research, analysing the historical knowledge enacted in a Berlin secondary school classroom, I felt compelled to investigate both human and nonhuman actors. I will argue that teachers and teenagers are not the only actors in these knowledge-enacting practices, as so too are the classroom itself, previously enacted knowledge that enters the classroom in the form of Berlin's History curriculum, as well as a set of power relations. As such, I will describe Berlin's History curriculum for the lower secondary school as a result of a 'cascade of ever simplified inscriptions' and suggest that it acts as an immutable mobile.

2.2.6. Post-ANT

Since its emergence in the 1970s, ANT has gone through different stages of development that partly responded to the named criticism. Different scholars have discussed the possibilities and limits of ANT, most prominently in *Actor Network Theory and After* (Law & Hassard1999). Gad and Jensen (2010) discuss the development of Post-ANT in their 2010 paper *On the Consequences of Post-ANT*. They present some basic Post-ANT concepts and engage with two Post-ANT case studies (Mol 2002; Strathern 1999) in order to elucidate the central notions of complexity, fractality and multiplicity. In their attempt to 'illustrate the analytical consequences of thinking with Post-ANT' they contrast ANT and Post-ANT as follows.

In ANT the focus is on processes of translations through which actors relate to one another in order to form a network (Gad & Jensen 2010, p. 57). This focus positions the researcher as separate and distant from the observed actors and network. In contrast, Post-ANT understands researchers as having a performative effect through collecting and selecting data, analysing and presenting it, and hence see them as part of the observed network. Here, the researcher is involved in the investigated process.

Another difference between ANT and Post-ANT relates to what Star describes as marginalized outsiders and what Gad and Jensen describe as otherness. If something or someone does not adapt to the observed network s/he/it does not

become part of it although s/he/it might be confronted by it. Gad and Jensen suggest that

> These readings are based on an interpretation of ANT as a *general theoretical perspective* - or even from seeing ANT as *a strong theory*. It is this identification, which enables critics to view ANT as "essentially" a "managerial theory". However, if ANT is an entity under transformation, this is problematic. "Otherness", marginalization, asymmetry, and suppression may certainly be important in relation to specific practices and networks, as Star's case exemplifies. However, just as surely, ANT challenges the assumption that this *always* be the case. Because ANT is not a comprehensive theory, its potential political problems cannot be solved enforcing *another* general perspective, even one from the margin. (2010, p. 59, emphasis in original)

Gad and Jensen strengthen the view that ANT is open to change and to a diversity of approaches. Such Post-ANT researchers propose to deal with the

had a certain impact

(Fenwick & Edwards 2010) and fractality (Mol 2002). These terms are sometimes also related to each other, such in the case in which Gad and Jensen discuss Mol's research on arteriosclerosis. They suggest that:

> One could say that the complexity of the disease is embedded in tension between its multiplicity (there may be several versions of arteriosclerosis) and its fractality (they may be related but not on all points or in all dimensions). (2010, p. 66)

Concepts such as multiplicity and fractality have evolved in Post-ANT literature in recent years and respond to criticism about the limits and blind spots of ANT. As suggested in my own responses to criticisms of ANT I understand my research to be in the tradition of Post-ANT. However, in order to make my analysis of classroom practices as readable as possible I avoid references to concepts like complexity, multiplicity and fractality, although I understand and describe classroom situations as situations in which complex, multiple and fractal ordering strategies emerge.

2.3. STS in classrooms

As mentioned, in recent years researchers in the field of educational research have increasingly applied the methodology of ANT. Among others, Tara Fenwick and Richard Edwards understand learning as a network effect of activities, actors and spaces assembling (Fenwick & Edwards 2010, p. 4). From this perspective learning is no longer seen as being an individual or cognitive process, nor is it an individual achievement.

Educationalists who apply ANT focus on associations and activities, on actors and spaces of knowledge processes. They gain insights into processes of knowledge production and circulation (Hager and Hodkinson 2009; Engeström 2009; Mulcahy 2011a, 2011b). For the purposes of investigating classroom situations, however, I have found current attempts to apply ANT methodology to educational settings as epistemologically problematic. ANT researchers are, it seems, content to engage with what is observable. Processes of learning, however, are not visible. What can be observed in learning processes are responses to questions in a test, a difference in applied practices after having associated with previously enacted knowledge, or brain activity. The act of learning itself, however, is difficult to observe. Consequently, Dianne Mulcahy (2011b) describes learning as a move in-between, while Paul Hager and Phil Hodkinson (2009, p. 635) describe it as a 'becoming within a transitional process of boundary crossing'. Both approaches consider the observable, but are too vague to be applied them in my thesis.

The cultural psychologist Estrid Sørensen (2012) proposes a different approach to answering the question as to how one should investigate knowledge practices in classrooms. In reference to the dispute about whether cognition is located in the mind or is distributed between socio-material phenomena, Sørensen explores the place of knowing in maths classes. She suggests that both of these understandings of cognition are themselves effects of locating practices. She then describes some practices that locate cognition in the mind and others that locate cognition between socio-material phenomena. Through

this reading of them, the knowledge practices within a classroom do in fact become observable.

2.3.1. Sørensen's typology of classroom knowledge

In *The Materiality of Learning* (2009), Estrid Sørensen explores the materiality and spatiality of learning practices when IT technology is employed in a classroom. Drawing on Mol's and Law's work on the topology of the social (Mol & Law 1994, see p. 39), which classifies the social as regions, networks and fluids, Sørensen develops three types of classroom knowledge: representational, communal and liquid knowledge.

In what follows I will use this typology to categorize differences in the enacted historical knowledge that I observed as different outcomes of knowledge practices. First, though, I will introduce Sørensen's definition of the three types of classroom knowledge.

Representational knowledge

Drawing on her own fieldwork in a classroom, Sørensen (2009, p. 95) describes a situation in which a teacher read aloud an account from a maths textbook of a physical education lesson. The teacher read about students attempting a two-meter jump. Having finished reading, she asked one of her students to judge if a two-meter jump was long or short. After the boy had categorized it as a short jump, the teacher asked him to jump as far as he could. The teacher measured this jump then by a standard one-meter-ruler. The measurement was related to the two-meter jump and again the student was asked to judge the jump that was described in the textbook as long or short. This time the boy described the jump as long.

In this case, the knowledge produced in the classroom related to a knowledge that existed outside the classroom – the one-meter standard. This meter was standardized and was counted as universal (and therefore applicable to the classroom situation), and its constructed character was no long visible. The

knowledge resulting from measuring the boy's jump existed independently of the standardized meter, but in relating both the jump and the standard, it referred to an 'outside' reality. The knowledge about the standardized one-meter could not only be located in the classroom activities. The knowledge enacted in the classroom by the boy's jump was presented as new to the students, but the knowledge that was enacted by the measurement of the jump was enacted 'as existing prior and independent from the classroom activity' (Sørensen 2009, p. 103). Sørensen suggests that the distance between the knower and the known is an important aspect of this type of knowledge. This distance is necessary to use a standard for linking two distant and entirely different situations (Sørensen 2009, p. 96).

The knowledge that is enacted this way refers to Mol and Law's (1994) regional topology of the social in which objects, such as knowledge, are defined in each region and can be close or different to each other. While Mol and Law propose that these closeness and differences create an 'inside' and an 'outside' of regional maps, Sørensen suggests that the knowledge that was enacted through the boys jump refers to knowledge that existed prior to the jump. In the classroom situation, this prior knowledge was re-presented. Sørensen (2009, p. 102) calls newly enacted knowledge that re-presents pre-existing knowledge as *representational knowledge*.

Communal knowledge

In order to explain another type of knowledge enacted in the classroom Sørensen cites the example of a ceremony she had participated in which a bed-loft, built by a Year Fourth class in cooperation with a school of carpentry, was inaugurated at the school. Sørensen describes that some students swept the floor, while other decorated the windows. Attendees of the ceremony brought soft drinks and sandwiches. A teacher had written a song for the occasion and had printed up copies of the lyrics, which were handed out to everyone present. Parents came, the principal made a speech celebrating the students' hard work.

Three of the students also made speeches, each of which was followed by sustained applause (2009, p. 105).

The knowledge performed here cannot be understood as representational knowledge. It is not necessarily located inside the human knower, while referring to an object distant from him/her. What was enacted in the inaugurating ceremony was a 'feeling of inter-connectedness that cannot be clearly separated from the web of participants of which it is made up' (Sørensen 2009, p. 108). Sørensen (2009, p. 108) calls knowledge resulting from this shared experience *communal knowledge*. Unlike representational knowledge, which is understood as individual knowledge that relates to an object distant from the individual, communal knowledge creates 'acquaintance or familiarity, regardless of whether it is granted, emotional, cognitive, or practical' (Sørensen 2009, p. 108).

Liquid knowledge

To illustrate a third form of knowledge, Sørensen (2009, p. 19) describes the process of selecting a Pakistani song to be included in a virtual environment that she established to garner empirical data about socio-material aspects of learning. Sørensen explains that a girl, Hajjah, wanted to bring some Pakistani music into the virtual world. After briefly speaking with Sørensen Hajjah asked her older cousin for the title of an appropriate song. Unfortunately s/he [the cousin] could not provide her with one, so Sørensen spent an evening searching the Internet for a Pakistani song and then downloaded it. Before she had a chance to play this song to Hajjah, the girl rolled up her sleeve and revealed a URL written on her forearm. The link, provided to her by some older boys, proved to be to a pornographic website. Sørensen and Hajjah agreed that the boys had played a trick on them. When Sørensen played the song that she had downloaded, it turned out that Hajjah knew and liked it. After Hajjah uploaded the song to the virtual environment some other children wanted to listen to it with the earphones.

In this story different elements came together but they did not add up to form a more stable object. Instead each of the parts that was attached transformed the relations and contributed to the direction of a process of knowledge production about a song in a virtual environment. This process of producing knowledge about the song was continually performed and open-ended. This type of knowledge is performed as part of an 'ongoing mutation, not as a human possession or ability' (Sørensen 2009, p. 129). This mobility characterizes what Sørensen calls *liquid knowledge*. Sørensen describes it as showing instability and a lack of temporal constancy. Liquid knowledge is 'a pattern of relation that varies, as shifting discontinuities, and as mutating connections and links that are performed' (Sørensen 2009, p. 129). Liquid knowledge does not refer to knowledge distant to and/or separate from the knower or to a 'reality outside', nor is it necessarily a shared knowledge. Rather, the term 'liquid' knowledge refers to the ever-changing effects of knowledge practices.

Sørensen's typology of classroom knowledge was developed to categorize the knowledge that emerged while using information technology in a classroom. I use her typology to describe the outcome of knowledge enacting practices. Using the term 'representational' might be misunderstood as *representing* something. This understanding of 'representational' would neglect the performative enacting of the knowledge in the classroom. However, neither Sørensen nor I describe the knowledge as existing independently from the practices by which it was enacted. Thus, I argue that the attribute 'representational' does not mean that such knowledge represents a previously enacted knowledge, but rather that previously enacted knowledge was re-presented in the classroom.

Also, the term 'representational knowledge' does not remove the observer from the scene. Representational knowledge remains an outcome of collective acting that includes the researcher. I suggest that representational knowledge has increasingly stable associations with previously enacted knowledge; stronger than with communal and liquid knowledge. The stronger associations, in turn,

are an effect of practices of associating and attributing. Communal knowledge has a slightly more flexible association with previously enacted knowledge, while liquid knowledge has a high level of mobility and flexibility in its association with such knowledge. The stability of associations, however, does not allow us to make assumptions about the observer's position. More or less independently from the stability of associations, the observer can reflect on being involved in making associations or dissociations.

By dividing knowledge into types one might be suspected of objectifying knowledge, particularly as the types are clearly separated and seem to have boundaries. This practice in Sørensen's work is however useful for contrasting the different types of historical knowledge enacted in the classroom. At a later point I will refer to the dynamics that accompanied the co-existence of different types of historical knowledge. I will present them as overlapping and in tension with each other and will argue that they are distinguishable only in relation to each other (Verran 2001, see p. 168).

2.3.2. Verran's ontic/epistemic imaginary

By adopting the research approaches of ANT and utilizing Sørensen's (2009) typology of classroom knowledge I will be able to describe numerous classroom practices. I will analyse what was mobilized, what associations were made and what attributes were attached. I will also categorize different outcomes according to the stability of associations with previously enacted knowledge. While the insights provided by these analyses and categorizations will be significant, they must be supplemented by an acknowledgement that different types of historical knowledge co-exist in the classroom. As such, I will argue that the enacted types of historical knowledge differ in their ontological basis (see Chapter 3). While some historical knowledge is based on spatially and temporally defined ontics, other historical knowledge is based on a morally defined ontics. From these different knowledge types emerged different historical realities. Dealing with different historical realities in the classroom required specific activities, such as translating and the setting of priorities (see

Chapter 6). Hence, the co-existence of ontologically different types of historical knowledge impacts on what happens in History classes.

In order to investigate ontologically different historical realities I will follow Sørensen in applying the concept of the ontic/epistemic imaginary developed by the STS scholar Helen Verran (2001), who describes her own analysis as relational empiricist (Verran 2013)[9].

Verran argues against philosophical concepts that separate the ontic from the epistemic. Rather, she suggests that both are inevitably intertwined and mutually enacted (Verran 1998). Verran's concept of an ontic/epistemic imaginary is an outcome of her analysis of two different *generalising logics of numbering*, one in the English language and the other in the Yoruba language, spoken in parts of Nigeria. This concept is not related to psychological understandings of imaginaries, which often locate the imaginary in the mind, but is based on an analysis of practices. Verran (2007b, p. 110) describes the study of 'the ontic' conventionally as 'ontology' and uses the term ontic/epistemic imaginary synonymously to ontic imaginary, and when referring to this concept I intend to describe the ontic and the epistemic to be interwoven within the term 'imaginary'. Verran investigated the differences in *generalizing* from these logics of numbering and of the differences in *gaining certainty*. For our purposes here, it is Verran's analysis of making generalizations that is particularly important. The following provides an abstract description of the process of generalization, with reference to Verran's own examples.

Verran argues that differences in generalizing logics can be investigated by analysing the units in which phenomena are ordered. This is because the act of ordering is already a generalizing act. A generalization is an outcome of collective practices. Verran (2001, p. 159) suggests that generalizations

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[9] Verran (2013, p. 4) uses the term 'relational empiricism' for indicating to 'a family of analytic framings that began to emerge in science studies and anthropology in the late 1980s'. She describes relational empiricism as a modal analysis of relations between entities in some collectives (Verran 2013, p. 5).

emerged as rituals from specific materially arranged times or places, which she terms 'microworlds'.

In these arranged microworlds further ordering practices occur in the process of generalizing. Referring to these activities, Verran states: 'In the structuring of the performance, a vast amount of irrelevant complexity is excluded, and momentarily, ongoing collective life becomes extremely simple' (Verran 2001, p. 159). This excluding of irrelevant complexity is a central aspect in the process of ordering reality. Elements get ordered by focussing on some features and excluding a vast amount of others. These selected elements are ordered in units. A unit comprises different elements with similar features. As some features are selected while others aren't, these become central features of the element. Rather than an element being defined by its features, Verran suggests this process of neglecting some features while selecting and attaching others in fact defines it.

Verran (2001) argues that in the process of generalizing, elements with specified features are gradually clotted. This clotting is embedded in and emerges from collective images and stories. This framework is what Verran calls 'an imaginary'. She defines an imaginary as 'framing images and stories of gradually clotting and eventually routinized collective acting, and not only human acting' (2001, p. 37). She does not use the term imaginary in the vernacular sense of imagination occurring in the mind. On the contrary, her 'imaginary' 'does not involve the mind and is certainly not located there' (2001, p. 37). Echoing Michael Carter, she understands the imaginary as an 'overarching relation'.

In the case of numbering in English and in Yoruba, Verran identifies two different imaginaries. In these imaginaries, different framing images and stories resulted in differences in clotting elements. In order to describe the different ways of clotting Verran uses an example of numbering. The Yoruba-statement 'Ó fún mi ni ókúta mérin' is conventionally translated as 'He gave me four

stones'. Verran suggests that a more literal translation is 'He gave me stonematter in the mode of a group in the mode of four.' (Verran 2001, p. 69)

Drawing on Wittgenstein, Verran (2001, p. 136) argues that the concept of numbers comes not from the world, but from language. She understands the act of speaking in general, and referring in particular, to be a similar practice. This allows Verran to focus not only on the visible practices, such as ANT researchers, but also on the generating and creative practices of and within collectively shared language. She then proposes that the referring to things in the world differs in English and Yoruba. They differ in how they clot certain particulars in an analytical first step and how the emerging units are ordered in a second step.

English language numbering refers primarily to objects. Four stones are described as four objects. These objects are characterized by their boundaries. These boundaries assign positions in space and time. Arguing in the field of STS, and thus insisting on the investigation of practices rather than an essence, Verran does not describe the defined position in space and time as an intrinsic quality. Rather, she argues that these definitions are resulting from the gradual clotting around framing images and stories that lead to routinized collective acting and thereby assign the status of an object. In the numbering of four stones, the complex reality is ordered by particulars that have spatial and temporal particulars that in turn form boundaries. 'English speakers talk primarily about spatiotemporal particulars, separated bits of matter set in space/time' (Verran 2001, p. 136). Among English speakers, the second ordering level is a categorizing of the object. Here the object has its qualities attached.

In contrast, 'Yoruba speakers talk primarily of sortal particulars, physical matter grouped around sets of characteristics' (Verran 2001, p. 136). It is not the objects that are of primary concern, but characteristics of a certain matter. In the stone-example, the matter in question was defined first: stonematter. Verran

uses the term 'matter' in order to describe everything that matters. The sort that is dealt with in the example is the sort of stonematter. Instead of a material object, an abstract object is defined based on characteristics. In a second level ordering, the mode in which the sort is represented is defined. In the stone example, the stonematter appears in two modes: in the mode of a group and this group appears in the mode of four.

In this thesis I make the important differentiation between spatiotemporal particulars that become attached as qualities and sortal particulars that are represented in various modes. Verran's imaginary allows me to describe how certain actors order reality by excluding 'a vast amount of irrelevant complexity' and simplify reality by structuring it according to collectively agreed particulars. Verran calls these ordering processes 'doing ontics'.

Verran does not stop in describing how reality is ordered in different imaginaries. Instead, she claims that the different imaginaries not only co-exist, but are also in relation to each other. The generalizing modes in these imaginaries 'are relational, distinguishable only in relation to each other' (Verran 2013, p. 7). In other words, the imaginaries are related and exist in tension with each other.

In Chapters 3 and 5 I utilize the concept of the imaginary to show that the particulars of the historical knowledge circulated by the History curriculum differ from those that the teenagers used when enacting historical knowledge in a debate. Pointing to the different ontological bases of historical knowledge allows me to propose that different types of knowledge co-existed in the classroom. It also allows me to argue that the History curriculum's aim (Senat Berlin 2006, p. 9) to enable the teenagers to engage with the past is partly thwarted by prioritizing a particular type of historical knowledge. In Chapter 6 I will describe practices that were applied to deal with the tension in which the two imaginaries existed.

2.4. Conclusion: application of the theoretical and methodological tools to my thesis

In this chapter I have introduced three approaches in STS that I will utilize in my investigation of the enactment of historical knowledge in a classroom: ANT, Sørensen's (2009) typology of classroom knowledge and Verran's (2001) concept of the imaginary.

What I observed and classified as enacting historical knowledge in the classroom can neither be subordinated to an overarching structure of school nor reduced to a local interaction that connected teenagers to the past. Instead, the classroom is just one among many sites where the school and historical knowledge are enacted. Similarly, the historical knowledge that I observed in History classes was the observable results of the interactions between human and nonhuman actors in the classroom. These included activities of the teenagers and the teacher, as well as invisible actors, such as Berlin's History curriculum or discourses of history education scholars. Although historical knowledge was brought into the classroom by Berlin's History curriculum, a new historical knowledge that differed from the previous one was enacted in the History classes. In this way, historical knowledge should no longer be thought of as something that can be acquired, possessed, learned or taught. The enactment of knowledge required certain activities, such as associating. These knowledge-enacting practices found a provisional endpoint in the classroom. By applying Actor-Network Theory I will be able to describe some of the specific ways in which the teenagers acted in class. I will focus on practices and their effects, and describe what associations were made between the actors and what attributes were attached, thereby honouring a broad spectrum of observable classroom activities and revealing the enactments of historical knowledge made by actors not visible in the classroom.

If the enactment of knowledge depends on relations and practices, different kinds of knowledge have to be enacted by different relations and practices. Consequently, when relations were made during History classes that differed from the ones that previously enacted knowledge, a different kind of knowledge

was enacted. By applying Sørensen's typology of classroom knowledge I can classify the outcomes of different practices as different types of knowledge.

Drawing on Verran's (2001, p. 37) notion of the imaginary I will then describe the basis of these types of knowledge as fundamentally different. Applying the imaginary to my data enables me to state that different historical realities were enacted in the classroom, one based on spatiotemporal particulars and another based on moral particulars. My approach will also reduce the complexity of classroom activities in specific ways. I will structure the classroom reality according to practices, actors and attributes that I identified as important for the enactment of historical knowledge. This selection, however, is not representative. Rather, I understand that the results of this thesis are itself outcomes of specific knowledge practices.

PART 2 – Enacting knowledge

3. Enacting communal knowledge in the classroom

3.1. Introduction

In this chapter I discuss a debate that investigates how some of the teenagers enacted different forms of historical knowledge in the classroom. I will quote some of the statements that I found confusing or experimental when I sat in class. I wondered if what emerged in this debate is still historical knowledge. The analysis of these statements, however, made me aware of the co-existence of different kinds of knowledge. In line with the History curriculum (Senat Berlin 2006, pp. 11-12) I understand historical knowledge to be the result of an engagement with the past, including associating.

The debate, which I examine, can be analysed in various ways. In what follows I explain why I decided to analyse it the way I did and reflect on the implications of using this particular debate for my research. I show that the knowledge I circulated in the class had a significant impact on the historical knowledge that was later enacted. In detail, I analyse what ontic commitments were implicit in my preparations for the debate and, as such, shaped the enacted historical knowledge. In this way, I hope to present myself and the historical knowledge that I circulated in the class as involved in the knowledge practices. Being clear about my position in the debate and the commitments of the knowledge circulated by me elucidates the creativity that some teenagers used in order to enact new historical knowledge. In the second part of this chapter, I apply Helen Verran's (2001) imaginary to analyse some of the debate situations that I describe. I argue that associating elements other than those of the curriculum and attaching attributes to these associations, which were again different from those of the curriculum, enacted a different form of historical knowledge. In order to enact this kind of historical knowledge, I will explain that specific particulars were clotted in a first-level categorization and specific qualities were

attributed on a second level. Drawing from Kathryn Pyne Parsons's (1974) typology of morality, I argue that the historical knowledge enacted in this way is of the revolutionary type. Using Sørensen's (2009) typology, I also categorize some of the historical knowledge enacted in the classroom as communal knowledge.

3.2. Establishing previously enacted representational knowledge

While undertaking my participant observation research, I was given the opportunity to conduct debates in a German class, an English class and a History class. Thus, in addition to a tribunal conducted by the History teacher, Mrs. Züge (see p. 128), I staged three other debates during the period of my fieldwork that were concerned with my original research questions about teenagers' notions of historical justice. In the debates I gave the teenagers some information, set up a scenario and then let them guide the discussion. I was surprised by how they processed the historical knowledge they were provided with for the debates. In each debate the teenagers dealt with the issues under discussion in a particularly creative way. Although they seemed to be interested in playing their roles, they mixed up terms, added fiction and 'facts' from other historical times and other contexts. They seemed to be playing rather than a working with the historical knowledge and I struggled to make sense of their activities. Having ensured they were given enough previously enacted knowledge to work with, I was surprised when they selected aspects of it at random, without regard to spatiotemporal logic. They also added knowledge from books, computer games and films, and sometimes they even made up information. Observing this curious way of dealing with historical knowledge in the classes, I began to question my assumptions about what constitutes historical knowledge. It seemed that the teenagers were enacting a different form of historical knowledge to the representational historical knowledge enunciated in the curriculum.

In what follows, I reflect on the enactment of these different kinds of historical knowledge. I will ask what associations were made and what attributes were attached to it. Finally, I will question the ontics upon which the teenagers' knowledge was based.

Supported by a helpful teacher, I planned to hold a debate on 3 June 2010. Mrs. Kaufmann taught German and was concerned about some of her students' language skills. In the previous weeks, analysing poems, some of the teenagers had difficulties understanding the meaning of phrases such as 'swollen sails', or words like 'stream' and 'tepid'. Mrs. Kaufmann hoped that a debate might improve their vocabulary and increase their motivation and ability to construct arguments. When I asked the teenagers if they would be willing to participate in a debate about how to deal with injustices of the past in the present, all of them answered in the affirmative.

The use of debates as a research method can be criticised on the basis that the data it generates is artificial, constructed specifically for the purpose of the research. However, a debate offers the researcher an opportunity to observe how knowledge is enacted. As such, I was able to follow the teenagers' practices, the associations they made and the attributes they attached. I was also able to analyse the ontics that emerged in the kinds of historical knowledge enacted in the debate. Another potential point of criticism relates to the use of debates in education, where they have often been used to achieve specific learning outcomes. In educational terms, debates are used to engage students in a certain topic, enabling them to understand and discuss in detail by the end of the session. The debate I designed and conducted was different because my aim was not pedagogical but rather to investigate the teenagers' notions of historical justice. Consequently, the play I designed intended to provoke moral statements about the past. The topic of the debate, the need to compensate victims of past injustices, was intentionally controversial.

As a class we read a handout containing information related to the topic of the play. It started with a reference to a specific case of compensation for past injustices used in an expert opinion paper about governmental restitution of the West-German Federal Government in 1987.

> The maximum penalty for begging and vagrancy in the Weimar Republic was six weeks of imprisonment. After 24/11/1933 there was no time limit set for punishing people if they were convicted for begging more than once. In May 1936 Heinrich D. was interned in a labour camp for nearly nine years due to begging. In May 1945 the labour camp was occupied by US-troops. During this time Heinrich D. escaped. Shortly afterwards, he was re-captured, as had been classified as 'justifiably interned'. (In Ayaß 1987: p. 159-163, my translation)

The expert opinion paper, 'Compensation for homeless people persecuted under National Socialism has so far been refused', was presented on 24 June 1987 to the Committee for Internal Affairs in the West-German Bundestag as part of an investigation into the compensation of all victims of the National Socialist regime. The information about the past given in this expert paper was circulated as valuable historical knowledge. By referring to a 'real case' I was, in Sørensen's terms, presenting representational knowledge.

Estrid Sørensen's (2009, p. 102-104) representational knowledge refers to a reality distant in time and space from the situation in which the current knowledge is being enacted (see p. 55). In the case of Sørensen's research, the knowledge that she categorizes as representational was performed by a teacher in a classroom situation. In the classroom the teacher used a standardized one-metre ruler to measure a boy's jump (see p. 55). In this example, the pre-existing knowledge being re-presented is the knowledge of the distance of one metre.

Sørensen (2009, pp. 102-129, see p. 56) distinguishes between representational knowledge, communal knowledge and liquid knowledge. Communal knowledge is fundamentally different from representational

knowledge. Communal knowledge does not refer to a knowledge enacted prior to the situation. Rather, communal knowledge is enacted by a 'feeling of inter-connectedness that cannot be clearly separated from the web of participants of which it is made up' (Sørensen 2009, p. 108). In the third type of knowledge identified by Sørensen (2009, p. 125), liquid knowledge, individual elements come together but do not combine to form an increasingly solid object. Instead, each of the elements contributes to the direction of the process of enacting liquid knowledge. This process is characterized by its instability and a lack of temporal constancy. As such, liquid knowledge remains open-ended and is continually being performed.

Sørensen's typology of classroom knowledge aims to categorize knowledge that was performed while a classroom of teenagers used information technology. This typology of knowledge fits well within conventional taxonomic approaches to the sociology of knowledge, and I employ it merely to describe the outcome of knowledge enacting practices. I do so, though, with caution, as I am aware that the attribute 'representational' might be misinterpreted as *representing* something (see p. 58). In my research representational knowledge might be understood as the representation of the knowledge in the expert opinion pager. This, however, would neglect the performative aspect central to all three of Sørensen's types of enacted knowledge in the classroom. Rather than representing something else, Sørensen describes each of the three types of knowledge as performed. Representational knowledge should be understood as re-presenting previously enacted knowledge, as a re-performance. This strong association with earlier enacted knowledge is, in turn, an effect of practices of association and attribution. Communal knowledge has slightly more flexibility in how it associates with previously enacted knowledge, and liquid knowledge has a high level of mobility and flexibility in these associations.

The strength of association with previously enacted knowledge is of significance in relation to how the enacted knowledge comes into being. The more the association with previously enacted knowledge is stabilized, the more the newly

enacted knowledge is enacted through practices that resemble the ones that formed and shaped the previously enacted knowledge. Also, as I will show, previously enacted knowledge carries attributes that are more likely to be attached to representational knowledge than to communal or liquid knowledge. This is also the case for the expert opinion paper.

This expert paper presented past events as morally unacceptable in the present. In other words, this historical knowledge had moral attributes. As described in the previous chapter, this judging of past events is a kind of historical thinking. I attached the same attributes when I designed the debate, selecting information that I found immoral and presenting different injustices to the teenagers through this selection. An examination of the moral judgement about the injustices implicit in this expert paper reveals how moral judgements of past events are often assumed to comprise historical knowledge. This knowledge circulated around specifics with similar characteristics, such as 'injustice', 'Germanness' or a certain time span. These specifics were condensed into what I, following Verran, call units.[10] The making of the units by teenagers will be further analysed later in this chapter. At this point, in order to understand the enactment of ontics, it is necessary to investigate the units created in the historical knowledge implicit in the expert paper.

When experts presented the historical case to the German Government, the moral attribute of injustice was attached to the legal regulation of a previous German Government that punished people for begging and vagrancy with lifelong internment in a labour camp. Heinrich D. was mentioned as a victim of these legal regulations. The units in which the injustice of the past was tackled were 'human suffering' due to 'governmental regulations in Germany' at a 'certain time', but also the lack of reflection on these injustices in 1945 and in

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[10] My use of 'unit' implies two meanings. One describes the condensed specific characteristic. For example, all the citizens of Germany are condensed to Germans. 'German' is the unit which condenses the characteristic of having German citizenship. The second meaning uses the characteristics of the specifics as levels of analysis. Hence being German is the level on which the citizens of Germany are analysed. I use 'unit' in its first meaning – as a condensing of specific characteristics. These condensed characteristics can relate, for example to nationalities, but also to other phenomena such as periods of time. A time-unit condenses different times with specific characteristics.

1987. Another moral judgement related to the American military that justified internment in a labour camp for the 'crime' of begging.

Before I presented the case to the class, I selected previously enacted representational knowledge that not only allowed the teenagers to judge Heinrich D.'s suffering, but also to judge a law that punished begging and vagrancy with a sentence of lifelong imprisonment. By choosing this case I associated three time units that could be judged as moral or immoral. I associated the moral judgment in the present with begging in the past (1936). References to this time made by historians and politicians, but also in public discourses, often imply a moral position. Another association linked the moral judgments of the present with judgements in the past (1945), when the American military called the reasons for Heinrich D.'s internment 'justifiable'. A third association linked moral judgments of the present with the lack of compensation in 1987 for people who had been interned for begging. I created the same units in the design of historical knowledge as those circulated by the expert paper presented to the Bundestag.

I designed the debate with these different layers of moral implications as I wanted to provoke a discussion among the teenagers that referred to different aspects of history. As with the curriculum, I presented historical knowledge as resulting from an engagement with the past – including moral judgements of the past. The design of the debate was intended to provide the opportunity for the teenagers to morally judge a past event.

In order to discuss this issue in a judicial format, I added a fictional story:

> Heinrich D. asked a German court for compensation for the suffering he endured during his incarceration. His main argument was that National Socialist propaganda portrayed begging as being 'anti-social'.

I also added some lines that referred to his suffering. The third part of the handout included some information about compensation gathered from Elzar

Barkan's (2000) academic work, *The Guilt of Nations. Restitution and Negotiating Historical Injustices*.

> It is possible to give reparation in different ways. Restitution can be done by giving back artefacts that were confiscated, stolen, or occupied such as works of art or land. Another way of giving reparation is to give reparation or compensation for something that cannot be given back such as human lives, a thriving culture and economy or an identity. Finally, high ranking public politicians can give reparation by recognizing historical injustices through a public apology. (2000, p. xix)

Each of the three parts of the handout were read aloud and extensively discussed. I wanted to make sure that the teenagers understood the terms and arguments used in the handout and in the discussion. I also asked them whether they knew anything about the Weimar Republic. This was a rhetorical question as I had been with them when they had discussed the Weimar Republic in their History class a couple of weeks earlier. My purpose in asking this question was not to discover what they did or did not know about this period of German history, but rather to associate their discussion of this time in their History class with the information in the handout.

Although the teenager who read aloud most of the handout was generally a fluent reader, he stumbled while reading terms like 'reparation, 'restitution' and 'compensation', suggesting that these words were not in his regular vocabulary. These words are self-explanatory in German[11] and in our interviews I had provided the teenagers with definitions of these words that I took from an academic book (Barkan 2000, p. xix). Thus, I could assume the teenagers understood the concept of, for example, 'compensation'. I also checked that they understood words like 'thriving' and 'artefacts'. They seemed to have 'understood' these terms, that is, to have associated them with previously enacted knowledge.

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[11] The discourse about compensation in Germany is loaded with moral attributes. The German word for compensation reflects this. 'Wiedergutmachung' literally means to make the wrong right again. The moral implication in this term is obvious.

Finally, the handout listed guiding questions. These questions asked if those convicted for begging or vagrancy should have been compensated in the years after 1945. If yes, then how should they be compensated? Should different categories of prisoners and their different conditions of imprisonment be a consideration in their compensation? Does the fact that there were two German states after the war, each of which treated Holocaust-survivors differently, have an impact on the compensation? These questions were designed to guide the teenagers towards an articulation of moral justifications. I hoped they would help me understand teenagers' notions of historical justice.

Three teenagers, Murat, Memet and Alex, volunteered to be the judges. These three boys guided the class discussion. I asked them to gather together all the arguments for and against Heinrich D.'s compensation claim, to identify any flaws in them, and to articulate questions which would clarify these flaws. Having collectively read and discussed the handout and its attendant questions, I asked for volunteers to act as plaintiffs for Heinrich D.'s claim. When I looked at the raised hands I realized they belonged to all of the girls in the class. 'All the girls?', I asked, slightly surprised as I had never before witnessed the girls acting as a group. They looked at each other and nodded. My eyes wandered to the other side of the room, where the boys were sitting.

'Who wants to be the defence attorney presenting the German state's case against Heinrich D.'s claim? Will the boys do it?' Some of the boys shrugged their shoulders, but most were nodding.[12] The teenagers had thirty minutes to develop their arguments, after which they would conduct a trial to test Heinrich D.'s claim for compensation. I repeatedly insisted that their arguments should respond to the questions contained in the handout. I also asked them to make their arguments concise, because I thought these would be easier for me to interpret when I came to analyse them.

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[12] I am aware that this distinction between girls and boys offers a way of associating the enactment of gender with the enactment of historical knowledge. As this would further extend the scope of my thesis I have resisted the temptation to engage with this.

3.3. Enacting the ontics of the debate

Before describing the debate in some detail I will look at the effects of my decisions on the historical knowledge I presented to the teenagers. This will allow me to analyse both the historical knowledge in the classroom and the knowledge enacted for and in this thesis. Drawing from Verran's work on the imaginaries from which ontics emerge, I will look at what associations and ontics entered the classroom with the design of my debate. This extended analysis is necessary as I will later use it to background my description of the different ways of enacting historical knowledge.

As outlined in Chapter 2 (see p. 59) Verran (2001, p. 37) describes the imaginary as those framing stories and images that gradually clot and result in routinized collective acting. In the imaginary, it is not only a certain language about the reality that is enacted, but realities themselves that are emerging too. Verran compares two different generalizing logics of numbering: numbering in the English language and numbering in the Yoruba language of Nigeria. Verran argues that the practices of numbering differed in the two languages both in the way they were generalized and in the way were ordered into units.[13] In Chapter 2 (see p. 61) I gave the example of two ways of numbering stones. 'Ó fún mi ni ókúta mérin' is conventionally translated as 'He gave me four stones'. Verran suggests that a more literal translation is, 'He gave me stonematter in the mode of a group in the mode of four.' (Verran 2001, p. 69) Numbering in the English language is ordered around spatiotemporal particulars. These particulars define positions in space and time. Distinguishing the object being dealt with from other points in space and time is the act of drawing spatiotemporal boundaries. By this act, the object is defined as *an* object. In other words, when reality is ordered around spatiotemporal particulars an object is enacted (Verran 2001, p. 136). English language numbering refers to objects defined in space and time. In the example of the stone, the act of numbering made the stone *an* object, one

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[13] A unit comprises particulars with similar features. These features were selected while other features were excluded. In selecting some features but not others these features were attributed to the particulars.

with 'intrinsic' qualities, such as being defined by a certain place and a certain time.

In contrast, numbering in Yoruba language does not attribute spatiotemporal particulars first. In Yoruba numbering 'physical matter groups around sets of characteristics' (Verran 2001, p. 136). Verran describes numbering in Yoruba as being based on 'sortal particulars'. The modes of representation ascribe the 'manner of appearing' (Verran 2001, p. 67), or the sort of thing that is being referred to. On the basis of the units of the sortal particular, 'a degree of dividedness is allocated as a mode in which the stuff is presented' (Verran 2001, p. 138). In the stone example, the matter in question was firstly defined as 'stonematter'. Only in a second level ordering of reality was it described in the mode of its representation: 'in the mode of a group in the mode of four'.

An analysis of the ontics of the historical knowledge enacted in the History curriculum will reveal its specificity. I will contrast these ontics with another that was not included in the curriculum. In order to do this, I adopt Verran's distinction between spatiotemporal and sortal particulars. I also adopt her distinction between first-level and second-level ordering. I begin by describing two different ontological comittments of historical knowledge that emerged in the designing of the curriculum. I will also ask how these two ontologically different kinds of historical knowledge emerged in first- and second-level ordering processes.

In each of my decisions in the process of designing the debate I mobilized framing stories and images that impacted on the outcome of the research. Thus, the knowledge that was circulated needs also to be analysed for its associations and ontological commitment. In addition to the associations made in the expert opinion paper of the Bundestag, others were involved in the design of the debate. I will now retrospectively trace what I defined as being important to the enactment of historical knowledge in the debate.

While designing the debate, my decisions for selecting a certain historical knowledge related to the discussed *topic,* to the *medium* through which I associated with the historical knowledge and to the *places* and *times* which were mentioned in the selected knowledge. Obviously, in designing the debate many other associations and attributes were not made and not attached.

Being part of an international research project on social memory and historical justice at my university, I intended to 'deliver' the German contribution to this project. This institutional request to do research related to historical justice, social memory or both guided my choice of a topic. This decision to include a German example necessarily excluded due to its finiteness a vast variety of places other than Germany that were consequently not discussed. As I wanted to do research with teenagers and as, according to Berlin's History curriculum, teenagers are introduced to National Socialism in History classes in Years Nine and Ten, I decided to focus on this age group.

In the design of the debate I associated law, a change in law due to a different Government, Heinrich D., his and other people's suffering, labour camps, German National Socialism, the American military, begging, judging, sentencing and a justifiability. I attributed morals, ethics, legal regulations and political decisions and changes. I created historical knowledge about historical injustice. Spatial considerations guided my decision regarding the media I used to collect material for the debate. I was living in Melbourne as I prepared a debate for high school students in Berlin, thus I searched for relevant information on the Internet rather than in German libraries. As with any other medium, the Internet preselected the historical knowledge that was available. The topic, place and time chosen for the debate, and in a wider sense for my thesis, were the effects of the associations of many actors. Among them were the institution of the university, moral judgements about National Socialism and the distance between Melbourne and Berlin. Having associated the debate with the expert opinion paper, I not only replicated some of the associations made in the expert paper, but also the units by which the past was ordered. One of the units

comprised legal regulations of a nation state - Germany. To create this unit, I reduced and homogenized different sizes, areas and periods, citizens and concepts of nation states, laws and regulations into something that can be called 'Germany'. I ordered the object according to its 'Germanness' and simplified this quality to its legal regulations and to some previously made inscriptions about the period of the National Socialist regime. These inscriptions were not made explicit. In copying the creation of this unit, I ordered the object according to its political-legal regulations. The unit 'governmental regulations in Germany' was not the only previously enacted unit of the enacted past I used for the debate. In describing and presenting Heinrich D.'s story as chronological, I defined times on a linear timeline and defined spaces. In other words, I attributed spatiotemporal particulars in the first-level categorizing, so that a linearly ordered past could emerge.

I attributed morality in a second-level categorization. In this way, within the previously enacted representational knowledge that I presented to the teenagers I enacted the same ontics as that implicit in Berlin's History curriculum (see p. 156). The historical knowledge that I circulated in the classroom was based on ontics with spatiotemporal particulars and moral qualities. Some of the teenagers, however, enacted a historical knowledge that implied a very different ontological basis.

The design of the debate thus comprised a lot of work, but this work was no longer visible when the debate was introduced into the classroom. The circulation of knowledge present in, for instance, a committee of the German Government, or in university requirements, or in moral judgements had by then disappeared. In presenting this historical knowledge as existing prior to the classroom situation, I presented it as an object rather than the emerging result of collective interactions, associations and attributes. Thus historical knowledge was presented and misrepresented as history.

3.4. Enacting historical knowledge in the classroom

What follows is an analysis of the historical knowledge enacted in the classroom, beginning with an excerpt from my field notes. Thirty minutes after the teenagers began discussing their positions and developing arguments, I asked them to help me rearrange the desks in the classroom.

'Welcome to court', my loud voice sounded formal as it resounded through the classroom. I stood in front of the class, looking at the teenagers. The desks in this standard 10m x 6m classroom were organized into two rows now. Plaintiffs and attorneys faced each other. The heavy teacher's desk was the judges' pulpit at the end of the two rows. The last teenagers sat down, the last chairs scraped on the floor, and the last voices fell silent. Mrs. Kaufmann, sitting in the corner of the classroom at a desk with some papers in front of her, smiled slightly.

'Today, we will conduct in a trial on Heinrich D.'s claim for compensation. I thank you for your participation and for your preparation. I now hand you over to the judges now.' I went to the end of the two rows and sat down, my notebook on my lap, pen in my hand, and looked at the judges.

(Field notes 03/06/2010)

As mentioned above, three teenage boys, Murat, Memet and Alex, volunteered to be the judges. Although the three judges were supposed to lead the group discussion, they in fact stated opinions throughout the course of the debate that were not as neutral as those required by their roles. To clarify the dynamics between the teenagers, the judges' names are set in bold in the transcript.

Murat began. 'Okay, let's start. Commence the statements! The girls begin!'

Memet pointed left to where the girls were sitting. 'This side!'

Isabel spoke for the plaintiffs. 'We think the compensation should mainly be related to the circumstances and conditions of internment. That is an important aspect. Furthermore, he [Heinrich D.] was convicted for begging. But nobody gets hurt from begging! Actually, begging and vagrancy are not reasons for locking someone up. Also, you cannot call his begging 'anti-social' because you do not know what led to it. We do not know how he lived, if he had a job or if he was born into a family of beggars. That's why calling it 'anti-social' goes against his dignity.

Furthermore, that [being anti-social] is something very different [from begging]. Hmm. Yes. And it should not matter where you come from in terms of getting compensation, whether East- or West Germany – related to that. And, yes, as I said: Compensation!'[14]

Murat turned to the right, to where the attorneys were sitting. 'What do the others say?' The attorneys hesitated and looked at each other. Apparently they were yet to decide who will be their spokesperson.

Hassan giggled and then in a low voice said, 'Nothing'. Leon joined in giggling and said, 'Nothing? That's it. We can go home.' Finally, Karl decided to speak. 'Well, actually, he [Heinrich D.] knew that begging was a chargeable offence, that he could be punished for it. So it is self-inflicted, because he knew that people get locked up for it. He could have tried, I don't know, to find a job, even when there aren't any jobs. Hmm.'

Murat chaired the discussion. 'That was a strong argument from Karl, because he knew it very well.' Some teenagers laughed. Then Murat looked to the girls again. 'Can you argue against this?'

Lena responded to Karl's point. 'Yes! Hmm. Should he have died rather than beg? I mean, what should he have done when there was no job? What was he supposed to do?'

Without waiting for a response from Karl, Isabel supported Lena. 'Furthermore, how can he find a job when he doesn't have a degree?'

Karl raised his eyebrows. 'How do you know he hasn't got a degree?'

'Well, we don't know how he lived,' said Isabel. 'It's just an example.'

'If you don't know it for sure you can't use it,' retorted Karl.

Selma interjected, 'Well, even so, it wasn't okay because he didn't get six weeks imprisonment for it, he got a lifelong sentence!'

'Yeah, because he broke out!' Karl was speaking louder now. He was the only one from his group who was talking, so the girls addressed their responses to him.

(Field notes 03/06/2010)

As my field notes reveal, the teenagers spoke about a variety of topics and some of them entailed moral judgements. Some statements referred to the past or related to previously made statements, others did not. Murat spoke about the structure of the debate and Karl's presentation of the attorneys' position. Isabel

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[14] As the teenagers' use of language is open to different interpretations, I do not want to deny this by smoothing out the sentences, even when they are fragmented and confusing. The additions in squared brackets explain how I interpreted and translated the meaning of the statements.

mentioned conviction, begging, causes and effects, dignity and compensation in East- and West-Germany. She also pointed to a lack of opportunities to act differently and was later backed up in this regard by Lena. Isabel's statements included moral judgements. Hassan spoke about the lack of statements from the boys. Leon's contribution implied an understanding of the requirement to stay at school until a task is completed. Karl's statement touched on an individual responsibility for his or her actions, justifications and income opportunities aside from begging. His statement also comprised a moral judgement. Lena suggested the only alternative to begging was starving, and Isabel spoke about a lack of an education qualification, not previously discussed. Karl spoke about the lack of historical knowledge involved in the debate and Isabel explained her debating strategy. Selma judged Heinrich D.'s lifelong sentence as not being 'okay'. Karl again spoke about justification.

Many of the statements that were associating with the past comprised moral judgements. As analysed previously in this chapter, I understand the making of moral judgements about the past as a way of engaging with the past and as a way of enacting historical knowledge (see p. 72).

3.5. Negotiating morality

Not all of the judgements were moral or related to the past. Murat judged Karl as 'knowing it very well' and Karl judged Isabel's fictional addition as inadmissible to the debate (I will return to this short exchange later in the chapter, as it entails different kinds of knowledge. See pp. 87 and 174). As the enactment of historical knowledge is the topic of this thesis, I will blackbox[15] the judgements that were not related to the past. Instead, I will focus on Isabel's and Karl's moral judgements and will investigate from what associations they emerged and which attributes were attached.

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[15] The verb 'blackboxing' is drawn from the notion of a black box and was originally used to describe the process of making scientific and technical work invisible (Latour 1999a, p. 58). As with many other researchers, I employ the term in its broadest sense, to denote the process of making any work invisible.

Isabel associated several elements in her claim. Calling begging 'anti-social' infringed upon Heinrich D.'s dignity because of the lack of previously enacted historical knowledge about his living conditions. By referring to her uncertainty about his past, she rejected the possibility of morally judging Heinrich D. Instead, her moral judgement related to legal regulations in the past. Her main criticism addressed the attribution of 'anti-social'. Instead of judging Heinrich D.'s activity, Isabel suggested judging a legal system that punished an activity that had no significant harmful effects on others. She also related compensation to the circumstances and conditions of internment. Furthermore, she attributed morality to Heinrich D.'s case by relating the claim for compensation to her judgements that 'begging and vagrancy are not reasons for locking someone up' and that 'nobody gets hurt from begging'. Referring to governmental regulations in Germany, and consequently ordering the past around them, Isabel enacted a historical knowledge that was accorded with the expert paper and my handout for the debate. The attributes she attached to the associations when ordering the past were 'irrational', 'important' and 'undignifying'. As described in the analysis of the previously enacted knowledge in the design of my debate, these attributes entailed judgements. These judgements were based on moral considerations. Isabel's judgement of the past, and thus the historical knowledge emerging in her statement, carried the attribute 'immoral'. She attributed this immorality to Heinrich D.'s suffering.

Unlike Isabel's statement, Karl's statement only associated a few elements: punishment was related to an activity that was judged as a crime, and culpability to being informed about a punishment for begging. He related the justification for Heinrich D.'s internment to alternative ways of acting. In contrast to Isabel, Karl did not attribute 'immoral' to Heinrich D.'s internment in a labour camp, rather, in accordance with his role in the play, he attributed this as 'moral'. In Karl's statement, the morality was not attributed to a law or to human suffering, but to the act of begging.

Both teenagers ordered the past morally. Accordingly, the historical knowledge that emerged was a moral one. I have described two ways in which morality was attributed to historical knowledge. Two different imaginaries were emerging. Isabel's framing stories and images related to the immorality of legal regulations, Karl's framing stories and images related to the morality of following rules.

In order to more clearly convey and analyse the differences of these two moral forms of historical knowledge and how they were enacted in the classroom, I will draw on Kathryn Pyne Parsons's (1974) typology of morality. I understand Pyne Parsons's three types of morality as imaginaries in Verran's terms.

In addressing the question 'What is moral change?' Pyne Parsons (1974, p. 57) draws together Kuhn's[16] characterization of science as progressing in revolutions and Nietzsche's contribution to moral philosophy. She describes Nietzsche's slave morality and master morality as normal morality and as analogous to Kuhn's understanding of normal science. In describing normal morality, Pyne Parsons (1974) distinguishes between slave morality as the first type and adapts Nietzsche's idea of master morality to being that of a noble as the second type.[17] She then develops a third type of morality, the morality of the revolutionary. This revolutionary morality exhibits similar features to Kuhn's description of a scientific revolution.[18] Pyne Parsons's three types of morality

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[16] This short detour into the thoughts of Thomas Kuhn and Friedrich Nietzsche is necessary because references to these scholars trace back Pyne Parsons's typology to the discourses in which it was developed. To explain the original concepts of and discourses about Kuhn's paradigms and Nietzsche's moral philosophy would, however, exceed the parameters of this thesis. I have therefore 'cut the network' at this point.

[17] Pyne Parsons explains that she 'called this sort of morality "noble morality" rather than "master morality" because, in Nietzsche's discussion, master morality is sometimes not clearly distinct from what [she] shall call[s] "the morality of the person of conscience"' (1974, p. 71).

[18] Pyne Parsons's analogy between scientific change and moral change has been widely discussed and criticised. Palmer and Schagrin (Palmer, Schagrin 1978) respond to Pyne Parsons's article arguing that 1) there is no such thing as a Kuhnian moral paradigm as there is 'no uniformity of training in the moral community'; 2) there has been no interpretation of the history of moral theories as progressing to the currently popular ones; 3) there is no cohesiveness of views brought about by the kind of regimen found in the training of a scientist. Consequently there are not the shared views and assumptions constitutive of a Kuhnian paradigm, and hence no possibility of a paradigm change.' (Palmer, Schagrin 1978, p. 270) I agree with this criticism and argue that the analogy between Nietzsche's consideration on morality and Kuhn's scientific revolution is a reductive application of their theories.

are distinguished by their ontological commitments, as the basic units are different in each. In these imaginaries of morality, three ontologically distinct categories emerge: slave morality, noble morality and revolutionary morality.

According to Pyne Parsons (1974, p. 70) the primary value in slave morality is obedience to a rule. The only freedom in slave morality is to obey or disobey. As disobedience of a rule is sanctioned, the person acting in a slave morality must be able to justify his/her actions. Slave morality involves rules, principles and justifications that are applied to an act. Thus, in this type of morality the act is the basic moral unit of moral judgement. In other words, moral judgements refer to acts.

In contrast, the noble person's morality is not concerned with the moral codes and opinions of society. Rather, a person acting with a noble morality is free from the slavery of rules, obedience and justification. 'A just act is one which the just person would do and to act justly is to do such an act as the just person would do it' (1974, p. 71). According to Pyne Parsons, 'the noble person apprehends himself as worthy, and he *confers* values in his act' [italics in original]. In noble morality, the person is the basic unit of moral judgement. Moral judgements refer not to an act, but to a person who does something moral or immoral.

Finally, the morality of the revolutionary offers not only freedom from rules and obedience, but also the freedom to create. The revolutionary creates new values in an act that does not involve rules or being morally noble, but is a novel act. Acting novelly, the revolutionary might not be able to justify his view, but take new principles as important and create a different morality. What is understood as morality will be different after the act of the moral revolutionary, as the basic unit of moral judgement has to be created. In this case moral judgements refer not to an act or a person, but to categories that are created and that newly emerge. The acts of a moral revolutionary can be understood as a creative morality intervention.

Pyne Parson concludes that moral change might not 'result in replacement of one set of principles by another, or in a reinterpretation of principles held under the old paradigm. It might result in a *morality of a new type*' (1974, p. 72) [italics in original].

Pyne Parsons's categorizing of morality has implications for the analysis of the historical knowledge enacted in the classroom. However, before examining these implications I will briefly reflect on the limitations of this categorization. By applying Actor-Network Theory to the analysis of categorization we discover that the process of defining categories is a creative act in which specific associations are made and others not. Accordingly, in Pyne Parsons's typology different elements of morality were selected, clotted and clustered in specific ways. Other categories would have emerged if other elements had been selected, clotted and clustered, associated and attributed. Thus, categorizing is a practice too. A lot of effort is directed towards the 'engineering' of categories. These categorizing practices have to be laid open to understand the categories as emerging. If that is not the case, categories can appear to be inherent in the categorised phenomenon. Pyne Parsons applies discourses from the field of society of knowledge and of moral philosophy rather than working with empirical data. Thus, her concepts are idealistic concepts of how morality occurs, with more or less clear boundaries, rather than descriptions of morality as it emerges from practices.

Hence, by applying Pyne Parsons's theory I am knowingly categorizing practices according to her idealistic concepts and excluding all the practices that might not enact moralities that conform to her typology. Also, through the blackboxing and homogenizing practices in and through which morality is enacted, morality itself is made an object. Rather than being presented as enacted, morality is presented as an already existing object. In short, through presenting morality as an object, Pyne Parsons treats it as though it exists independently, with characteristics that can be categorized.

Another criticism of blackboxing the practice of creating categories relates to the effects of objectification of categories. With Annemarie Mol, I suggest that '[f]or most characteristics, the differences within a group (clustered in one way or the other) are larger than those between such groups' (Mol 2012, p. 29). In this way, it is not only the characteristics of categories that involves engineering, but the use of categories as well.

Pyne Parsons's categories of morality can be criticised on at least two grounds. Firstly, the categories of morality are objectified, and secondly, this objectification hides the variety of elements associated in them. As such, I suggest a different reading of Pyne Parsons's moral typology, one in which they are interpreted as actor-networks emerging from associating Kuhn's and Nietzsche's, which were published, circulated and read. By interpreting Pyne Parsons's typology of morality in terms of Verran's imaginaries, they are revealed as being particular ways of ordering reality. I assume there are innumerable ways of characterizing and categorizing morality, and that Pyne Parsons's attaching of certain particulars and features materialized these three types at the exclusion of many other possibilities.

By applying Pyne Parsons's typology of morality to the morality circulated in Isabel's and Karl's statements, the differences between the historical knowledge enacted by them becomes clearer. Isabel suggested that begging is a victimless activity and is therefore not a valid reason for imprisoning someone. As little was known about Heinrich D.'s living conditions, she claimed it was immoral to judge him and his actions. Instead, she asserted that the law was at fault and that because of the injustice resulting from this law Heinrich D. should be compensated. Isabel did not argue in terms of rules or obedience and she was not concerned with societal opinions. Rather, she conferred moral values in her statement, and enacted a morality of the noble type. In contrast, Karl suggested that it was not the law against begging that was immoral, but rather Heinrich D.'s breaking of it. Thus, by proposing that disobedience of the law was immoral, Karl enacted a slave morality.

It is worthy of note that although the statements of Isabel and Karl enacted different types of morality, the ontological basis of them was the same. Both associated Heinrich D. with the law and with begging and ordered these around clotted spatiotemporal particulars. Isabel's and Karl's statements only exhibited differences on the second-level of ordering. While Isabel attributed moral qualities of the noble type to the spatiotemporal particulars, Karl attributed moral qualities of the slave type to them.

The historical knowledge emergent in Isabel's statement was similar to the historical knowledge emergent in the design of the debate. As mentioned earlier, the historical knowledge emergent in the handout given to the teenagers also clotted around spatiotemporal particulars. And, in terms of Pyne Parsons's typology, the handout applied a noble morality, so that instead of assigning morality to the obedience of regulations and laws, it conferred values.

The historical knowledge emerging in Karl's and Isabel's statements, in the expert paper, in my handout and in the History curriculum was based on spatiotemporal particulars and defined by moral qualities of different kinds. These kinds of historical knowledge differed in their qualities, but not in their ontological particulars. None of them exhibited revolutionary morality.

According to Pyne Parsons, revolutionary morality does not confer or obey to existing values, rather it challenges and ultimately changes the moral values themselves. One such challenge manifested in the above exchange when Isabel asked how Heinrich D. could have found a job without having a degree. Karl questioned how she knew about this. Isabel explained that she did not know whether or not Heinrich D. had a degree. In effect, that was beside the point, her remark illustrated how little was known about Heinrich D. and how the lack of knowledge about the circumstances of his life made it difficult to judge him. Karl responded that such information is inadmissible to the case if it is not known to be verifiably true (see p. 174). On this basis, he rejected it as historical knowledge as it is not representational knowledge in Sørensen's terms.

In fact, what was negotiated here is what counts as historical knowledge. It is no longer the quality categorized on a second level, such as slave morality or noble morality, but the first-level categorisation within an imaginary that was negotiated. In adding the fictional element of Heinrich D.'s lack of qualifications, Isabel no longer attributed the spatiotemporal in the first-level categorization, but instead clotted particulars that were moral rather than spatiotemporal. The defining of a certain point in time and space became secondary. Only in this second-level categorization did she attribute spatiotemporal particulars and enact knowledge that is still historical. In judging a past event, Isabel enacted a historical knowledge that differed from the previously enacted historical knowledge. The historical knowledge emerging in her statement emerged from moral particulars and spatiotemporal qualities. As such, it had a different ontological basis.

This historical knowledge, then, comprised revolutionary morality. At this point in the debate, the newly emerged revolutionary morality could not be justified. What counted as moral or immoral was different after this revolution. New framing images and stories had to be developed. The following arguments were made 20 minutes after the beginning of the debate and revolved around what happened in the labour camp.

> Karl introduced another argument: 'Moreover, people were locked up for their religious beliefs – they weren't able to help it at all! Actually, that is totally… yes!'
> Lena yelled, 'We agree with you! These things are totally mindless, to put these people in jail. And that's why we want them to be compensated!'
> Karl became louder as well. 'Yes, but he committed a crime in principle, because it was a punishable offence! And he knew it!'
> **Murat** shouted in response, 'Could we clarify one thing! There was a law at that time that said begging is not allowed!' He pummels the desk with his hand. 'It was forbidden! Simple. Finish! Not just', he copied Lena's girlish voice, '"Yes, but it's mindless! Yes, but it's mindless!" It is as it is!'
> 'But what else could he have done?' Lena yelled.
> 'It is as it is. We have to clarify this', **Murat** repeated.

Lena continued, her voice getting faster and higher, 'So, should he have died because he has no money?'

'He could have gone to a labour camp!' **Murat** offered. 'And he doesn't die there, he works there.'

Some boys sent kisses in the air. Some girls, including Lena, giggled.

'And he works to death there or what?' Isabel spat at Murat.

'Yeah, maybe,' **Murat** replied.

'And that's better, is it?' Selma asked ironically.

'He's paid there,' **Murat** suggested.

'No, he isn't,' Karl corrected.

Selma sounded outraged, 'Paid! In jail!'

Isabel sounded upset as well: 'You're going into jail as well…'

Murat corrected her: 'In the labour camp. That is not a jail.'

'Yes, it is,' argued Karl.

'No, actually, it isn't,' insisted **Murat**.

'Either way, they're not paid,' said Karl.

Isabel added, 'But it is a kind of imprisonment.'

Alex joined the discussion. 'But begging was simply illegal. That was the law!' With a very low voice he added: 'Well, that is really difficult!'

(Field notes 03/06/2010)

Murat explicitly rejected the option of questioning the law, of declaring it as 'mindless'. The fact that there was a law that insisted on punishing begging and vagrancy was sufficient for Murat to judge Heinrich D's begging as immoral. Murat enacted a historical knowledge with moral qualities of a slave type. Karl, too, attached the attribute 'immoral' to the fact that Heinrich D. committed a crime. However, Karl also enacted moral qualities of a different kind when he argued that it is immoral to imprison someone for their religious beliefs. Here, he questioned the moral basis of the law and thus, argued within a noble morality. In her judgement, Lena referred not to the act of begging but to the person of Heinrich D. Lena also enacted a historical knowledge with the qualities of a noble morality when she suggested that starving was Heinrich D.'s only other option. The historical knowledge enacted by Karl, Murat and Lena clotted around spatiotemporal particulars and moral qualities.

Of further interest is Murat's suggestion that instead of begging and being interned in a labour camp as a punishment, Heinrich D. could have volunteered to go to a labour camp and thereby avoided breaking the law. This implied that there were no jobs available, that this was the only other alternative to either begging or starving. Murat's remark can be interpreted in many ways. Perhaps the most obvious interpretation is that he did not *understand* the nature of a labour camp, that is, that he misused the term. This reading assumes that historical knowledge must be representational according to Sørensen's typology of classroom knowledge; that Murat's comment must be associated with previously enacted knowledge and needs to be provable and justified. By making this remark, Murat reveals that he has not yet connected with the previously enacted representational knowledge.

As this approach does not consider the emergent character of historical knowledge, I offer another reading of Murat's remark. Drawing on Verran and Pyne Parsons, I suggest that Murat had not yet been introduced to the 'collective memory' (Verran 2001, p. 163) and that he attributed moral particulars of the third, revolutionary type. When writing about collective memory, Verran does not use the term as it is used in the field of memory studies. She explicitly does not picture a mind when writing about collective memory, but 'ordered/ordering microworlds and their rituals with which all times and places abound.' (2001, p. 163, see p. 101) Adopting this sense of collective memory, Murat had not yet been inducted into the ordered and ordering processes which exclude a labour camp being understood as a possible source of paid work, as viable alternative to either disobeying the law or to starving. His suggestion that Heinrich D. could have avoided breaking the law and being punished for his crime by voluntarily entering a labour camp shattered these ordered and ordering microworlds and enacted a revolutionary historical knowledge by clotting moral particulars rather than spatiotemporal ones. According to Pyne Parsons's typology, Murat was free to create a different kind of morality with different moral units. Only after the creation of this new morality would different actions and attitudes be deemed either moral or immoral. As

such, Murat could not justify his new moral categories because he was still in the process of creating them. In other words, he enacted a historical knowledge with moral particulars of a revolutionary type.

Similar to the historical knowledge emerging from Isabel's remark about Heinrich D. 'not having a degree', the historical knowledge emerging in Murat's comment differed in its ontological particulars from the representational knowledge of the handout, as analysed previously in this chapter. It differed in the practices through which it was enacted and could not be clearly separated from the situation in which it emerged. It is obvious now that this newly enacted historical knowledge with revolutionary moral particulars did not pre-exist the classroom situation and cannot be representational in Sørensen's terms.

In her book on *The Materiality of Learning,* Estrid Sørensen (2009) proffers an alternative to representational knowledge, one that I here adapt in analysing the teenagers' discussion. Communal knowledge (see p. 56), Sørensen claims, is fundamentally different to representational knowledge. Rather than being strongly associated with pre-existing knowledge, as is representational knowledge, communal knowledge is a shared experience that enacts a 'feeling of inter-connectedness that cannot be clearly separated from the web of participants of which it is made up' (2009, pp. 108-109). Sørensen argues that communal knowledge involves 'acquaintance or familiarity, regardless of whether it is granted, emotional, cognitive, or practical'.

The negotiation after Murat's remark can, I believe, be interpreted as an emergence of communal knowledge. The act of knowing was not of primary importance for the teenagers. Rather, they were acquainted with the past and this was an effect of the enactment of historical knowledge in the classroom.

The teenagers' practices were the activities that brought historical knowledge into being in the classroom, and through these practices a communal historical knowledge was enacted. The historical knowledge emerged from the

interwoven activities of various actors. These activities were the acts that ordered the past. The actors involved in the enactment of communal historical knowledge attached particulars, defined qualities and features and made associations. The teenagers used different terms for processing the same information and shifted back and forth between negotiating about the debate and the negotiating about Heinrich D.'s case. In doing this they mixed previously enacted historical knowledge of different times and places and created new knowledge. Statements were proposed, rejected, repeated, refined, opposed and justified. The historical knowledge that emerged clotted around particulars and qualities, while other options for enacting historical knowledge were ignored. The teenagers in the classroom associated only a few elements of the past and the present. These elements were associated with the debate and various other actors inside and outside the classroom. The enactment of the historical knowledge was characterized through highly dynamic interactions between various actors, with the classroom and the teenagers merely being some among others. The historical knowledge emerging through these activities can be understood as an achievement of these actors. This communal knowledge, exhibiting characteristics of revolutionary morality, was no less valuable to representational knowledge than that circulated in the curriculum. Rather it differed from representational knowledge by the practices through which it was enacted and in the way the past was ordered around certain particulars.

3.6. Conclusion

In this chapter I have described how historical knowledge was enacted in the classroom. I have analysed the representational kind of knowledge that emerged in the design of the debate. The creative work involved in the design of the handout was not visible to the teenagers, neither was the constructed character of the historical knowledge I presented. The handout itself comprised a previously enacted historical knowledge with moral particulars of a noble type,

as understood in Pyne Parsons's typology. As a result, I presented an historical knowledge that, through blackboxing, had become the object 'History'.

I have described the associations made by the teenagers as they enacted historical knowledge. I have argued that knowledge that resulted from an engagement with the past is historical knowledge – including moral judgements of the past. I have also described what attributes they attached to these associations. In order to scrutinize the effects emerging from attaching these attributes I have used Verran's concept of the imaginary. By analysing the first of two field note excerpts, I have identified two different imaginaries from which two different types of historical knowledge emerged. Pyne Parsons's typology of morality aided my analysis of the specifics of these two imaginaries.

The comparison of two different types of historical knowledge, one enacted in and for the handout, the expert paper and the curriculum and the other by and among the teenage students during a debate in the classroom, impacted on the results of my analysis. I have compared certain features of historical knowledge that were enacted through the making of associations (such as linking the past to politics and attributing controversy to the enacted historical knowledge) and other specified practices (such as agreeing/disagreeing or exemplifying). In these comparisons, the different kinds of historical knowledge seemed to inherit these features. However, these features are not inherent. Rather, I associated them. The fact that I associated these features in order to write about the enactment of historical knowledge has been blackboxed. Also, in discussing the results of the analysis of the debate I did not intend to suggest that historical knowledge emerging in the classroom necessarily has either spatiotemporal or moral particulars. As the debate was designed to elicit moral statements, my focus was on the morality involved in the enactment of historical knowledge. Other forms of historical knowledge can emerge in the classroom as well and, again, what became apparent is the way in which I and other actors ordered the classroom practices.

I suggest that the creation of new values is what is happening in History classes and that the exploding of history as a stable category is a common activity in the classroom. In this way the teaching of History might best be understood as training students in the habits of exploding categories.

Despite my attempts to meticulously describe the enactment of historical knowledge, these descriptions are still limited by the fact that I focus only on local knowledge practices. My description does not take into account the dynamics and fragility that I observed in the classroom. It also does not respond to the claim made in STS that taken-for-granted, non-visible actors might be involved. I assume that the mere analysis of the teenagers' arguments leaves aside the elements that shaped these arguments.

Having analysed the debate and having assumed that the dynamics in the classroom and the fragility of the relationships between the teenagers influenced it, I wonder how other actors shaped the enacted knowledge. This question cannot be answered either though a description of the associations made within their arguments, or an analysis of the ontological commitment of these arguments. Rather, to respond to this question I must consider what counts as relevant data. I need to discover or develop an approach to relevant data in the investigation of knowledge practices that goes beyond the actual, direct interaction of a classroom situation. To investigate what shaped the knowledge that emerged in a specific, direct situation, such as aforementioned debate, I need to involve the broader socio-material network. In other words, I need to expand the focus from the direct situation to spatial and temporal framings. This approach is based on the assumption that the historical knowledge cannot exist without the spatial and temporal dimension in which it is enacted. This approach, providing as it does a comprehensive analysis of the socio-material embeddedness of knowledge practices, differs markedly from the ones utilized in contemporary German history education research. The analysis of this embeddedness provides an opportunity for more effective interventions in history education.

The following chapters will provide an empirical analysis of the spatial and temporal network in which historical knowledge was enacted in the classroom. In Chapter 4 I will describe the spatial aspects of these practices and who and what is involved in the enactment of knowledge in a classroom. I will define actor-networks and describe how these stabilize the enactment of knowledge. In Chapter 5 I will then describe the temporal practices. I will analyse how a particular historical knowledge was enacted in the development of Berlin's History curriculum for the lower secondary school. The knowledge enacted for the History curriculum pre-existed the classroom situation, but significantly shaped it. I will trace how this knowledge is not only an actor in the classroom, but also a network effect itself.

4. Defining the actor-networks involved in stabilizing and destabilizing classroom practices

4.1. Introduction

When sitting in class, I spent much time observing the dynamics in the classroom. Often I felt that the dynamics related to different levels of interaction. Teachers and teenagers seem to have very different intentions and confronted each other with different requirements and needs. Consequently, the dominant practices in the classroom revolved around negotiations of what activities were acceptable to both parties. These negotiations did not only occur between teachers and students, but also between the students themselves. The constant negotiation of acceptable activities meant I often experienced the classroom situation as highly dynamic. As described , I came to the conclusion that what I observed in the classroom responded to these dynamics. Acceptable activities were not the only outcome of these dense and dynamic negotiations, so was knowledge. In this chapter I show how these negotiations about acceptable activities and the enactment of knowledge were mutually constitutive practices. I aim to investigate knowledge practices beyond the local scene of knowledge enactment and expand the focus from the direct interaction to the classroom.

This chapter describes knowledge as an outcome accomplished through a variety of practices in the classroom. This thesis is about *historical* knowledge, but in order to describe the enactment of knowledge as an achievement I draw from data collected in classes other than history classes. These data allows me to identify knowledge *practices* and *actors* involved in the enactment of knowledge and more generally, to focus on the practices that enact the knowledge rather than focussing on the analysis of the knowledge itself. I suggest that any kind of knowledge is enacted through knowledge practices - knowledge about poems, society or about history. So this chapter does not analyse the differences between History education and the education of other

subjects, but the knowledge practices that were used in the classroom in different subjects.

In order to depict knowledge as enacted, I describe how five of the actors involved in the process of enacting of knowledge in the classroom shaped classroom activities and argue that negotiations about actors in classrooms are part of knowledge practices.

Although these actors were all acting at the same time in the classroom situation, for analytical purposes I will describe them separately. I argue that the actor-network that is involved in enacting knowledge in the classroom is fragile, that a stable actor-network is the outcome of ongoing negotiations and that power is a crucial actor in the process of stabilizing a network. In order to demonstrate this, I describe a situation in which these actors were in tension with each other and identify specific ordering practices in the enactment of knowledge. These practices are negotiating, associating and dissociating, dislocating and adjusting and replicating. I describe a situation in which two of the identified actors, the teacher's power and the classroom, went missing at a certain point. I argue that the enactment of knowledge was impaired when these two actors were missing and ordering practices became necessary to stabilize the actor-network. New actors associated with the network and through these new actors and the lack of stabilizing actors, the actor-network involved in the enactment of knowledge became very unstable. I show how the network necessary to enact knowledge in the classroom was stabilized. My analysis of this network draws on Bruno Latour's understanding of power and Helen Verran's notion of ordered/ordering microworlds.

4.2. Maintaining stability

In order to selectively identify actor-networks that are involved in the enactment of knowledge in the classroom, I have to bracket-out practices that did not affect on the enacted knowledge. In order to investigate the enactment of knowledge

in the classroom, I follow Bruno Latour's recommendation 'to keep the social flat' (2005, p. 165). Latour suggests focusing on the dynamics and the practices that enact the phenomena under scrutiny rather than on overarching structures or specific local phenomena (see p. 35). Hence, it is not the structure of the school that is of importance to me, or merely the activities in the classroom. Firstly, I analyse activities observed in the classroom, secondly, how actors, not all of who were physically present in the classroom situation, were linked to each other. Thirdly, I analyse the results of the associations between these various elements and actors.

Drawing on my field notes, I describe some activities during recess and then depict what happened when the bell rang for the beginning of a German class. The following rather long excerpt from my field notes identifies five actors: the teenagers, the teacher, the classroom design, power and previously enacted knowledge circulated in the classroom through the curriculum.

The first period started at 8.00 am. It was early morning when I entered the classroom. Most of the teenagers were already sitting at their desks. Some stared sleepily at the desk in front of them, others sat in groups chatting, their backs to the blackboard. Lena and Haifa stood with Mrs. Kaufmann, the German teacher, in front of the blackboard. Lena was talking, Haifa nodding. When Mrs. Kaufmann responded, both girls nodded. When the bell sounded the small groups dispersed and the last students went to their chairs and sat down. All of them now faced the teacher and became quiet. They sat in three rows of desks, each row comprising six desks.

'Good morning', said Mrs. Kaufmann.

'Good morning', replied the teenagers, almost as one voice. Mrs. Kaufmann explained that they will be discussing poems and meters today. In the second desk in the row next to the window Murat turned half way around to Nevin and Hassan, who sat behind him, and started to chat quietly.

Mrs. Kaufmann spoke of the characteristics of a poem's meter, then turned her back to the class and wrote four forms of meter on the blackboard. When she had finished Murat was still chatting quietly. Mrs. Kaufmann requested that he change places with Fatih, who had not been chatting and who sat at the first desk in the middle row. Both teenagers stood up, took their notebooks, their textbooks and pencils, went directly to

the other boy's chair, and without saying anything sat down. Mrs. Kaufmann did not wait until the boys had changed their seats, before she switched on the overhead projector and projected a poem on the wall. She read the poem, 'Frische Fahrt' ('Brisk Journey'), aloud from a piece of paper in her hand. She explained that Joseph von Eichendorff wrote the poem in 1810. When she finished reading, she looked up from the paper, towards the class and asked if there were any words that the students did not understand.

The girls, nearly all of who were sitting in the row of desks next to the wall, copied the poem into their notebooks. Although I noticed their individual features, I was struck by their similarities. From where I sat at the end of their row of desks, it looked as if they were all sitting the same way: leaning over their desks at nearly the same angle, their heads bent to the left, rhythmically moving their heads up and down, their hands moving over the paper in front of them. Some boys also copied the poems. A few others, though, were chatting, Nevin and Hassan among them. The fact that Murat had been sent to another chair and was thus separated from Nevin and Hassan had not stopped them from chatting. Now, Mrs. Kaufmann asked them to stop chatting. Two arms rose in response to the teacher's question regarding the meaning of words. One student asked about the meaning of the word 'tepid', another about that of 'perpetuate'. Mrs. Kaufmann provided definitions of these words and then calmly asked Hassan to change places with Niklas. Again, both boys, Hassan and Niklas, stood up, took their things and changed places as requested.

(Field notes 17/02/2010)

The teenagers were obviously central actors in the enactment of knowledge in the classroom. In the previous chapter I described the teenagers as actors in the enactment of historical knowledge and as actor-networks. I also described the associations they made and how they clotted reality around specific ontics. In this way I identified them as central actors of historical knowledge in the classroom. The teacher was obviously another central actor. In this chapter I will describe two teachers as being themselves engaged in the enactment of knowledge. I will also point out how the two teachers stabilize the actor-network. In this excerpt from my field notes I also identified other actors as influential. I argue that the way the classroom was laid out shaped the activities and hence suggest that an analysis of classroom activities has to take the classroom layout into account. I also suggest that in the negotiations about appropriate behaviour

a certain power is used and enacted and I describe how this power is enacted and circulated. I also identified the knowledge that was circulated in the classroom as an actor in the enactment of knowledge in the classroom. This knowledge in the curriculum was enacted as knowledge before it entered the classroom and the processes of enacting the curriculum will be analysed in a separate chapter, Chapter 5.

Focussing on Mrs. Kaufmann's practices, some associations become apparent. She connected her own person with her students when she welcomed them and when she explained what was to be discussed. She also connected herself and her students with previously enacted knowledge about a poem and poetic meters. She projected a poem that she had selected on the wall, read it aloud and explained the meaning of words that her students did not understand. At the same time she relocated some of the chatting boys. All these activities were involved in the enactment of knowledge about poems, meters, and word definitions. Mrs. Kaufmann's activities related also to the classroom, the teenagers and to accepted rules of behaviour. In short, Mrs. Kaufmann's activities addressed a variety of actors, not just the teenagers and the poem, and it was not only knowledge about poems that they enacted, but also a variety of power that will be analysed later in this chapter.

When focussing on the teenagers, different kinds of activities become apparent. Most of the teenagers listened to Mrs. Kaufmann and looked at her, at the names for various meters written on the blackboard, and at the poem projected on the wall. Most echoed Mrs. Kaufmann's welcome and copied the words that were projected against the wall into their notebooks. When invited, two teenagers asked for the meaning of specific words. Not all of the teenagers were obedient. A few teenagers did not look at Mrs. Kaufmann or listen to her explanations of the poems, the forms of meter and definitions. Nor did these teenagers copy the poem into their notebooks, instead they talked quietly with each other. When asked, some of the teenagers swapped seats.

4.2.1. The ordered/ordering microworld of the classroom

In order to identify other actors besides the teenagers and the teacher I will firstly discuss Helen Verran's theoretical framework. All of the activities described above differed from those that I observed before the bell rang to indicate the start of class. I found it striking that both Mrs. Kaufmann and the teenagers needed no guidance or discussion as to what they should do once this occurred. Each of them seemed to follow a code of behaviour that I had not been introduced to. The teenagers sat down and stopped chatting when the bell indicated the beginning of class. Mrs. Kaufmann started to talk to all of the teenagers rather than just one or two. The teenagers listened to her, answered her questions and most copied the poem. When they chatted, the teacher asked some of them to swap seats with other teenagers who had not been chatting. Not one of these activities was explained or justified, but they did not seem to be arbitrarily chosen either. Rather, I interpret the lack of explanation and justification in Mrs. Kaufmann's and the teenagers' activities as indicating that these practices were routinized.

These observed routinized activities were what Helen Verran (2001, p. 159) terms 'rituals, repeated routine performances' that might enable generalizations. I discussed the act of generalizing in order to enact knowledge in Chapter 2 (see p. 59). Now I wish to build on an understanding of enacted knowledge as generalizations and focus on the activities in the classroom that were necessarily routinized in order to enact knowledge. Drawing on Verran's concept of 'ordered/ordering microworlds',[19] I suggest that what I observed in the classroom was the result of different ordering practices that were not visible in the moment of my observation of them. According to Verran, such repeated routine performances are a way of structuring reality through collective acting. This structuring of reality through collective acting affects how reality appears after repeated routine performances. In order to locate these structuring routine performances and their effects, Verran (2001, p. 159) describes them as

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[19] I understand the microworld as a particular type of network that has the attribute of being ordered or ordering.

causing and occurring in 'ordered/ordering microworlds'. Verran describes these rituals as having ordering effects on the already ordered microworlds. The double wording in 'ordered/ordering' raises two questions. Firstly, what kind of order resulted from the described activities? And secondly, in what ordering microworld did the activities occur?

In asking for the ordering effects of the described practices, I understand the welcoming of the teacher and the teenagers as associating with each other. The explaining, reciting and copying of a poem can be interpreted as excluding many other topics that neither the teacher nor the students were expected to talk about in this class. The question about the understanding of the meaning of the words in the poem structured the classroom situation according to topics that were included in the routinized classroom activities. The activities of teacher and teenagers structured the situation collectively through excluding 'a vast amount of irrelevant complexity'. In doing this, teenagers and teacher contributed to an ordering microworld. In this microworld, the classroom situation was structured around poems, meters and the definitions of words. The described activities also occurred in an ordering microworld, a concept explained below, under the next subheading.

Some of the boys, however, did not contribute to the collective exclusion of irrelevant complexity. They not only behaved differently from the collective, they also jeopardized the classroom situation so that it might not have remained structured purely around poems, meters and the definitions of words. The relocating of the boys was necessary in order to exclude the variety of topics they may have been chatting about from disrupting the classroom routine, and to keep the focus on knowledge about poems, meters and the definitions of words. This relocating was an ordering routine performance, repeatedly performed, through which the classroom situation remained simple.

This relocating did not only structure the topics that were talked about, it also structured the space. The new seats were chosen in order to create distance

between the chattering boys. These seats were ordered in rows and lines, with always the same kind of chair with the same kind of desk in front of each chair. This space was already ordered. It was designed as an ordering microworld. Under the next subheading I will analyse the classroom as an arranged time/place in which the knowledge (in the case of the described situation, the knowledge of poems, meters and meanings) was enacted. Then, under the following subheading, I will describe the process of enacting power in the classroom based on the results of my analysis of ordering effects of the classroom.

4.2.2. The classroom as an actor-network in the enactment of knowledge

In order to analyse the structuring effects of the classroom I will firstly describe the physical layout of the classroom and then ask how this affected classroom activities. My field notes convey my impression of the classroom in which Mrs. Kaufmann recited a 200 years old poem and in which some teenagers copied the poem into their notebooks.

In terms of size, this classroom looked like most others in this building. Its dimension was ten metres by six metres, and it had two windows. I estimated that each window was three metres wide and two metres high. At the back of the room was another smaller window, just one metre wide, one and a half metres high. Its lower sill is higher than that of the others windows. Blue curtains hung beside the bigger windows. Drawn back, they did not block the early-morning sun. The wall opposite the windows and the back wall were painted a soothing yellow, while the wall at the front, surrounding the blackboard, and the one with the windows was a bright white. Six desks stood one after the other in three parallel rows, eighteen desks all together. Each desk offered space for two students. As this class consisted of twenty-three teenagers, some of them did not have to share a desk with someone else. At the beginning of the row of desks next to the windows, close to the blackboard, stood one desk that was higher and bigger than the others – the teacher's desk.

Apart from the teacher's chair, all the chairs looked the same, with a light brown wooden seat and back rest and straight, industrial-looking steel legs. They were all located at the same side of the desks, encouraging the

students to look towards the front-wall and the blackboard. The teacher's chair was upholstered and bigger than the other chairs and stood on the other side of the teacher's desk, facing the students. When seated at the desk, the teacher had her back to the blackboard. She could, however, turn her head to look at it without turning her body away from the rest of the room. The blackboard on which the four forms of meter were written was foldable, in that it had wings that opened from the middle. Unfolding these wings revealed another blackboard, which doubled in size when combined with the wings. In these features this classroom was like most others in the school, which shared similar shapes, designs and functions.

One of the things that distinguished this classroom from others was the presence of the small cabinets at the back of the room. The two wing-doors of one of these cabinets were open and numerous books were visible inside, all neatly stacked, each one looking like the other. Seeing the colour of the covers I recognized these as dictionaries. Above the cabinets hung six posters in A3 format. Although they were different in design, all of the posters were made from pink paper, had white pieces of paper glued on them, some drawings and the word 'Andorra'.

Two other distinctive features of the classroom were the overhead projector next to the blackboard that projected the poem on the wall, and the small blue bucket positioned in front of the blackboard. The latter was filled with water and was used to rinse the sponge that cleans the blackboard.

(Field notes 17/02/2010)

This classroom was thoughtfully designed for specific activities. It provided furniture, teaching and learning equipment, space and an amount of light, all chosen according to the various intended specific activities. These were regulated by a governmental authority, the Standing Conference.[20] For example, the amount of artificial light in the classroom was governed by the EU

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[20] This governmental authority is the Standing Conference of Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany. According to the *Basic Law* (2000) for the Federal Republic of Germany the political supervisory control over the school system lies with the states ('die Länder') and not with the federal government. Each state defines the names of the numerous different types of school types, their characteristics and the duration of student attendance at these different types. Hence, there is a need to coordinate the education policy of the states on a federal level and to secure the required mobility for students beyond state boundaries. This coordination is the task and responsibility of the Standing Conference of Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (in German: Die ständige Konferenz der Kultusminister der Länder der Bundesrepublik Deutschland), short Standing Conference (in German: Kultusministerkonferenz, abbreviated KMK). As education policy is remit the autonomy of the states, decisions made by the Standing Conference are not binding. Rather, they are received as recommendations that have become widely accepted and applied by the ministers for education of the states. In their coordinating role the Standing Conference also provides guidelines regarding standards in school buildings.

standard DIN EN 12464-1, as published by the 'Central Agency for Questions of Norming and Economic Efficiency in the Educational Sector (in German: Zentralstelle für Normungsfragen und Wirtschaftlichkeit im Bildungswesen, short ZNWB) (ZNWB 2008, p. 8). This regulation prescribes the atmosphere of the light, the atmosphere of the light, the luminance distribution, the intensity of illumination, the direction of light, its colours, flickering, maintenance, energy balance analysis, as well as the amount of daylight admitted into the room and the amount of light at workspaces with monitors.

Other regulations concerning school buildings address to the prevention of accidents, health and safety, protection, sound and thermal insulation, acoustic properties, heating, ventilation, electrical installations, gas, water, sewage, bathroom facilities, illumination, equipment for playing and sport, accessibility for students with disability, furnishing, costs, spaces, capacity (ZNWB 2008).

Each of these aspects is standardized. These standardizing regulations dictate the classroom's furnishing, sound-, health- and heating requirements. Each of the activities of the teenagers I observed included them dealing with at least one of these aspects. Thus, the teenagers' activities related to the standards and norms of classrooms in German schools. All the classrooms in the school appeared to be similar. The teacher's desk was usually positioned in the same corner of the room and the teenagers' desks were in similar positions and distances to each other and from the teacher. In each room the teenagers sat facing the blackboard with a defined minimal distance between them and the teenager next to them. From the teacher's perspective the teenagers were in three rows of six lines, all facing her or him, the teacher desk between them. Although the teenagers differed from each other, the classroom design gave them the appearance of conformity, or at least uniformity. If requested, the teenagers copied the same poem in their notebooks, looked up words in the same dictionaries or, as in a previous class, used the same materials to create posters. Not only in 'my' class did the teenagers act in accordance with the design standards for the classroom, but also in other classes. If a different

group of teenagers and a different teacher were to use the same classroom in the next period, teenagers and teachers would use the same places and positions.

As knowledge is enacted by activities (among them associating and attributing) and as the classroom standardizes activities, I will describe this standardizing effect as shaping the knowledge that is enacted there (see Chapter 4). The classroom's design enabled some activities and excluded others. In Verran's terms, the classroom is the ordered/ordering microworld, a standardized/standardizing space in which repeated routine performances can lead to generalizations, that is, to the enactment of new knowledge.

4.2.3. Power as an actor-network in the enactment of knowledge

The classroom was not the only aspect of the ordered/ordering microworld. It was not just the standardized furniture and classroom design that had an effect on the exclusion of a vast amount of 'irrelevant' complexity, but also the act of stopping the teenagers chatting by relocating some of them. I have argued that the relocation of the boys was necessary to exclude the topics the boys were chatting about from the classroom routine. This relocation had important effects on the classroom activities. When the boys stood up and swapped seats they enacted the power of the teacher. This power is another crucial aspect of the ordered/ordering microworld and an important actor in the enactment of knowledge in the classroom.

Let us take a step back and look at what happened during the chatting episodes. The chatting teenagers did not look to the front of the classroom where the teacher talked about the poem projected on the wall, rather they faced each other. They did not relate to the poem, meters and the meaning of the words in the poem, and thus did not associate with the teacher and the previously enacted knowledge. In the standardized/standardizing classroom, this lack of association with the teacher and previously enacted knowledge introduced complexity and a break in the routine performance. In order to make

the chatterers associate with the teacher and the previously enacted knowledge the teacher requested they move seats. I assume that the teacher understood the chatting as not contributing to the enactment of knowledge, but rather disrupting the routine, so she excluded it. The teenagers were then required to associate with the teacher and the previously enacted knowledge. When asked to move places, neither teenager commented on the teacher's request. Instead, they obediently took their things and went to the allocated place. Having changed places, the distance between them (approximately two meters) was still small enough to continue chatting, but they did not. I suggest that the chatting did not stop because of the inability to speak over this short distance, but as an effect of the teacher's *request* to move seats.

Through this request and the following swapping of seats, Mrs. Kaufmann made the teenagers enact her power. In his article *The power of associations*, Bruno Latour (1986a) describes 'the paradox of power':

> When an actor simply *has* power nothing happens and s/he is powerless; when, on the other hand, an actor *exerts* power it is others who perform the action. It appears that power is not something one can possess – indeed it must be treated as a consequence rather than a cause of action. (1986a, p. 264, emphasis in original)

Latour (1986a, p. 265) distinguished between power 'in potentia' and 'power in actu' and claimed that the difference between both forms of power is the actions of others. When power is enacted it becomes a 'composition made by many people' and 'attributed to one of them' and it is 'necessary to obtain it from the others who are doing the action'. Hence, when Mrs. Kaufmann requested the relocation of some of the chatting teenagers and they obeyed her, power was exerted. I suggest that it was the enactment of this exerted power that silenced the chatterers rather than the distance between them, thus discouraging them from continuing to associate with each other and compelling them to associate with the circulated knowledge. The topic of their chatting was no longer included in the classroom activities in which

knowledge was to be enacted. By excluding these disruptive influences the classroom allowed routinized performances through which generalizations could occur. Mrs. Kaufmann's power also enabled her to order the classroom activities. In this way power is another actor in the enactment of knowledge in the classroom.

4.3. Destabilizing an actor-network

Drawing on an excerpt of a classroom situation, I have identified five actors as involved in the enactment of knowledge: the teacher, the teenagers, the classroom, the curriculum and power. These actors associate in the classroom to form a network. They are effects of an ordered microworld and they participate in ordering the microworld as well. So far, I have not explained how this network's stability is accomplished as an outcome of ordering practices. In order to identify these practices, I will describe a classroom situation in which power and the classroom were transiently dissociated from the network. While illustrating the fragility of the actor-network I will analyse the effects of this dissociation on the network and will describe what practices were used to stabilize the network.

4.3.1. When power is transiently dissociated from the network

First, I have to include a disclaimer. The classroom situation I describe is one where conflicts occurred when different actors challenged the teacher's exertion of power. I am aware that to write about conflicts in classrooms, particularly conflicts about power, is a sensitive issue and I have altered all identifying details. It is not my intention to criticise either the teacher or the teenagers, but merely to report on their actions. I describe this situation in order to demonstrate the fragility of the network I have identified, how an ordered/ordering microworld has to be actively ordered, and the importance of power as an actor in the process of ordering classroom activities.

In Chapter 6 I will build on the results of this analysis and point out that enacting the teacher's power was necessary in order to be able to bridge the gap between two different types of knowledge, one that was enacted by the teenagers and another that the teacher was required to teach the teenagers, which was circulated through the curriculum. After having analysed the enactment of historical knowledge, I will argue that it is beneficial for history education to acknowledge the co-existence of different imaginaries from which different types of historical knowledge emerge. If curriculum developers acknowledged that teenagers enact different types of historical knowledge in the classroom than is required in the History curriculum, the gap between the requirements and the actual knowledge practices would be smaller and there would be less need for conflict over negotiations of power. I will recommend a teaching model based on modules rather than chronology. As I discuss in the next chapter, this modular method of teaching history was discarded as an option in favour of a chronological approach during the development process of discussing and writing the History curriculum. However, this chapter is about the actor-networks involved in knowledge enactment and how it is stabilized or destabilized. For now I ask the reader to follow my analysis of the enactment of power and to put to one side any moral judgement they may have of the activities described.

The following incident occurred during a period of a Studies of Society and Environment (SOSE) class. The excerpt from my field notes starts at the beginning of the period.

> The bell indicated that the SOSE-class had begun. Mrs. Mohn stood in front of the class and waited until all of the teenagers had hushed and were looking at her. The teacher stood tall and looked authoritative. Her face showed no particular emotion. 'Good day. I hate starting like this, but you leave me no choice. You had a deadline to meet.'
>   Mrs. Mohn then addressed the individual teenagers who had not submitted the form as required. On this form the teenagers were supposed to tick the subjects they wanted to study the following year. The form was also to be signed by at least one of their parents. Mrs. Mohn continued,

explaining that if the students did not bring the form by tomorrow morning she would 'call the parents and then you are really in trouble, much more than you can imagine'.

At this point Nevin bent down to his backpack, took his notebook and his pen out, opened his notebook and wrote a note. He lifted his shoulders up and down and pulled down the corners of his mouth. None of the other students moved. Some sat relaxed in their chairs and looked at a point on their desk or somewhere else in the classroom, others looked at Mrs. Mohn. Dilara sat next to Nevin. She bent towards him, looked into his notebook and whispered to him. Nevin shook his head and grinned, slightly embarrassed, I thought.

Meanwhile, Mrs. Mohn continued by saying that the students had another deadline to meet. They should have brought another paper that was to be signed by the parents. This paper informed the parents about school procedures in the case of students missing school without having a legitimate note. Mrs. Mohn talked about the teenagers in the class who had left the school without having permission to do so. Then she asked: 'What, do you think would happen if I just came and went as I liked?'

'Then we would have a cancellation,' Hassan answered. Nobody laughed or moved. While I felt the tension of having experienced something inappropriate and I worried about its effects, I did not discern this tension in any of the teenagers.

Mrs. Mohn responded immediately: 'Well, you are a dickhead. Sorry, that shouldn't be said, but you are really moronic!'

Some teenagers giggled. I felt very uncomfortable observing this. Hassan responded and a dispute between Hassan and Mrs. Mohn escalated until Mrs. Mohn asked Hassan to leave the room.

Nah, couldn't be buggered', Hassan responded.

Neither Mrs. Mohn nor Hassan would budge from their positions and each repeated what they had said before. After a few minutes of heated argument, Mrs. Mohn finally said: 'Well then, everyone else, take your equipment. We'll go out now.'

(Field notes 19/04/2010)

Although this situation seems very different from that in which a poem and its meter were interwoven with the relocating of teenagers, there are two similarities that need to be stressed. Firstly, when some teenagers did not do what was requested the teacher challenged their behaviour. And secondly, this challenging of behaviour by the teacher created a hierarchy between the

teacher and the teenagers. I will explain that this hierarchy is crucial in the enactment of knowledge.

As explained previously, power has to be exerted and cannot be possessed, so I am identifying the relevant practices for the exertion of power, the strategies that the teacher and teenagers used in order to negotiate power. These strategies are relevant as they structure the ordered/ordering microworlds in which collective generalizations lead to the enactment of knowledge.

'You leave me no choice', explained Mrs. Mohn as she began the class. The missed deadlines triggered her *reaction*. The teenagers had not done what was required. In missing the deadlines the teenagers were not enacting Mrs. Mohn's power. So she felt forced to react.

Mrs. Mohn's reaction started with an explanation that if she did not get the form by tomorrow morning, she would call the teenagers' parents. She added that the teenagers would be in a lot of trouble then, more than they could imagine. At this point Nevin made a note in his notebook. He responded in a way that would finally enact her power. At the same time, when Nevin was making his notes, Mrs. Mohn continued talking, mentioning another missed deadline, the submission of a form outlining regulations to deal with students who miss a class without permission. When Mrs. Mohn used the example of herself missing a class without permission, one of her students, Hassan, ridiculed her. He thwarted the enactment of Mrs. Mohn's power, which in turn led to the escalation of the conflict.

To have an understanding of what this conflict was about, and why it was related to Mrs. Mohn's power, the papers in question will be treated as actors. The first paper was a form on which students were to provide information about subjects they will take the following academic year. It offered several subjects to choose from, but the choices were limited. The form required a parent's signature. It had to be transported from the classroom to home, then back

again. The form, thus, connected the school with the parents at home and connected the parents with the regulations of the school. A deadline for submitting the signed form was given in order to provide adequate planning time for the next academic year. This planning involved institutional processes and was based on internal school regulations, external political guidelines, funding, and so on. The more regulations, guidelines and processes that relate to the school organisation, the more powerful the institution becomes. The form, which was intended to be circulated between the school and the teenagers' home, thus, entailed, among other elements, some of the institutional planning processes, school internal regulations and external political guidelines. All these were inscribed on this paper. When mobilized, the form transported the inscriptions with remarkable speed. Instead of explaining to the parents each of the regulations, guidelines and processes, it transported them in the request for a decision and a deadline. It obtained its power through its manifold associations with the school organization, but only on the condition that it was signed and returned. As this was not the case for some of the teenagers, the authority of the teacher was undermined. The power of the teacher had to be renegotiated and exerted by the students. When Nevin made the note in his notebook he exerted Mrs. Mohn's power. His note might have contributed to associating the inscriptions of the form with his parents at home.

The second form performed a similar role. It also circulated inscriptions, and associated the school's regulations with the teenagers' parents at home. When giving her example, Mrs. Mohn associated herself with the school's regulations and with the form. Hassan's reaction to Mrs. Mohn's request to exert her power differed significantly from Nevin's. He responded in a way that undermined her power rather than exerted it.

It was not only Mrs. Mohn's power that was at stake in this situation, for the lack of the teacher's power also impacted on the enactment of knowledge in the classroom. The teacher's power structured the classroom activities around the enactment of knowledge and was part of the ordered/ordering microworld. The

lack of power exerted by Mrs. Mohn's students, which became apparent when the forms were not returned, disrupted the ordered/ordering microworld and thus the enactment of knowledge. As Hassan refused to enact Mrs. Mohn's power she got her other students to enact it. When these students obeyed her request to go outside they cancelled out the disruption of Hassan and his refusal to enact her power.

4.3.2. Negotiating the enactment of power through associating and dissociating

Although Mrs. Mohn succeeded in getting her other students to enact her power, the disruption of routine in the ordered/ordering microworld caused by Hassan's refusal continued, as my account of the following incident illustrates. The network of teenagers, teacher, classroom, previously enacted knowledge and power had become unstable.

> When the teacher commanded the teenagers to leave the classroom I obeyed too, even though I was not one of them. Nevertheless, my discomfort increased. I did not know how to behave as a researcher in this situation and decided to see what the teenagers would do. What they did was hesitate. Benjamin stood up and so did Isabel. Ebru and Yasemine and some more teenagers followed them, packing their things. Finally, I did the same. I took my bag, my notebook and my jacket and joined the group of teenagers. Some of them started to chat. Most of the boys were bigger than me and for a moment I felt comfortably less visible among them as we left the room. Some of the boys talked about another boy who I did not know. A few metres away, I heard Niklas say, 'Well, that is pedagogically very useful'. I was busy trying to keep my face expressionless, but when I lifted my head I saw from the corner of my eye that he was observing me.
>
> Mrs. Mohn led the group from the fourth to the first floor and asked us to stop there. The class was noisy in the school building. The door of a classroom opened from inside and a teacher asked the students to quieten down. While we were waiting in the stairwell on the first floor landing, Mrs. Mohn went into the school office. I assumed she was filling in a form as we then left the school building.
>
> Hassan came with us, but stood on the upper stairs at the back of the group. He bent over the balustrade so he could see most of his classmates. 'You just let her put you down', he said, quickly, loudly. 'All of

you. I am in this class for the shortest time. And all the time you let her put you down!'

When Mrs. Mohn came back out of the office he stopped talking. We left the school as a long, stretched out group and walked towards the nearby neighbourhood.

Mrs. Mohn guided us to a place in the sun. Except for us, no one else was around. Two pairs of benches stood at a right angle; with a little imagination it looked like an amphitheatre opening up to a footpath. Some young chestnut trees stood near the path. They had glossy green leaves. The sun shone through these fresh leaves so that they had different shades of green. Behind the path was a sports ground, which was usually used both communally and by the school.

I was among the first in the group to arrive at the benches. I waited for the teenagers to come and sit down. Not all of them found a seat. Hassan stood next to me under one of the chestnut trees, Nevin stood opposite us at the other end of the 'amphitheatre' and Anna stood between the pairs of benches. Next to her on the bench, Mrs. Mohn's bag occupied a seat.

While the teenagers took a seat, Mrs. Mohn came over to Hassan, next to me. She insisted he leave us. He stayed, arguing that she had no right to ask him to leave.

'Indeed I have,' argued Mrs. Mohn. 'Perhaps you'd prefer to go to the Principal with me? Hassan asked why, and reasserted his claim that she could not send him away. Mrs. Mohn insisted that she did have the right to make him return to the room in which he had been asked to stay. She suggested that if he wanted to find out more about her authority to send him away he should read the school's legal regulations. Hassan said he wanted to read them before he left. At this point Mrs. Mohn censured[21] Hassan for his 'inappropriate' behaviour and told him she would inform the Principal about it.

I did not know where to look. This talk was conducted only half a metre away from me. I wondered if I had a role in this conflict and if so what it was. I felt an urge to react somehow, to stop them. But when I thought about the options I decided to stay out of it and to do nothing but observe how they would resolve the situation. Alex caught my eye. Sitting next to me, he stared in my direction. He did not smile, he just looked, but Memet, who sat next to Alex, grinned at me. Mrs. Mohn still stood only half a metre from me. Looking towards Alex, though, I could not see her. Apparently, she had observed me now and had followed my eyes to Alex

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[21] This is the highest disciplinary punishment at school. Three censures might lead to the student's expulsion from school.

and Memet. She turned in their direction, and, raising her palm skyward, asked Memet indignantly: 'And you are still laughing?' Memet stopped smiling.

Just then, Leon called to Hassan: 'Wrong teacher!'
'I don't care', responded Hassan.

Turning from Memet, Mrs. Mohn went stood at a place where she was equidistant from all the benches. She instructed the students to read a text about democratic elections. One case study examined elections in Iran, another those in Burma.

(Field notes 19/04/2010)

This incident demonstrates how the actor-network that I identified as being involved in the enactment of knowledge could be destabilized. Once destabilization occurred routine practices could no longer be enacted. The network needed to be stabilized again in order for the enactment of knowledge to occur. The exertion of the teacher's power was crucial for regaining stability, so the enactment of Mrs. Mohn's power became heatedly negotiated. This situation illustrates several instances in which the teenagers did not enact Mrs. Mohn's power; most obviously in Hassan's refusal to enact the teacher's power by questioning and ultimately disobeying of her commands. Indeed, when Mrs. Mohn argued with him about his need to leave rather than spending her time conducting the class, she in fact enacted Hassan's power. Memet's grinning can also be interpreted as a refusal to enact Mrs. Mohn's power. However, when Mrs. Mohn demanded he stop smiling, Memet complied and thereby enacted her power.

When Hassan refused to enact Mrs. Mohn's power, she associated with the school regulations about leaving the school building and about authority. She also referred to the school's Principal, invoking the Principal's person and his/her power, requesting Hassan to enact that power. In a situation where Mrs. Mohn experienced an inability to exert her own power, she associated with other actors and requested the enactment of their power. Not only did Mrs. Mohn associate with actors that were not present, she dissociated in another attempt to stabilize the network, or in Verran's terms, to re-arrange the ordered/ordering microworld. Mrs. Mohn attempted to dissociate Hassan from

the rest of the class. She also dissociated Memet from me, and in a less obvious way, she dissociated herself from me when she ignored me. Leon associated with Mrs. Mohn and dissociated from Hassan when he told him he picked a fight with 'the wrong teacher'.

I argue that in the classrooms the enactment of knowledge is entangled with the exertion of the teacher's power, and that practices of associating and dissociating are also included in that enactment of power. In the next chapter I will describe in more detail the process of associating and dissociating in knowledge practices. For now I want to point out that associating and dissociating are practices applied in the negotiation of the power of the teacher.

4.3.3. Negotiating the enactment of power through replicating the classroom

In this section I discuss a third practice, in addition to associating and dissociating, used to stabilize the network through the teacher's power. The outdoor setting for this was very different to the classroom, the standardizing effect of which was clearly absent. Even so, in response Mrs. Mohn invoked routine classroom practices. She directed the teenagers to a place where they could all face her, instructed them to read from their standardizing/standardized textbook and to associate with previously enacted knowledge. In order to stabilize the network Mrs. Mohn replicated the classroom situation.

The limits of her attempt to do this were apparent. Whereas the classroom was characterized by its standardization, the outdoor 'amphitheatre' introduced a wide variety of new actors that/who also associated with the network.

It was reading time and the teenagers were supposed to read an article in their textbook. Leon stood up and went over to Hassan.
Mrs. Mohn turned around and asked Leon to come to her. 'What's that about?' she asked as Leon passed her on his way to Hassan. Leon replied that he wanted to ask Hassan something.
Mrs. Mohn said: 'You keep at least ten metres distance!'

Fatih, who sat now between Alex and me, started to laugh loudly. I wondered what had caused his laughter. Nevin, who did not have a seat, came over to Fatih and asked what he was laughing about. 'Hassan, jump on fence' (sic), called Fatih to Hassan, pointing to the fence that separated the sports ground from the footpath, approximately ten metres from where they stood. Nevin grinned.

'If only you could say the whole sentence' the teacher interjected. Fatih said it again, uncorrected but louder, to another boy on one of the other benches. Leon, sitting on his bench again, loudly explained that he was not allowed to go to Hassan and that he was supposed to keep ten metres distance. Hassan, meanwhile, stood still next to me. He pulled a mobile phone from his pocket and dialled a number. Then he lifted it to his ear. 'Mum?' He turned away and started to talk into the phone.

When reading time was over, Mrs. Mohn asked why the elections mentioned in the textbook were not undemocratic. At this moment a man with an obvious intellectual disability, holding an apple, joined us. He was a big, blond man. He looked at us and smiled a friendly smile. He stopped behind one of the benches, then bent over Dilara's shoulder to look in her textbook. 'Ah', he said and looked at his green apple, 'School!' He bit into the apple and Leon and some others laughed. Dilara turned around to see him, bending her upper body away from him. She and her best friends, Aylin and Selma, nodded. The man came around the bench, lifted Mrs. Mohn's bag from the corner of the bench, hung it over the backrest and sat down next to Dilara. Then, he had another bite of his apple and while chewing looked towards Mrs. Mohn with a friendly manner.

Behind Mrs. Mohn was the sports ground. A man with white hair was jogging very slowly now. Fatih looked at him, laughed loudly and called out, referring to the movie, 'Run, Forest, run!'

Mrs. Mohn ignored the runner and the apple-eating man and repeated the question as to why these events were not democratic elections. The apple-eating man asked whether it was because of the factions. Mrs. Mohn answered sternly: 'Not directly.'

Then most of the teenagers burst out laughing.

(Field notes 19/04/2010)

Little in this incident seemed to be ordered/ordering. Hardly any element in it seemed to be specifically arranged for routinized practices. This meant that many practices were necessary in order to stabilize the network again. First, I analyse the new disruptions, and then the practices used to once more re-stabilize the network.

A variety of new actors that associated with the network caused the disruption of the ordered/ordering microworld in this new setting. The two new human actors, the jogger and the man with an intellectual disability, disrupted the enactment of knowledge in different ways. While the former might not have even been aware of being involved in the process of enacting knowledge about democratic elections, the latter was prominently involved. These men disrupted the network on different levels, but both disrupted the ordered/ordering microworlds. The disruption by the jogger was subtle. Unlike in the earlier incident where quiet chatting in a classroom resulted in teenagers being relocated, here Fatih laughed loudly and yelled out jokes about the jogger without being asked to change seats. Hence, the previously described routinized practices were not in this instance used to stabilize the network.

The disruption caused by the apple-eating man was more obvious. As an adult acting like a student he disrupted the polarized roles of student and teacher that were based on the associations with other actors, such as school regulations, the Principal, textbooks or the teenagers' parents. This man did not associate with any of these elements. Instead, he ate during the class, something the teenagers were not allowed to do, he answered without having raised his hand, drew attention to himself and, most obviously, did not ask if he could share the space with this class that was transposed from the school setting. His lack of associations was of importance in ordered/ordering microworlds and had impacts on the exertion of power. The associations that I described in the previous excerpt would not necessarily make the man exert Mrs. Mohn's power. As the teacher's power was central to the re-stabilization of the network, the presence of the apple-eating man once again destabilized the network and disrupted the ordered/ordering microworlds. However, new associations became possible. For example, just as this random stranger joined the class, so too could any other passer-by. Other regulations than school regulations applied in dealing with the apple-eating man and other previously enacted knowledge then became available.

Other activities also became available in this setting. Hassan called his mother on his mobile. Mrs. Mohn asked about democratic elections as mentioned in the textbook. Nevin, who did not have a seat, walked to Fatih. These activities occurred in a space approximately the same size as a classroom, that is sixty square metres. However, the fact that these activities did not occur in a classroom but rather outdoors, extended the space that was associated beyond the immediate surrounds. Mrs. Mohn's comment about Leon maintaining a ten-metre distance from Hassan was only possible because of the outdoor setting. Fatih's loud comments and laughter about that comment was only funny because the command was no longer rhetorical, as it would have been if made in a classroom, but was literally possible. This extended space enabled different actions and had very different effects to those of the standardizing design of a classroom. While the classroom reduced and standardized the actors involved in the enactment of knowledge, the open space multiplied the actors and offered the possibility of new actors. The classroom, with its ordered/ordering interior and its inscribed rules of behaviour, was absent in this situation. This meant that not only new did associations destabilize the network, but there was also a lack of stabilizing actors.

Both the associations with new actors and the lack of stabilizing actors had disrupted the ordered/ordering microworld and challenged routinized practices. However, some of the practices described also stabilized the network and the ordered/ordering microworld. The reading of the text in the textbook had different effects. When the teenagers followed Mrs. Mohn's instruction and obediently read the text, Mrs. Mohn exerted her power over them. However, it was not only Mrs. Mohn's power that stabilized the network. In reading the text, a previously enacted knowledge was circulated among the teenagers. The teenagers associated with this knowledge in order to enact knowledge about democratic elections. They did that while sitting on benches facing the teacher and the teacher facing the students. Behaviour that disrupted the enactment of knowledge was challenged. When one of the teenagers, Leon, went to Hassan, Mrs. Mohn challenged his behaviour as well as Fatih's loud declaration,

'Hassan, jump on fence!' Finally, when the apple-eating man joined the class, Mrs. Mohn ignored him, rather than including him in the activity. By arranging the teenagers in such a way that they all faced her, as well the nature of her spoken responses to them, Mrs. Mohn replicated the routinized practices of the classroom.

The different practices of the teacher, exerting her power over the students, circulating previously enacted knowledge and replicating classroom situations were stabilizing practices through which the actors were arranged in a particular way.

4.3.4. Regaining stability

Having described this major disruption to the network that enacts knowledge in a classroom, I now focus on the practices through which stability was regained.

When the laughing died down, Julia raised her hand to answer the question and Mrs. Mohn pointed to her and Julia answered: 'It [the people] has been intimidated and it [the process of election] is not basic-democracy at all'. Niklas responded that in order to be elected the person in question would have to be nominated. Benjamin pointed out that there must be no threats to candidates or voters, and Julia added that there must be no bribery either. Karl said that a polling place is required for democratic elections, and Isabel mentioned polling booths and safety as conditions for free statements of opinion.

Mrs. Mohn nodded at each of the statements and added that each vote must be properly counted and that they must all carry the same value. She then articulated some general principles for democratic polls. After this, she instructed the teenagers to read another text, with the headline: 'Elections for the German Bundestag too complicated?' The teenagers were asked to work out the differences between the majority vote system and proportional representation. This time the teenagers just read their books. The man with an intellectual disability still sat at the bench, looking around with a friendly smile and eating his apple. This time, though, there was little interruption to teenagers' reading time.

When the reading time was over, Mrs. Mohn asked Nevin to ask the other teenagers for their answers. Still having no seat and standing next to Mrs. Mohn, he asked if elections for the Germany Bundestag are too

complicated. He had to repeat the question twice more before some of his fellow students raised their hands. By then Nevin had turned away and was looking at the man running around the sports ground. Mrs. Mohn took two steps towards him, poked him in the arm and pointed to the raised hands. 'Yes, Niklas', said Nevin. One after the other the four teenagers with raised hands gave their answers. When they had finished speaking, Mrs. Mohn told the teenagers they had five minutes to go back to the classroom. The teenagers clustered in small groups and headed back. Once back in the classroom, it became evident that Hassan had finally gone missing.

The last twenty minutes of the class were filled with a presentation of general principles for democratic polls projected onto the wall. Niklas asked if people with intellectual disabilities were allowed to vote. Mrs. Mohn explained the regulations and started a discussion about differences between the majority vote system and proportional representation. Then she asked the teenagers to copy these differences from the projection slide into their notebooks. All of them opened their notebooks and began copying.

Already writing, Dilara moaned: 'What do we need this for?' Nevin was also copying when he answered: 'So that we can explain it later.'

Dilara shook her head: 'What for?'

Nevin leaned back and said to Memet, who was four seats away: 'Memet, I will explain it to your children.'

'You won't see them. I'll send one to the United States and the other to Australia.' Memet responded.

'Anyway', Nevin said.
Stalker', Memet responded.

Mrs. Mohn did not comment on the chatting that occurred while the teenagers copied the information into their books. When the class was over, Hassan was found waiting outside the classroom. Mrs. Mohn did not comment on this.

(Field notes 19/04)

Some of the practices finally stabilized the network and structured the ordered/ordering microworld. Julia not only responded to Mrs. Mohn's question, thereby enacting her teacher's power, she also raised her hand and waited until she was granted permission to speak. Being in the sun, seeing the teenagers sitting on benches and observing them raising their hands, these gestures seemed to be slightly displaced. However, in doing this Julia replicated the classroom situation and its inscriptions. She associated with Mrs. Mohn and so

did Niklas, Benjamin and Karl. They all *dissociated from the new actors* and *ignored the lack of stabilizing actors*. Instead they *circulated previously enacted knowledge*, *enacted Mrs. Mohn's power*, and *replicated classroom situations*. In fact, these five practices were so stabilizing that the presence of the man with the intellectual disability or any other new actor barely interrupted the next reading time.

When Mrs. Mohn associated with Nevin and delegated to him the task of asking the questions she used another practice to stabilize the network. The teenagers, who were now asked by Nevin, enacted Nevin's power. Nevin in turn enacted Mrs. Mohn's power. Mrs. Mohn let Nevin exert her power over his peers. Once the teenagers had responded to Nevin, Mrs. Mohn asked the teenagers to go back to the classroom. In the classroom, none of the new actors could destabilize the network. Instead, due to the presence of the standardized/standardizing classroom, the practices of teacher and teenagers became routinized once again. The chatting of teenagers and their articulated resistance, however, did not challenge the enactment of knowledge as they did what they were asked to do and in this way enacted not only Mrs. Mohn's power, but also knowledge about democratic elections.

4.4. Conclusion

All the activities happening in the classroom could have been different, but they were not. Acting actor-networks shaped these activities. In this chapter I defined these actor-networks and described how they hung together. I have identified the teacher and the teenagers, the classroom, previously enacted knowledge and power as actors involved in the enactment of knowledge in the classroom. I have shown that each of the identified actors was necessary in order to specifically arrange the classroom spatially and temporarily in a way that I described in Verran's terms as ordered/ordering microworlds. I have argued that this ordered/ordering microworld allows repeated routine practices to happen and that from these practices generalisations emerge. In this sense, the

ordered/ordering microworld is a crucial condition and status in the enactment of knowledge in the classroom.

I have analysed the teacher as a network effect and as an actor in the enactment of knowledge. I have described the associations that were made by two teachers, their practices, and the effect of these practices. I have described how the teacher circulated the school's regulations and previously enacted knowledge in the classroom, and how she exerted power over the students. I have shown that this circulation of school regulations and the exertion of power are ordering practices in the classroom. Thus, I have suggested that the teacher is a crucial actor in the enactment of knowledge as she is dominantly involved in maintaining and stabilizing the ordered/ordering microworld in which the knowledge practices occur.

I have described the classroom as being standardized and acting in a standardizing way on the teenagers and the teacher. Its standardized interior design strengthened the similarities between different classrooms and carried inscriptions of school regulations. On the other hand the classroom had standardizing effects on the other actors with its standardized arrangement of furniture, positions of bodies in the room and in limiting the actors that can be involved in the enactment of knowledge.

Power was described as another actor that is involved in the enactment of knowledge. I have shown that power was heatedly negotiated and that disrupting the ordered/ordering microworld by the refusal to enact the teacher's power affected the routine practices through which generalizations occurred.

Previously enacted knowledge is a further actor involved in the enactment of knowledge. While in the next chapter I explore previously enacted historical knowledge circulated in the classroom through Berlin's History curriculum for the lower secondary school, in this current chapter I have described the stabilizing effect of circulating previously enacted knowledge. I have argued that

among others the association of the teacher and the teenagers with previously enacted knowledge helped to regain the network's stability. Despite the actors that/who were involved in the enactment of knowledge I also identified practices that stabilized the network and ordered the microworld in a specific way. These practices were *negotiating* and *replicating*, *associating* and *dissociating*, *dislocating* and *adjusting*.

I have chosen incidents from two different classes in order to illustrate the ongoing negotiations between teenagers and teachers in order to maintain or disrupt an actor-network or the ordered/ordering microworlds. I have described situations in which the teenagers chatting with each other or their provoking of the teacher was challenged. In both classes students were dislocated from their seats in the classroom. This dislocation resulted in the dissociation from one actor, Hassan, who was not supposed to be included in the enactment of knowledge. In the second incident the attempted dislocation resulted in the negotiation of the teacher's power. I described the negotiation of power in detail and related the practice of circulating previously enacted knowledge to the negotiation of power. I identified the circulation of knowledge as a practice through which stability is regained. I argued that adjusting the network to new actors was another stabilizing practice through which the ordered/ordering microworld was structured and the enactment of knowledge enabled. Dissociation can be a further stabilizing practice. I argue that dissociation from other actors had stabilizing and destabilizing effects on the network. While the intended dissociation of Hassan from the rest of the class destabilized the network and disrupted the ordered/ordering microworld, the dissociation from additional actors outside the classroom stabilized the network and regained the ordered/ordering microworld.

I want to emphasise that although I focussed on the teenagers In Chapter 3, they were not separate from the classroom, from the teacher or from the power circulated in the classroom. Instead the teenagers' statements were intrinsically entangled with and emerging from their associations with these actors. I have

described the actors, the making of associations, the ordering practices and the effects of these practices in order to strengthen my claim that knowledge practices do not only occur in the direct interactions in classes. I have suggested that these knowledge practices are embedded in a socio-material environment and that this environment needs to be included in the investigation of knowledge practices. The inclusion of these socio-material knowledge practices provides an opportunity to critique and effectively intervene in future educational practices (see p. 181).

I have selected and described the actor-networks and the ordered/ordering microworld that I found intrinsically entangled in knowledge practices. While claiming that an investigation of the enactment of knowledge must include the way the classroom reality is ordered, and thus must include actor-networks and the ordered/ordering microworld through which this knowledge is enacted, I definitely do not claim that my descriptions of classroom situations are representations of classroom reality. Rather I chose and defined these actor-networks according to my interpretation of the classroom reality in order to describe knowledge as enacted and knowledge practices as comprehensive negotiations. Other ways of analysing the described situations would have been possible. I identified the teacher, the teenagers, the classroom design, power and previously enacted knowledge as acting in the particular situations. The classroom and power were analysed in detail in this chapter.

5. Circulated historical knowledge

5.1. Introduction

While in the preceding chapter I identified actors involved in the enactment of knowledge in its spatial expansion beyond the direct interaction in which knowledge is enacted, in this chapter I analyse previously enacted historical knowledge that entered the classroom as pre-existing and thus temporal expansion. This knowledge entered the classroom directly, for example, through textbooks and overhead transparencies, or indirectly through the curriculum and the teachers' own education. Before the knowledge of the History curriculum entered the classroom and circulated within it different actors had already enacted it by specific practices and already attached certain associations and attributes. In this chapter I provide insights into what knowledge exactly circulated in the classroom, who/what was involved in its enactment and what resulted from the teacher's and the teenagers' associating with this previously enacted knowledge. To investigate how the History curriculum acted as knowledge in the classroom, I draw on three theoretical tools: Actor-Network Theory, a typology of classroom knowledge as suggested by Estrid Sørensen, and Helen Verran's concept of the imaginary, in which ontics are enacted.

I also argue in this chapter that the curriculum triggers specific practices of knowledge enactment in the classroom. Through these specific practices, in turn, a particular type of historical knowledge in the classroom is enacted. In other words, the historical knowledge circulated in and by the curriculum is an effect of activities, associations and attributes, which are analysed in this chapter. I argue that these activities solidified a specific historical knowledge enacted in the curriculum. I also demonstrate that the historical knowledge in the curriculum was an immutable mobile, acting at a distance on the classroom activities. Drawing on Sørensen's work on the materiality of learning, I call this

type of knowledge 'representational knowledge' and through analysing Berlin's History curriculum[22] I trace how it came into being in the classroom.

Dr. Christoph Hamann from the State Institute for School and Media, Berlin-Brandenburg (LISUM) gave insight into how the curriculum was developed. Hamann was responsible for the development of the History curriculum in Berlin. He described how different understandings of historical knowledge were enacted and had to be negotiated. I describe the negotiation around these different kinds of historical knowledge and suggest that they differed according to the associations they made and to their ontological basis.

I argue that the historical knowledge circulated in and by Berlin's History curriculum clotted around spatiotemporal particulars. Another kind of historical knowledge was debated in the process of developing the curriculum, but then rejected. This rejected knowledge clotted around sortal particulars. I show that the attributes attached to the historical knowledge mentioned in the History curriculum can only be attributed through a limitation of spatiotemporal particulars. I argue that the curriculum's approach to enacting historical knowledge through competency practices devalued some of the practices employed by the teenagers in the classroom. I will suggest that the devaluation of non-representational knowledge thwarted the History curriculum's aim to improve the historical thinking of teenagers by promoting their independent engagement with the past.

This chapter has three main functions: Firstly, to describe how previously enacted historical knowledge shaped the enactment of historical knowledge in the classroom; secondly, to explore how this previously enacted knowledge was itself enacted for the curriculum and circulated through it; and thirdly, to analyse this historical knowledge by applying Sørensen's typology of knowledge and Verran's concept of the imaginary.

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[22] As described in Chapter 2, the political supervisory control over the school system lies with the states and not with the Federal Government. Hence, the curricula are developed on a state level.

5.2. Attributing legitimacy to historical knowledge

The task of tracing previously enacted historical knowledge in a History class will begin with a descriptions of various classroom situations. During the time I attended the History classes the teenagers learned about the First World War and the Weimar Republic. Mrs. Züge, who we became acquainted with in the introduction, taught the subject History. At the conclusion of the unit of work on the First World War Mrs. Züge prepared a mock tribunal through which the teenagers were asked to determine which country involved in the conflict was responsible for the outbreak of war. In preparing the teenagers for this tribunal, Mrs Züge selected teaching materials that contained information about the First World War that had been adapted for use in the classroom. These teaching materials can be understood as previously enacted historical knowledge.

Also as part of the History class, the teenagers were shown a film adaptation of Erich Maria Remarque's famous novel, *All Quiet on the Western Front*. Both book and film tell the traumatic story of Paul Bäumer, a young German soldier in the First World War. The teacher showed the shorter and newly dubbed 1952 edition of the much-acclaimed 1930 production. The teenagers were also shown two episodes of a documentary about the First World War (Roerkohl 2006, DVD). The first episode contained reflections of the popularity of the German Emperor and King of Prussia Wilhelm II in the period in question, and the second episode explained the political relations between Germany and Austria at that time. It stated that both nations were aligned in their opposition to Russia, France and Great Britain. The teenagers learnt about Germany's efforts to become an imperial power, the exasperation of many German citizens over the 'unfair' distribution of African and Asian colonies among the European powers, and about the increase in the production of weapons leading up to the outbreak of the First World War. They were also taught about Germany's so-called 'Blank Check of 1914', which, according to Wilhelm II, symbolised Germany's loyalty to the Austro-Hungarian Empire following the assassination of the heir to their throne by a Serbian citizen.

Two History periods were dedicated to the preparation of the tribunal. Mrs. Züge explained that by the end of the tribunal the teenagers would have a much more complex understanding of the question of war-guilt, as during the tribunal process different justifications would be elaborated upon. In the first of the two History periods, Mrs. Züge divided the teenagers into two groups. She appointed one group as witnesses of historical events, the others as historical expert. Each group was given a handout with an original source, for instance, a telegram from June 1914. This handout also contained a quote about this period written by renowned historians[23] who had written on the question of responsibility and guilt for the outbreak of the First World War. Armed with the handouts, the teenagers were supposed to discuss the historians' different opinions and then write their own individual report on the matter. This report was to provide a reasoned opinion regarding Germany's responsibility (or lack thereof) for the outbreak of the First World War.

After giving the handout to the teenagers, Mrs. Züge asked for ideas as to which country could be understood as being guilty for the outbreak of the First World War. In their responses the teenagers variously nominated Austria-Hungary, Germany, Russia and the continent of Europe as a whole as the guilty party. The justifications for their opinions related to the obligations of the nations, to the making and maintaining of political alliances, and to the political strategies they assumed were made by some of these states.

After this class, once the teenagers left the room, only the teacher and I remained. Wishing to speak with her about other issues regarding my fieldwork, I approached her desk at the front of the room where she was packing pens and papers into her bag.

'This tribunal seems to be getting interesting', I said, opening the conversation.

'Well, we'll see if it gets interesting', she replied sarcastically.

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[23] Mrs. Züge used quotations from Immanuel Geiss (1967), Thomas Nipperdey (1992), Michael Fröhlich (1997), Söhnke Neitzel (2002) and David Fromkin (2005).

'I'm excited about the details in the students' arguments', I said.

'We'll see if there are any details. I think the students take it too easy. I will have to show them an example [of a proper report], so that they know what's important', she replied.

(Field notes, 08/03/2010)

I became curious to know what makes historical knowledge 'important'. Apparently the teenagers' justifications, which included the names of the guilty nation states, the obligations of those nations, international relations and assumed political strategies, were not important enough. According to Mrs. Züge something else had to be done, something else had to be associated and some other attributes had to be attached in order to enact the legitimate historical knowledge.

A week later in the next History class, Mrs. Züge explained to the teenagers what is 'important' when enacting historical knowledge.

The teenagers were given thirty minutes to write a group report. This report was to be based on the individual reports they had prepared the previous week. Mrs. Züge showed them how to write the group report. She explained that she wanted the students to follow this example. Firstly, the group report had to have an argument, such as 'I agree or disagree with Thomas Nipperdey's statement that Germany and Russia share equal responsibility for the outbreak of the First World War'. Secondly, the group had to provide an informed justification based on information provided in the handout and on what they had learned in the History class. Thirdly, the justification had to be proved through the provision of sources.

(Field notes, 15/03/2010)

Mrs. Züge's guidance about what constitutes important historical knowledge needs further examination. Mrs. Züge highlighted three activities. Firstly, she highlighted *agreeing* or *disagreeing* with a quote of a historian who has done research on the same topic. Secondly, the agreement or the disagreement had to be *justified.* Thirdly, the teenagers had to *prove* their justification based on the historical knowledge that they had 'learned' in the History classes. The practices and the associations resulting from the activities give the newly enacted

historical knowledge its legitimacy. The association with an already accepted opinion, based on previously enacted knowledge, was crucial for attributing legitimacy to the historical knowledge enacted in the classroom. Doing these activities impacts on the historical knowledge that is enacted in the classroom.

In order to agree or to disagree, the teenagers had to associate with the historical knowledge of the History classes and of the handout. This knowledge had to be circulated first in order to enable the teenagers to agree or disagree. The knowledge was selected and provided by Mrs. Züge. Drawing on this knowledge, the teenagers had to make a more or less strong association with certain aspects of it. The teenagers had already justified their opinion by proffering names of relevant nation states, by describing the obligations of different nations, by identifying national alliances, and through their assumptions regarding political strategies. Yet in the eyes of Mrs. Züge, these expressions of historical knowledge only received legitimacy when they became associated with a statement of a historian who had published about the topic. In order to justify their opinions, the teenagers had to stabilize the association that was made when they agreed or disagreed with one of the historians. Finally, in order to prove their justification and their agreement or disagreement, the teenagers had to point to the association they had made. Through these practices and associations a particular historical knowledge was enacted.

In terms of Sørensen's typology, the historical knowledge enacted in the teenagers' tribunal to determine which country was responsible for the outbreak of the First World War was representational knowledge. The knowledge was enacted in the tribunal by the teenagers agreeing or disagreeing, justifying and proving their opinions in relation to the arguments of renowned historians and through the previously enacted historical knowledge of the curriculum. Attributes such as 'important' were accorded to practices to the degree that they resembled the practices applied to enact the previously enacted historical knowledge. Enacting types of knowledge other than representational knowledge would have been possible. However, I will show that actor-networks not visible

in the classroom were enrolled in the enactment of representational historical knowledge.

5.3. Circulating historical knowledge – Berlin's History curriculum

Including actors that are not in, but distant from the classroom, I identify actors that politically shape the knowledge enactment in classrooms, focussing on legal regulations and governmental programs in Berlin. Having done this I will analyse Berlin's History curriculum for the lower secondary school. I will describe how the History curriculum shaped the enactment of historical knowledge in the classroom through its selection of topics and its definitions of standards for history education.

5.3.1. Actors shaping classroom activities

In addition to the School Law (Senatsverwaltung für Bildung, Wissenschaft und Forschung 2010) many programs, such as the Berlin educational system's School Programs (Senatsverwaltung für Bildung, Jugend und Wissenschaft 2011) and School Structure Reform (Senatsverwaltung für Bildung Wissenschaft und Forschung 2009) exert a significant influence on classroom activities. These shaping activities result in ordered, routinized collective acting in the classroom. School programs, school structure reform and the History curriculum may seem to exist independently from other actors that shape classroom activities, but they are not. Instead, similar actors are involved in shaping classroom activities that/who are also involved in the enactment of historical knowledge in the classroom.

The development of a School Program (Senat Berlin 2001)[24] is regulated in Article 8 of Berlin's School Law, which states that schools must define criteria for the assessment of quality. School programs are described as tools for

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[24] As this thesis is written in English I will use the English term 'Senate'. However, I will use the German name 'Senat Berlin' in my references, which is short for Senatsverwaltung für Bildung, Jugend und Sport.

quality management for each school. They are used in internal evaluations to assess whether aims have been met according to these quality criteria. Although school programs define core areas of pedagogic and administrative management for each school, the content of school programs is less relevant to the enactment of historical knowledge than the network that enacts it. School programs have to be developed in cooperation with other schools, with local youth welfare services and with the State Institute for School and Media, Berlin-Brandenburg (LISUM 2003). The regional specification in the name of the institute points to a specific aspect of the LISUM: it is a conjoined institute of two states, Berlin and Brandenburg. The LISUM is the only institute in Germany that does pedagogically conceptual work in two states, and it aims to 'coordinate the action on key issues in both states'.[25] It is also a prominent actor in the enacting of historical knowledge in the curriculum, and will be referred to again later in the chapter.

The School Structure Reform, introduced in 2010 by the Berlin parliament, the Abgeordnetenhaus Berlin, and enacted by the Berlin Government, the Senate Berlin, changed the types of school that had existed in Berlin for several decades. Four existing school types were reduced to two: the integrated secondary school, and the 'gymnasium' (a kind of grammar school that prepares students for university).

In addition to these political, state-based regulations, Berlin's education system responds to resolutions made by the national Standing Conference of Ministers of Education and Cultural Affairs of the Länder of the Federal Republic of Germany (henceforth referred to as the Standing Conference). These resolutions refer to school structure, to curriculum development, and to the inclusion of a certain political aim, for example the 2009 resolution regarding the strengthening of democracy education.[26]

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[25] http://www.lisum.berlin-brandenburg.de as accessed on 12/05/2012.
[26] In 2012, Berlin's Government, the Senate, has mandated the LISUM to revise the curricula. The revised curriculum is to respond to the resolution on strengthening of democracy education, but also the

Five prominent actors are involved in these processes: the LISUM, the schools, Berlin's parliament and its Government, the Senate, and the federal Standing Conference. They orders classroom activities in particular ways and thereby shape collective acting, not only in the classroom in which I did my fieldwork, but also in all other classrooms in Berlin. Each of the aforementioned actors not only shapes classroom activities through school programs and the school structure reform, but were also involved in the development of the History curriculum for lower secondary schools in Berlin.

The History curriculum is particularly influential in shaping classroom activities. It orders what counts as historical knowledge, what students are to learn about the past, and how the teacher is to teach about the past. The following provides an analysis of the History curriculum in Berlin.

5.3.2. Circulating history through the History curriculum

In Berlin, curricula are conceptualized and published for three educational levels: primary school (Years 1 to 6), lower secondary school (Years 7 to 10) and higher secondary level (which is taught at the higher secondary schools, at the vocational training institutes and at other educational institutions for adults, such as night schools). As this thesis analyses data gathered from a Year 9 class, only the curriculum for the lower secondary level will be discussed.

Berlin's History curriculum (Senat Berlin 2006)[27] is contained in a brochure of 50 pages and is available online as a document of 1216 kb at the Senate's home page (Senat Berlin 2006). It is thus accessible to anybody with Internet access and literacy. A hard copy is supposed to be stored in each school, and so would often be available in school offices.

UN-resolution to improve the inclusion in education. Furthermore, the Senate highlighted the requirement to design the curriculum increasingly interdisciplinary.

[27] In the following I will refer to the editor of the History curriculum, Senat Berlin, when I quote or paraphrase its content. I will not, however, refer to the Senat Berlin when writing about its effects on classroom practices.

In Berlin, all curricula for Years 7 to 10 have the same basic structure. The first pages are always the same chapter, describing principles of education in the lower secondary level. This chapter outlines the teaching and learning process and performance evaluation, and proposes that the general aim of education is to build the competencies of students. The second chapter outlines the contribution of the specific subject to the general educational aims as articulated in the first chapter. The third chapter makes the standards of the particular subject explicit. Topics and contents are explained in the fourth chapter. The fifth chapter gives guidelines as to how to evaluate the performance of students in the specific subject. Finally, the sixth chapter indicates specific requirements for the subject if it is chosen as a compulsory supplementary subject. [28]

The subject of History is designed as a part of the core curriculum. The topics of History classes proposed in the curriculum cover only sixty per cent of the topics to be taught in History education. The remaining forty per cent are to be defined internally by the school. Conceptually, Berlin's curricula merge Year 7 with Years 8 and Year 9 with Year 10. In these double year units certain themes are described that must be taught. What the teenagers that I had accompanied for six months had to learn was flexible enough to be taught in two years.

The compulsory themes are chronologically structured. In Years 7 and 8 students in Berlin are supposed to learn about the period from medieval times to industrialisation. The themes primarily cover the European past (Senat Berlin 2006, p. 24). In Years 9 and 10 the History curriculum commences with the German empire and proceeds to the present. The first theme identified three aspects of the German empire, from which the History teacher has to select one. These three aspects are: 1) the founding of the empire; 2) contemporary society; and 3) nationalism and imperialism. Under the heading, 'Democracy

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[28] Some schools offer the possibility to choose between certain subjects. Making a choice for one or more subjects is compulsory. The chosen subjects are considered supplementary to the required subjects. Hence, the subjects that can be chosen are called 'compulsory supplementary subjects'. This particular approach to history education is not relevant to this thesis and I will not be elaborated upon here.

and Dictatorship' the second theme lists three topics: 1) 'The First World War and its Effects', 2) 'From Democracy to Dictatorship' and, 3) 'Characteristics of Dictatorships and Life in Dictatorships – National Socialism, Victims Groups, the Holocaust, Stalinism, the purges, and the Gulag' (Senat Berlin 2006, p. 34). The third theme is headed 'Conflict between the Eastern and Western Blocs' and lists two topics: 1) 'East-West Opposition, the Cold War, and Overcoming Conflict between the Blocs'; 2) 'Life in Germany: Aspects of Everyday Life' (Senat Berlin 2006, p. 34). Finally, the fourth theme is headed 'Current Problems in World Politics' and suggests 'Trouble Spots and International Conflict Management' as possible topics (Senat Berlin 2006, p. 34).

Defining topics can be understood as one way of ordering the enactment of historical knowledge in the classroom by the History curriculum. Mrs. Züge taught about the First World War, and a little later about the Weimar Republic, in accordance with History curriculum guidelines. The History curriculum not only defines the areas of learning, but also how these topics should be taught. Suggestions of *how* to teach and to learn about the past are another way in which the History curriculum shaped the classroom activities through which historical knowledge was enacted.

The History curriculum does not describe historical knowledge as 'enacted', but rather as being 'acquired' (Senat Berlin 2006, pp. 10, 13). It proposes two practices through which historical knowledge is acquired: firstly, through thinking historically and making historical judgements and secondly, through an accumulation of historical facts. Both possibilities are discussed in the curriculum, with the primary focus being on the former method of historical knowledge acquisition as a way of accumulating historical knowledge and being the defined aim of History education at the same time.

No matter how the historical knowledge is acquired, whether through historical thinking and judgements or through accumulation of historical facts, it is done according to two scales that also order classroom activities. One scale

differentiates the extent of historical knowledge acquisition according to the qualification required depending on the school type, while the other differentiates it to year level. Both scales claim to proceed from the current stage of the learners' development.

In these ways, the History curriculum (Senat Berlin 2006) shaped the enactment of historical knowledge through selected themes and structuring scales. I have already pointed out that the latter scale, the one that differentiates the acquisition of knowledge according to year level, orders the historical knowledge chronologically. Teenagers are expected to learn about the past chronologically from Years 7 to 10. Although the curriculum creates an association between the learner's stage of development and a chronological account of the past, there is not necessarily any other connection between the two. Later in this chapter I will trace the making of the curriculum and analyse the matter of chronology, but for now I wish only to point to the ordering effects of the scale that structures the acquisition of historical knowledge according to school type. These scales are explained over five pages in the History curriculum (Senat Berlin 2006). The levels on this scale differ according to the degree to which teenagers of different ages are deemed to be developmentally capable of thinking historically and of making historical judgements (for competencies see p. 138). A pictogram headed each of the three columns, the first was of one key, the second of two and the third of three keys. A caption explains that these three keys stand for competency levels, with the higher level incorporating competencies developed in the lower level(s). One key equates to a simple standard, two keys to a medium standard and three keys to an advanced standard.[29] The tables for each competency list the operationalized

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[29] The curriculum states that the three levels are related to the school types in which History is taught. Accordingly, students at general-education secondary schools, 'Hauptschulen', are to acquire the competencies outlined in the column headed by one key. Students of intermediate secondary schools, 'Realschulen', are to acquire the competencies outlined in the column headed by two keys. Students in grammar schools that prepare students for university, 'Gymnasium', are to acquire the competencies outlined in the column headed by three keys. The curriculum was written prior to the school structure reform and thus does not respond to the new school system structure. History teachers in a Gymnasium are still required to enable students to acquire competencies indicated by three keys. History teachers in integrated secondary schools currently have no guidelines regarding competency levels. In this gap

standards of expected outcomes that the students in different types of schools are supposed to meet (Senat Berlin 2006, p. 17). The gymnasium in which I did my fieldwork was designated with three keys, and thus operated according to the advanced standards.

Mrs. Züge adapted previously enacted knowledge to enable the teenagers to develop these competencies. Specific practices were deemed to be more important than others. What counted as historical knowledge for the History teacher was directly related to the acquirement of competencies. Aspects of historical knowledge that are not included in the operationalized competencies were excluded. In this way the History curriculum ordered the classroom activities in which I participated.

5.3.3. Enacting competencies through specific practices

As will be shown later, the competencies for History were negotiated in the process of the development of the History curriculum (Senat Berlin 2006, see p. 149). In an actor-network based understanding, competencies are themselves network effects and the networks in which they are constructed will be investigated later in this chapter (see p. 145). Competencies are circulated as both the practices of the enactment of historical knowledge and the outcome of history education.

The fact that the curriculum suggests practices, through which historical knowledge is enacted, returns us to Sørensen's typology of classroom knowledge. I have argued that representational knowledge has to be enacted through practices and associations that resemble the ones that enacted the previous knowledge. The competencies outlined in the curriculum describe these practices and associations. Competencies are thus part of the previously enacted knowledge that entered the classroom. The previously enacted historical knowledge of the curriculum was not only associated with the topic of

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History teachers of school types other than Gymnasium have to negotiate the level of competency acquirement with the students.

the First World War, but also with competencies. I will now explain how the curriculum defined the competencies that were later circulated in the classroom.

Generally, the History curriculum in Berlin (Senat Berlin 2006) claims to follow a holistic understanding of learning. It defines 'holistic' as a cumulative building up of student competencies in the classroom. According to the History curriculum (Senat Berlin 2006, p. 12), these competencies are interdependent and equivalent – with the narrative competency being the overarching competency. Three pairs of competencies are proposed and explained in the History curriculum (Senat Berlin 2006, pp. 13-16): firstly, the competency to interpret and to analyse; secondly, the method-competency,[30] and thirdly, the competency to judge the past [based on 'facts'] and to orient [oneself in relation to the past by applying historical knowledge in order to make judgements].[31] These competencies are described as both developing interdependently from each other and as being equivalent. For a 'systematic planning of History classes' these competencies are introduced separately in the curriculum.

The aims of the competencies are subordinated to the aim of History classes:

> The aim of History classes is the development of a historical narrativity, that is the ability to think historically and to make independent historical judgements. This thinking and judging is proved through the ability to analyse and to present past facts, through the ability to interpret interdependencies and variations in time, through the ability to participate in the historical discourse and to form conclusions regarding the present and the future. (Senat Berlin 2006, p. 9, my translation)

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[30] The method competency refers to an appropriate and reflected use of methods. The required reflection of methods might point to a 'methodological competency' rather than a 'method competency'. However, the distinction between method- and methodological competency was not made in the History curriculum (Senat Berlin 2006, p.15) and I have decided to translate the name of the competency literally.

31 The German name of the competency, die Urteils- und Orientierungskompetenz' (in English: the 'competency to judge and to orient) does not clarify how the past shall be judged nor does it explain the term 'to orient'. I added the context in square bracket. Christoph Hamann explained that the combination of judgement and orientation is based on a three-level model of gaining historical consciousness that was developed by the history education scholar Karl-Ernst Jeismann. According to the model, the student asks questions in the present of the past to create the future individually.

In the definition of the aim of History classes the History curriculum associates activities and times with the discourse among historians and history education scholars. The History curriculum (Senat Berlin 2006, p. 11) claims that teenagers have to do the practices independently. The matter of independence in history education will be traced later in this chapter (see p. 151). For now, I want to focus on the enactment of competencies.

The History curriculum (Senat Berlin 2006, pp. 13-16) explains through which practices these competencies have to be developed. The History curriculum uses the term 'practices' differently to my use when applying Actor-Network Theory. 'Practices' as used in the curriculum relate to activities that lead to the acquisition of described competencies. In contrast, I investigate practices that enact a variety of phenomena. I understand competencies as emerging results of practices that bring together various elements such as the curriculum and classroom situations, teenagers and teachers.

Before I start to describe the competencies, I have to explain the particular use of language as applied in the History curriculum. The Standing Conference (Lohmar and Eckhardt 2011, p. 104) explained that curricula are generally written in a 'general way'. They are abstract in defining content and do not go into details for they are supposed to give each school greater scope for decision-making. In that sense, the curriculum is to be understood as a guideline for the lessons and as defining key issues within each specific subject.

As an effect of the use of abstract language, the guiding function of the language used in the History curriculum appears to be normative. Written in the present tense, it states what teenagers are supposed to do. In order to give an impression of this writing style I will quote it in my description of the three competencies. The following paragraphs will not offer any analysis, but will rather provide a summary of how competencies are described in the curriculum. I will use italics to highlight the performative character of enacting competencies by quoting the practices through which each of the three competencies (the

competency to interpret and to analyse, the method-competency and the competency to judge the past [based on 'facts'] and to orient [oneself in relation to the past by applying historical knowledge in order to make judgements]) has to be achieved and demonstrated.

The competency to interpret and to analyse

This competency involves students interpreting and reconstructing the past narratively, while deconstructing dominant narrations of the past through analysis. The curriculum proposes that the competency to interpret involves learning through *interpreting*, *connecting*, *explaining* and *judging* different sources. Textbooks and non-fiction literature, academic presentations of historical events, processes and structures are all designated as sources. According to the curriculum, students are to be confronted with age-appropriate questions. Students achieve the competency to interpret when they can *relate* past events and processes to each other and, in doing so, can *tell* a hitherto 'unheard' history. Through this process of interpretation they '*reconstruct* the complex past' (Senat Berlin 2006, p. 13).

The curriculum states that the competency to analyse is demonstrated in the learners' ability to *analyse* other people's interpretations of the past. It is expressed in the degree to which the students can, in an age-appropriate way, reflectively *judge* such interpretations according to the strategies employed by the author, and the validity of his/her claims and aims (Senat Berlin 2006, p. 14).

Method-competency

The History curriculum (Senat Berlin 2006) describes the method-competency as inseparable from the competency to interpret and to analyse. Method-competency is achieved when students:

> […] ask questions of the past and *discuss* ways to answer them, *m*aking hypotheses and *testing* them, asking witnesses and experts, *working* with guidance in appropriate museums and libraries, *tracing back* [the coming

into being of present phenomena] in land and region through excursions, investigations and in appropriate private and public institutions, *generating* time lines, posters, newspapers, and computer aided documentations, *speaking* and *acting* in roles *taking* [historic] perspectives, *using meaningful* quotations appropriately and *referencing* used sources and *judging* the methodical approach guided by [specific] criteria.' (Senat Berlin 2006, p. 15, my translation)

The curriculum states that students need to be guided in these practices at the beginning of their learning about the past in Year 7. As confidence and the competency of the learners grow the process should be supported so as to become self-directed (Senat Berlin 2006, p. 15).

The competency to judge the past [based on 'facts'] and to orient [oneself in relation to the past by applying historical knowledge in order to make judgements]

This competency is achieved when teenagers *show* that they *understand* and *respect* the differences between present and past norms. The History curriculum (Senat Berlin 2006, p. 16) describes the process of achieving this competency as a cumulative process in which the teenagers *apply their ethical, moral and normative categories* onto historical facts. Increasingly, they *differentiate* between factual and value judgements.[32] The curriculum states that a reflected value judgement can be achieved only partially. It then explains that a value judgement is reflected if a teenager *considers that his/her own criteria for judgements are bound to a certain time*.

To achieve, to consolidate or to demonstrate this competency, teenagers are to *describe* and *judge* historical perspectives when *receiving*, *analysing* and *starting to give weight* to practices of historical actors according to the moral concepts of the times. Teenagers *judge* the legitimacy of interests according to their contemporary or present criteria and *distinguish* between them. Teenagers *investigate* and *reflect* the variety of possibilities of human activities in the past

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[32] The distinction between factual and value judgements goes back to the discourses in history education. This distinction does not exclude the possibility that factual judgements might include value judgements or vice versa. Rather, these categories were developed to contrast the main focus of the judgments.

and *develop consequential strategies* for the present. They *develop an understanding and appreciation* of the importance of human and civic rights in their oral and written presentations. They are also encouraged to develop an appreciation for the principles of freedom, equality and different forms of democratic participation. According to the teenagers' stage of development, they *distinguish* between factual and value judgements and *justify* them with arguments and examples. Teenagers *face* the alien and the known with critical perception, openness and respect. They *listen empathically* and *reflectively* to other arguments, *respond* to them and *discuss* controversial interpretations. Increasingly, they *are capable* of *reflection* and to *relativising* the others' arguments by assuming a critical distance from their own standpoint and their individual values. Finally, teenagers *develop* or *maintain curiosity* about and *acceptance* of the unknown, the alien and the historical (Senat Berlin 2006, p. 16).

The description of the three competencies is loaded with implicit associations and attributes. Developing the competency to think and judge historically is closely linked to the students' ability to participate in a democratic society. Democracy is mentioned 37 times in the History curriculum. It is most prominently associated with the values of the society, with the students' disputes through which the historical knowledge is to be enacted, and with the future society within which the students are being enabled to participate. Democracy is a prominent element entangled in the association that creates this historical knowledge. The link between history education and politics will be discussed later.

To enact the defined competencies (I apply Actor-Network Theory again) teenagers have to engage in a variety of practices. Some practices are suggested and certain associations are to be made. Certain attributes attach a meaning or moral position to the knowledge about the past. Some required practices enact a representational knowledge, while others practices, such as making hypotheses and testing them, require the students to enact historical

knowledge without relating it to previously enacted knowledge. In other words, and in contrast to the class I observed, students are required to act in ways other than merely through agreeing or disagreeing, justifying and proving.

When Mrs. Züge introduced the teenagers to what is important in the enactment of historical knowledge she also referred to practices of knowledge enactment that were acknowledged among historians and history education scholars. Agreeing or disagreeing with a previously enacted historical knowledge, justifying and proving, are practices that have to be enacted in the classroom to enact representational historical knowledge. The aim of enacting this specific historical knowledge is, according to the curriculum, the achievement of competencies. The desired competencies are both built-up and demonstrated in the aforementioned practices. Defining competencies as aims of history education, orders classroom activities according to required and non-required practices. When Mrs. Züge prepared the teenagers for the tribunal about responsibility for the First World War, she claimed that agreeing/disagreeing, justifying and proving were more important than them identifying the obligations of the nations and of the making and maintaining of national alliances and political strategies. The History curriculum structured this preferencing of some practices over others. As already analysed, representational knowledge was enacted in the classroom through an association with previously enacted historical knowledge. Under the next two sub-headings I retrace the associations through which this previously enacted historical knowledge was solidified and which attributes were attached. By retracing this process we reveal the complex web of various practices and actors involved in the making of History curriculum.

5.3.4. Solidifying historical knowledge

I start this retracing by describing a theoretical model of curriculum development. The documentation and information service of the Secretariat of the Standing Conference (2011) published a national dossier, in cooperation with the German Information Network on Education in Europe (EURYDICE) Unit

of the Federal Government in the Federal Ministry of Education and Research. The dossier describes the process of curriculum development as follows:

> A curriculum is usually drawn up as follows. Once the Ministry of Education and Cultural Affairs of a particular state has reached the decision to revise or completely reorganize a curriculum, a commission is appointed, usually consisting in the main of serving teachers, including heads, as well as school inspectors, representatives of the school research institute of the Land concerned and – to a lesser extent – of experts in the relevant disciplines from institutions of higher education. As a rule, it is the job of the commission to devise a curriculum for a certain subject at a specific type of school, for a specific school level, or for a type of school. It will then work on a draft. The curricula not only deal with the contents, but also the course objectives and teaching methods. Experience gained with previous curricula is taken into account when it comes to devising new ones. In some Länder curricula are launched on a trial basis before being finalized and becoming universally valid. Finally, there are set procedures according to which the commission may consult associations and parents' and pupils' representative bodies.' (Standing Conference 2011, p. 104)

According to this national dossier, the process of (re-)making a curriculum can be retraced in the following way. Firstly, before being introduced to teachers a curriculum is likely to have been discussed with associations and representative bodies of parents and students. Whether it is to be discussed with the interest groups or not is decided by the commission charged with developing the curriculum charedge with developing the curriculum. If the decision is for consultation, then the commission have to contact, invite, inform student and parent representative bodies, and an outcome of the consultation has to be reached, written down in words, sentences and paragraphs, and then in form of a report disseminated. Secondly, these consultations draw on experiences of developing previous curricula and on reflections of the employment of previous curricula in the school. Specific employees of the Ministry of Education and Cultural Affairs of a particular state, who constitute a commission, have to include results of empirical research about the development and implementation of curricula or, alternatively, have to conduct empirical research. Thirdly, the

new curriculum is drafted. The members of the commission select content, objectives and teaching methods from a wide variety of possible options. They define these aspects further and adjust them to the classroom situation. Content, objectives and teaching methods are further operationalized and specified according to the subject, to different school types and to different school levels. The commission had earlier made the decision to revise or completely rewrite the curriculum. It had selected and contacted teachers, school inspectors, representatives of the Land and experts in the relevant disciplines and informed them about the matter. These selected people in turn had to approve the request, make appointments and inform themselves of the requirements for curriculum development.

The process of curriculum development for Berlin's History curriculum conformed to this model. As with the other curricula in Berlin, the school curriculum for History was published by the Senate Department for Education, Youth and Sport and was commissioned by the State Institute for School and Media Berlin-Brandenburg (LISUM). [33]

Working at the LISUM, Dr. Christoph Hamann had been the contact person for all matters to do with the History curriculum since 2002. Hamann agreed to be interviewed by me about the development of Berlin's History curriculum. When we met, Hamann spoke primarily in his role as a referent at the LISUM, but at times also as a well informed, published history education scholar. He was responsible for the development of the History curriculum for the higher secondary high school level (Years 11-13) published in 2004. Hamann based his reflections of how a curriculum should be designed on early considerations about standards and competencies in the work of history education scholars[34]. At the time of the development of the curriculum for Year 7-10, history education

[33] The LISUM also oversees the development of school programs in Berlin (LISUM 2003) and it develops curricula for another German state, Brandenburg. Berlin's History curriculum was published in 2006, Brandenburg's in 2010.
[34] Among these scholars are Waltraud Schreiber, Karl-Ernst Jeismann, Bodo von Borries, Jörn Rüsen and Hans-Jürgen Pandel (see pp. 15- 16).

scholars had developed no competency model,[35] so the History curriculum developed by Hamann for Year 11-13 was to guide the development of the new History curriculum for lower secondary high schools (Years 7-10). When Berlin's History curriculum for lower secondary high schools was developed in 2005-2006 Hamann coordinated the project group and communicated with Berlin's Government, the Senate. While the competency model and the standard definitions developed in 2004 for Year 11-13 were applied to the curriculum for Year 7-10, Hamann was not directly involved in the decision making process in the development of that curriculum.

In our interview Hamann explained that 'as a subordinate institution, the LISUM does not initiate the revision of curricula itself.' (Hamann interview 06/07/10, p. 4). Such a revision has to be mandated by Berlin's Senate or Brandenburg's Ministry of Education. Following the 2009 Standing Conference's recommendation for an enhancement of democracy-education, the Brandenburg Ministry mandated the LISUM to revise that state's History curriculum. Hamann explained that both curricula are new in the sense that they implement what was requested in education policy and among history education scholars, which is a model for the development of competencies and an orientation toward the achievement of educational standards.

Providing a wider context, Hamann described two paradigmatic changes in the development of the History curriculum. Firstly, as in many other German states, curriculum developers in Berlin distanced themselves from 'pure lesson plans' that only described the content that had to be taught at which grade level. Secondly, they distanced themselves from an accumulation of factual knowledge [36] (Hamann interview 06/07/10, p. 7).

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[35] To this day there are five competing competency models discussed among history education scholars (see Martens 2010). In our interview in 2010 Hamann pointed out that there is still no empirical basis for the standards of history education.

[36] A more literal translation is 'declarative knowledge'. In academic education discourse 'declarative knowledge' is contrasted to 'procedural knowledge'. While declarative knowledge refers to knowledge about facts and definitions, procedural knowledge refers to processes in which this kind of knowledge is applied.

The changes were initiated after the publication of results of the first Programme for International Student Assessment (PISA) and of a survey about national education standards, conducted shortly afterwards. In response to the results of both surveys the Standing Conference (2003) requested the redevelopment of all school curricula. In 2004 Berlin's Senate commissioned the LISUM to write new curricula with standards and competencies for all subjects and for all level of schools, primary, as well as lower and higher secondary schools.

Hamann described the situation after the Standing Conference's (2003) request as 'difficult'. To that point, the development of standards and competencies varied not only between the subjects, but also between each German state. Hence, the starting positions for the development of standards and competencies across the states and the subject differed markedly. For example, standard and competency development regulations already existed for foreign language school subjects in Europe. Similarly, all German states had developed competency models for German and Mathematics. These had been developed in response to the results of the PISA survey. However, no such standardised models existed for History, with history education remaining a hotly debated issue, with different outcomes in different states.

Hamann reflected on the politics of the decision making process surrounding the development of standards and competencies within history education as follows:

> The ones who made these decisions are education politicians. They are not history education scholars. They noticed the discussions about PISA [results] and the [international trend towards] standards. They decided to apply the standards to all school subjects, but did not realize how different the starting positions between the subjects were. They didn't know what they required, you know? That's why […] pioneering work was done by some education administrations. But it wasn't received that way. The standards we have here [in the History curriculum], and all the other standards as well, are not based on empirical evidence. (Hamann interview 06/07/10, p. 9)

Hamann recalled that before any other considerations the history education scholars and curriculum makers first debated whether the requirement to develop standards and competencies by education politicians should be followed or resisted. Those who had argued for the implementation of educational standards in History began to develop competency-models.

> For History this task is not as easy as it is for German or foreign languages. The competencies needed to solve problems in History are more complex, which is what is meant when the curriculum states that 'students shall learn to think historically'. For other subjects the curricula-makers articulated a content-orientation with accumulatively acquired knowledge. [Berlin's] History curriculum is very different to those. (Hamann interview 06/07/10, p. 8)

Hamann explained that the different subjects differentiate between content standards and skill standards. In History, skill standards are defined as competencies (Hamann interview 06/07/10, p. 7). The History curriculum is significantly different from some other curricula as it distances itself from the emphasis on content, and defines skills as standards, History education became less based around topics that have to be learned, and more on specific practices for dealing with the past.

The competency-standards were developed 'at the green table' within only one year. The 'green table' is a term used to describe a decision making process that lacks empirical research evidence to determine the practicability of the decisions being made. Decisions made at the 'green table' must prove their applicability after they have been implemented. Thus, the definitions of competencies were based on subject-specific theoretical considerations.

As mentioned above, the Standing Conference suggested the creators of the new curricula draw on the subject's previous curricula. The lack of standards and competencies in earlier history curricula, made that impossible in in the case of history education. Hamann described this paradigmatic change towards a standard and competency orientation as being excessively demanding for

both the developers of the curriculum and for History teachers; hence the need to involve experienced History teachers in the curriculum development process. Hamann explained that academic experts with expertise in school requirements tried to develop a curriculum practical enough to be taught in the classroom. At the same time, these experts did not develop a curriculum that responded to the expectation of many teachers that declarative content would be included (Hamann interview 06/07/10, p. 8).

5.3.5. Attaching attributes

Following the political requirement to develop standards, the competencies to deal with history were defined as the standard of history education. Explaining what guided the negotiating of history education standards, Hamann emphasised that history education explicitly aims:

> [T]o assist the students to make individual judgements. The nation cannot dictate understandings or interpretations of the past. And if it does so, it transgresses against controversy and plurality and fails to understand that we live in a democracy where diverse interpretations of the past co-exist. And whoever claims to represent an official academic interpretation does not understand that there are different disciplines and different scholars who have different interpretations of the past. I can't say, 'I'll just pick one out'. Instead, I have to know that these approaches are always subjective and they are either highly plausible or less plausible. This is a question of rational consideration. Nothing else. (Hamann interview 06/07/10, p. 13)

Central to Hamann's conception of history education is the freedom of the student to make his/her own interpretation of the past, an interpretation relatively free from political and academic influences. According to Hamann, the individual students should generate historical judgements. This freedom to make independent reflections about the past is attributed to their gaining of historical knowledge.

The discussion about political influences in education has a long tradition in Germany. In 1976, the State Centre for Political Education Baden-Württemberg

(in German Landeszentrale für politische Bildung Baden-Württemberg, short LpB) developed a consensus that is still considered to be guiding in political education – the Beutelsbach Consensus (LpB 1976). At this time, members of the state agency of civic education in Baden-Württemberg, a state in the South of West-Germany and West-German civic education scholars with different political and religious orientation developed the Beutelsbach Consensus as a minimal consensus for civic education that included the teaching of History. The aim of this consensus is to ensure that students are politically educated without being in any way indoctrinated. The consensus explicitly has 'the universally accepted objective of making students capable of independent judgement' (Mündigkeit). It lists three key aspects of political education. Firstly, it prohibits overwhelming the student. Teachers are not permitted to indoctrinate students with their own political opinion, in this case, their own interpretations history. Rather, the students are to be given the opportunity to make independent judgements. Secondly, the Beutelsbach Consensus (LpB 1976) proposes that controversial topics be taught as being controversial. In other words, the teacher enabling the students to study perspectives other than his/her own should widen the students' understanding of a controversial issue. Thirdly, the consensus determines that students should be equipped to analyse political situations and to engage with them according to their personal interests. This objective places an emphasis on the students acquiring necessary operational skills.

Towards the end of the interview Hamann described the limits of this hoped-for independence from political and academic influences when he spoke of lobbying, political decision making processes and resistance against modular history education among history education scholars. Without mentioning specifics, he recalled that different actors expressed their desires for different themes, events and/or interpretations to be included in the curriculum (Hamann interview 06/07/10, p. 15). The political influence on the development of the curriculum is harder to identify than those exerted by associations or institutions. Hamann mentioned an indirect influence on the way the curriculum dealt with

the history of the German Democratic Republic, GDR. Hamann said that the history of the GDR had to be included in the History curriculum.

> Were there an opportunity for the history teacher to decide which 20th century dictatorship he wants to teach about, and he decided to teach about just one, then the Ministry [in Brandenburg] would fail politically to pass this bill. That is easy to calculate beforehand. […] We were busy representing the two Germanies post-war period appropriately in the new curriculum [in Brandenburg] for the whole last year. And that is related to the political context. […] As there are always different interests, there are also different political interests, of course. But of course there are also different factual considerations. And my main argument is always that curricula must not dictate a certain interpretation of the past, but must be open. And there is a tension developing. (Hamann interview 06/07/10, p. 15)

The independence of history education is not only threatened by political parties, associations and institutions, but also by academics. Hamann pointed out that the legitimacy of positions at universities is based on the demand for teacher education. A devaluation of certain historical epochs, for example medieval times, might result in medievalist positions in universities being cut. Therefore, so-called 'Epoch-Lobbyists' might be afraid that their epochs might be devalued. This devaluation is more likely to occur with a modular approach to history education than with a chronological one, Hamann explained. He suggested that 'traditionalist' history education scholars and History teachers who advocate a chronological approach to history education might resist his preference for the introduction of a modular History curriculum. Similarly, Hamann suggested textbook publishers, who would have to commission new, reconceptualised History textbooks, might resist a modular History curriculum.

The enabling of students to make individual judgements is a central aim of history education as outlined in the History curriculum (Senat Berlin 2006, p. 13-16). The Beutelsbach Consensus (LpB 1976) associated independent education with individual judgements and controversial topics with the acquisition of operational skills. These four elements are also associated in the description of the aims of history education in Berlin's History curriculum and in suggestions

as how best to achieve them. The three central attributes that were attached to the historical knowledge of the History curriculum are therefore 'independent', 'individual' and 'controversial'.

5.4. The History curriculum as an immutable mobile

Starting with the description of a particular History class, I described a situation in which actors enacted a specific historical knowledge that was structured by the History curriculum. I, then, retraced the making of the curriculum and analysed through which associations the historical knowledge was enacted and what attributes were attached to it. The question that must now be raised is how the curriculum was able to circulate in the classroom. To answer this question I will re-familiarize the reader with the concept of the immutable mobile (see p. 50) as I argue that the curriculum acted as an immutable mobile in the classroom.

Bruno Latour (1987, pp. 226-227) describes the immutable mobile as an object that works at a distance without being changed. An immutable mobile is also characterized as working only in particular networks. Latour (1990, p. 6) defines an immutable mobile as being mobile enough to travel, stable enough to be immutable while travelling and being 'presentable, readable and combinable' with other immutable mobiles. These mobiles nearly always appear in the form of a paper that carries simplified inscriptions.

According to Latour, the process of inscribing is an ongoing process. Certain practices accompany the process: mobilizing, associating and translating. The processing of the elements continues until a final form has been obtained. Latour proposed: '[…] mobilization is not restricted to paper, but paper always appears at the end when the scale of this mobilization is to be increased.' (Latour 1986b, p. 16) The inscription is the final stage of a whole process of mobilisation, translating, associating and simplifying.

Drawing on Latour's concept of immutable mobile I suggest that the History curriculum acts as an immutable mobile. It acts at a distance without being changed. It is mobile enough to travel, stable enough to be immutable while traveling and presentable, readable and combinable with other curricula. It carries inscriptions that effect the enactment of historical knowledge in the classroom. The inscriptions have been attached to the curriculum in a long process of mobilizing, associating and translating elements. They were continuously simplified until at the end of the cascade of inscriptions a paper was produced.

I start my analysis of how the curriculum was able to circulate in the classroom at the aim of History classes, that is, the development of a historical narrativity that is demonstrated in the ability to think historically and to make independent historical judgements.

This aim is best achieved through the development of the students' competency to interpret and to analyse, the method-competency, and the competency to judge the past [based on 'facts'] and to orient [oneself in relation to the past by applying historical knowledge in order to make judgements]. According to the curriculum, the students must demonstrably achieve these three competencies. In other words, the students must be able to act in certain specified ways. In the drafting of the curriculum, specific skills and practices were prioritised over others. For example, the practices of '*describing* and *judging* historical perspectives when *receiving*, *analysing* and *starting to give weight* to practices' were chosen to enact the competency of historical judgement and orientation. The History curriculum developers chose these practices that enact each of the three competencies for the specific effects they create when employed by a student to engage with the past.

Among these aimed effects is the Beutelsbach Consensus' (LpB 1976) proposal that students must be enabled to analyse situations and to engage with them according to their personal interests. Consequently, the History curriculum

developers ordered the practices designed to develop competencies around effects. This categorizing of practices (as practices that enact certain competencies) had effects too. The History curriculum developers selected and defined, combined and weighted these practices. By selecting and defining, the chosen practices became more important than other, unselected practices. By combining and weighting, the practices were associated with other practices that had similar attributes. The groups of practices that were selected and defined, combined and weighted were then associated with elements that carry the attribute 'past'. The association was necessary to make the next step: to name the associations of practices and elements with the attribute 'past' *competencies*. In this sense, competencies are not a result of learning, but a process of selecting and defining, combining and weighting, associating and attributing. However, this process, once articulated as a curriculum, is no longer visible. Instead, what we see is a simplification and inscription of the process in the word 'competencies'.

Other processes of simplifying and inscribing were also made invisible. During the curriculum design process, ideas about practices were written down and presented in a paper. These ideas, generated by the history education scholars and politicians who made and shaped the competencies, are no longer visible, although they are still acting in the curriculum's understanding of competencies. Also, the majority of associations that connected these ideas, such as governmental parties, were also rendered invisible. Instead, competencies became associated with the attributes 'independent', 'individual' and 'controversial' and, moreover, they became measurable skills. Competencies transformed from a set of ideas to a set of skills. Elements and associations that are still working in the competencies but are no longer visible are inscribed and simplified.

In the process of associating and attributing certain elements to what would become the History curriculum, some attributes of the associated elements became more important than others, some were included while others were

excluded. Lobbying is an activity in which certain associations and attributes are intended to be made while others are not. The principles of political education outlined in the Beutelsbach Consensus guided the decision for some elements and against others (LpB 1976). The History curriculum developers did not consider elements that were difficult to associate with individual judgement, controversy and the acquisition of operational skills for inclusion in the History curriculum.

Once written and published, the History curriculum became an actor in the enactment of historical knowledge in History classes. The historical knowledge embedded in the History curriculum carried associated elements with it, such as competencies or considerations about political education. It also carried the attributes 'independent', 'individual' and 'controversial'. Many of these elements, attributes and actors that enacted and shaped the History curriculum had become invisible. The History curriculum became mobile enough to travel to classrooms, history education conferences and the offices of Education Ministers. Yet it became stable enough to be immutable. It could be presented, read and combined with other curricula, but it could not be changed. The History curriculum acted the same as it would in any classroom in Berlin and did not respond to the specifics of these classrooms. It participated in the enactment of historical knowledge in the classroom by defining practices and selecting topics. Thus, by the final stage of the process, the History curriculum had transformed into an immutable mobile.

5.5. Enacting the ontics of the History curriculum

The historical knowledge of the History curriculum implies specific ontics. During the design process, other ontics were discussed and ultimately discarded. Before I retrace the establishment of the ontics upon which the historical knowledge embedded in the History curriculum is based, I will contextualize and describe a theoretical tool for investigating it. As explained in the previous chapters, I understand all knowledge to be the result of activities by various

human and non-human actors. One of these activities is the associating of elements into an actor-network, and another is attaching attributes to the enacted associations. Tracing these associations provides insights into the process of how this knowledge was enacted. This approach is one aspect of Actor-Network Theory and was developed within Science and Technology Studies. The imaginary (see p. 59), as described by Helen Verran (2001), has also been developed in the field of Science and Technology Studies, but differs from Actor-Network Theory. Applying the concept of the imaginary to the analysis of historical knowledge in the classroom allows me to analyse how reality is ordered on a very basic level. It allows investigations of how different kinds of historical knowledge were enacted. I can describe how different aspects of reality emerged within the gradual clotting of framing images and stories surrounding the creation of the History curriculum.

Helen Verran (2001, p. 37) defines the imaginary as 'framing images and stories of gradually clotting and eventually routinized collective acting, and not only human acting'. The framing images and stories, on which the kinds of historical knowledge were built, were described to me by Christoph Hamann. In our interview he talked about two different approaches to history. Hamann discussed whether or not students have to learn about the past chronologically. He explained that history links at least two events that are causally or temporally related. In this understanding, history is an object that represents change in time. I will later analyse how this object came into being. Hamann himself offered a different reading of history. He argued that the past can be approached via a historical account of an event that could be later contextualised. In this understanding, the enactment of historical knowledge is related to a past event or process, and the way one approaches the event and the process of contextualisation. Historical knowledge, then, is the result of that process. I suggested that both approaches not only differ in the associations made and attributes attached to the enacted historical knowledge, but also in their ontics. Two different imaginaries were enacted. I suggest that a history based on chronology has spatiotemporal particulars, while a history based on

an event can have sortal particulars. Between these two imaginaries a tension developed.

Our discussion about the two different approaches to the past evolved as we spoke about the aim of reflected historical consciousness as articulated in Berlin's History curriculum (Senat Berlin 2006, p. 9). In the week before our interview Hamann had a 'grim discussion' with a colleague who has worked for a long time as school History teacher. Hamann's co-worker insisted that students can judge reflectively about historical events only after they have acquired knowledge. This historical judgement would then be more than an opinion and could be proved by facts. Hamann argued that this approach was falsely objectifying, stating: 'As if knowledge is neutral and not a result of a subjective approach' (Hamann interview 06/07/10, p. 5). Hamann argued that a reflected historical consciousness is not necessarily related to a chronological conceptualization of the past. Students can learn to think historically starting with a single historical event. The event has to be judged and analysed. Students would have to investigate the multiple causes for this event and its multidimensional presentation. Hamann suggested starting to work with an historical event. Students would have to gain the knowledge that is required to contextualize this event. They generate meaning of the event while including the concept time. According to Hamann, this generation of meaning of the event does not necessarily have to be reflective but can be done in an unrefined manner.

Hamann contrasted these two approaches to history. 'It is not necessary to start with section 48 of the Weimar Constitution, then pass on to the enabling Act, to talk about the consolidation of parties, cover the foreign policy – in short – to work "genetic-chronologically" through the past' (Hamann interview 06/07/10, p. 4). Rather, he argued that it is possible to approach the past in modules, providing the following example. Students dealing with the Holocaust might start with the film *Rosenstraße* by Margarete von Trotta. They could engage with the fact that non-Jewish wives fight for their Jewish husbands. Later, when the

students have done some research about this event, they can contextualize the film. An understanding of history ordered in thematic units is ontologically different from an understanding of history based on a chronology of events.

Two imaginaries were apparent when talking about these two approaches to the past. Each had different framing stories and images. In accordance with Verran's distinction between spatiotemporal particulars and sortal particulars, I argue that history based on chronology as described in the curriculum can be ordered according to the former, while history based on events as described by Hamann can be ordered in terms of the latter.[37]

In the form of history that attributed chronology as its constituting element, historical events were identified as specific points or distances in space and time. The units in this chronological history were separated by specific dates, years, periods or epochs that could be represented on a timeline. Their temporal and spatial manifestations characterized these units. In other words, in the process of first-level ordering of reality, the History curriculum developers attached spatiotemporal particulars and history was thereby made a chronological object that could be taught to students, learned or transmitted into the classroom. Having attached spatiotemporal particulars on a first-level ordering, the curriculum developers then attached the qualities 'independent', 'individual' and 'controversial' to history in a second-level categorizing process, so that the history that emerged from being grouped around spatiotemporal particulars became represented as being political, individual and controversial.

History that starts with a specific historical event is ontologically different from history constituted through chronology. Such a history is not necessarily defined in space and time. In Hamann's example of starting a unit on the Holocaust with the film *Rosenstraße* by Margarete von Trotta, history can group around rather unspecific moral, temporal or spatial characteristics. In a first-ordering act

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[37] I use the term 'history' in the analysis of the spatiotemporal ontics as it is history that is discussed in this case, not historical knowledge

history can be clotted around a variety of characteristics, which may or may not include spatiality and temporality. In this approach, there is nothing intrinsic to history. History can circle around the wives' activities, the injustice of interning Jews, the street in Berlin where the wives protested, the *Rosenstraße,* or the time of National Socialism. In this approach, historical reality is ordered around sortal particulars. Verran calls the appearance of sorts, 'modes of representation' – the mode by which the sort is represented. Hence, the sortal knowledge about the events on *Rosenstraße* can be feminist, moral or ethical, spatial or temporal or other. Each of these sorts of historical knowledge can, but does not necessarily have to be historical.

For Hamann, history adopts different characteristics depending on the way it is approached. History that groups around moral, spatial and/or temporal particulars appears differently, according to the way in which history is enacted. History that emerges from engaging with the past through a film is different from a history that emerges from an interview. These histories are of different sorts and they are represented in different modes. These modes might vary, but combined they define a type of *historical* knowledge. In a second-level categorizing process the sortal particulars are temporarily defined.[38] The following table contrasts the different ontics.

	History as circulated by the History curriculum	History as described by Hamann
First-level ordering	Clots around chronologically defined points in space and time	Groups around certain characteristics dependent on the modes of representation
	Spatiotemporal particulars	Sortal particulars
Second-level ordering	Attributed qualities: independent, individual and controversial	Attributed feature: temporal

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[38] Hamann suggested 'longitudinal cuts' would offer an alternative to the chronological approach to history. Longitudinal cuts included topics, such as 'Economical Systems and Their Effects', that would be taught over two years and for the period from the German Empire to the present. However, in the longitudinal cuts students also enact a history based on spatiotemporal particulars that is not controversial on an ontological level as the included topics would covered chronologically.

The difference in the histories emerging from the two imaginaries, one that is based on spatiotemporal particulars and the other based on sortal particulars, does not only lie in their ontological basis. They also differ in the type of knowledge and in the way these types of knowledge are enacted and circulated.

I have argued that the historical knowledge enacted in the classroom tribunal can be described as representational knowledge. I have explained that representational knowledge does not represent previously enacted knowledge, but rather re-presents the knowledge through agreeing/disagreeing, justifying and proving. I have proposed that to enact representational knowledge that agreeing/disagreeing, justifying and proving were required and that these activities were also used to enact the previous knowledge.

Historical knowledge based on sortal particulars can, but does not necessarily have to be representational knowledge. It can refer to previously applied knowledge enacting practices, when the knowledge is of the same sort, but other sorts are possible too. Using Sørensen's typology of classroom knowledge, it can also be communal knowledge. Communal knowledge has less stable, more flexible associations compared to representational knowledge. It is described as a shared experience. I suggest that a historical knowledge that emerged from clotting around sortal particulars needs a shared basis – the shared acceptance of specific sorts. This acceptance can be negotiated or dictated, but it must be shared. I therefore argue that a historical knowledge with sortal particulars can be categorized as communal knowledge in Sørensen's typology.

In order to enact an historical knowledge based on spatiotemporal particulars, Berlin History students are required to define positions in space and time. As they might not be able to do that with respect to times they have not experienced themselves, they have to associate the newly enacted historical knowledge with previously enacted historical knowledge that define points in space and time. They have to justify why they associate the newly enacted

historical knowledge with previously enacted knowledge, and to prove that the previously enacted knowledge already defined a point in space and time.

In contrast, a history based on sortal particulars does not necessarily have an object that can be circulated in the classroom. Rather, it results from the creation of sorts and from attributing temporal qualities. History that is clotted around sortal particulars and that is represented in different modes is necessarily understood as an enacted historical knowledge. Historical knowledge emerges in the process of ordering events that are attributed as being temporal.

Three qualities are attached to the spatiotemporal particulars: 'independent', 'individual' and 'controversial'. These attachments need some more analysis. I argue that Mrs. Züge's request that teenagers agree or to disagree with the statements of historians is the action in which the qualities can be attached to the historical knowledge that is based on spatiotemporal particulars. Historical knowledge becomes independent of other teenagers' and the teacher's opinions, individually enacted and controversial through the choice between agreeing and disagreeing. However, there is a limit to which these attributes can be attributed to historical knowledge that is chronologically constituted.

Chronologically constituted historical knowledge builds on objects and is therefore concerned with how teenagers have to engage with these objects. I identified this knowledge as representational knowledge. Teenagers have to learn about points in space and time by doing specific things. Consequently, they will enact a historical knowledge with similar spatiotemporal particulars and qualities. When adopting a certain perspective on historical events and when interpreting them, attributes are attached to the historical event. The qualities 'independent', 'individual' and 'controversial' can be used when judging historical events morally, economically or in other categories. They cannot be attributed to the question: How we can find about the past? This is a question of what to associate (ANT), and what to clot (Verran). This methodological

question is answered by the description of practices through which competencies are to be acquired. 'Independently', 'individual' and 'controversial' can also not be attributed to the ontological basis of the historical knowledge because the points in space and time are defined and not negotiable. In Chapter 3 I have shown that the teenagers in the class I attended dealt with historical knowledge independently, individual and controversially in a more fundamental way. The teenagers enacted a historical knowledge that was not based on spatiotemporal particulars. They failed to conform to the chronological approach outlined in the curriculum. In an analysis that builds on a spatiotemporal ordering of reality this fundamentally independent, individual and controversial way of dealing with the past can only be understood as not knowing. Hence, the aim of the curriculum to enable the teenagers to engage with the past independently, individually and controversially is partly thwarted by the requirement to enact a historical knowledge that is based on spatiotemporal particulars. However, in accordance with the History curriculum I will argue that every judgement of past events results in a kind of historical knowledge, even when it is not clotted around spatiotemporal particulars.

Having analysed the historical knowledge of the curriculum that circulated in the classroom, I can now state that the curriculum describes the practices, associations and attributes enacted in the classroom. The curriculum does not only circulate an object 'History' in the classroom, but also shapes the enactment of historical knowledge in the classroom through defining activities through which historical knowledge is to be enacted. The practices of enacting knowledge in the classroom had to conform to the practices prescribed in the curriculum. As the previously enacted knowledge is supposed to be constituted by chronology, its ontological basis clots around spatiotemporal particulars. The suggested activities and associations by which the competency of thinking and judging historically are supposed to be achieved and demonstrated therefore trigger the enactment of a representational knowledge based on spatiotemporal particulars. When enacting historical knowledge, teenage students can attach the attribute 'controversial' to the making of some associations or attributes, but

only as long as a representational knowledge can be enacted in the classroom. The attribute 'controversial' does not relate to the ontological basis of the historical knowledge that is to enact in the classroom.

5.6. Conclusion

In this chapter I have suggested that Berlin's History curriculum is an important actor in the classroom. It circulates a historical knowledge that is based on spatiotemporal particulars and has political, independent, individual and controversial qualities. I have shown that this kind of knowledge carries particular associations with political decisions and discourses among history education scholars. I have also explained that basing the historical knowledge on spatiotemporal particulars partly thwarted the aim of the History curriculum to enable teenagers to engage with the past independently, individually and controversially on a methodological and ontological level.

I have applied three approaches that have been used in Science and Technology Studies: Actor-Network Theory, Sørensen's typology of classroom knowledge and Verran's concept of imaginary. I applied these three approaches to two fields: the historical knowledge enacted in the classroom and the historical knowledge negotiated for and circulated through the curriculum.

I have used Actor-Network Theory to describe the associations made throughout this chapter. I have started with a classroom situation in which the teenagers and the teacher enacted historical knowledge in a tribunal. I have described which practices were required by both the teacher and the History curriculum to enact historical knowledge. I then have questioned what previously enacted historical knowledge was circulated in the classroom, and in answering this I have neglected the knowledge enacted by history education scholars (see pp. 15) and have focussed on that enacted by the curriculum.

In order to describe the curriculum as an actor-network I have taken two approaches. I began by describing how the curriculum affects the enactment of

historical knowledge in the classroom, and then I retraced the creation of the curriculum. I have shown what associations were made to enact the curriculum and what attributes were attached. This enabled me to describe what was circulated with the previously enacted historical knowledge in the classroom. I have shown that through stabilizing associations with certain actors and by attaching certain attributes, the historical knowledge was solidified as an object.

Applying Sørensen's typology of classroom knowledge, I argued that the historical knowledge as enacted in the tribunal in the classroom was representational knowledge. Representational knowledge is characterized by having stable associations with previously enacted knowledge, and, as such, re-presents previously enacted knowledge.

At a later point I suggested that in proposing activities and associations to develop competencies as history education standards, the History curriculum prioritizes the enactment of representational knowledge. The focus on certain activities is understood as one way of solidifying historical knowledge and to make it into an object – 'History', (Senat Berlin 2006, p. 9).

By following Christoph Hamann's discussion of history based on chronology, I identified a modular history as another type of historical knowledge. I argued that this approach would lead to the enactment of communal knowledge. To analyse the difference between a history constituted through chronology and a history approached through modules, I have applied Verran's concept of imaginary. I have traced the ontological basis of the two ways of approaching the past. History that is constituted by chronology has been described as being clotted around spatiotemporal particulars, having independent, individual and controversial qualities. However, I have shown that the attachment of these qualities to spatiotemporal particulars is only possible in a limited way. I contrasted this with history based on sortal particulars with temporal features, arguing that this kind of history can be independent, individual and

controversial. Finally, I have argued that different ontics of history also entail different practices of enactment and circulation of knowledge.

I conclude this chapter proposing that the different types of historical knowledge enacted in the classroom as described in Chapter 3, the representational knowledge and the communal knowledge, differ in their value for history education as conceptualized in Berlin's History curriculum. At this point in my thesis it becomes apparent that one type of knowledge is attributed as being more 'important' than the other. In the curriculum, representational knowledge is more highly valued as it follows the guidelines of what is to be taught in History classes and how an objectified history is to 'teach'. This representational knowledge associates newly enacted knowledge with previously enacted knowledge, both based on spatiotemporal particulars with different qualities. In this context, communal knowledge is devalued. This devaluation is in contrast to the explicitly stated aim of Berlin's History curriculum (Senat Berlin 2006, p. 9) to improve the historical thinking of teenagers by promoting their independent engagement with the past. The achievement of this aim is limited through the prioritising of spatiotemporal particulars in imaginaries over other kinds of particulars. In fact, the devaluation of historical knowledge other than representational thwarted the History curriculum's (Senat Berlin 2006, p. 9) aim to improve the historical thinking of teenagers by promoting their independent engagement with the past. I argue that the communal historical knowledge enacted in the classroom is equally valuable to history education as the other kinds of historical knowledge, such as the knowledge enacted in the curriculum as representational knowledge.

In the next chapter I synthesize the previous chapters and show that the identified actors in the classroom act within different imaginaries on the different types of historical knowledge enacted. I will also identify the tension emerging between the different imaginaries, and the ordering practices applied to help deal with this tension.

PART 3 - Concluding

6. The co-existence of different imaginaries – a synthesis

In the introduction of this thesis I described my confusion about what formed the knowledge in the classroom when I sat in class with the teenagers and observed their confusing ways of dealing with this knowledge. I have now described how historical knowledge came into being. I have also compared certain features of the types of historical knowledge enacted through the making of associations and other specified practices within imaginaries. Now, I wish to argue that different imaginaries co-existed, in tension with each other, but also overlapping. This concurrency is by no means trivial. Rather it has a significant impact on research approaches to enactment of knowledge in classrooms.

In the context of education, differences are often discussed within the dualism of relativist and universalist approaches. I will show the limits of these positions and suggest that understanding the imaginaries as co-existing, as overlapping *and* in tension with each other implies a generative tension that goes beyond universalist or relativist approaches. To begin, I will synthesize the previous chapters by describing the co-existing imaginaries. I will then describe the tensions between the identified imaginaries of the curriculum and continue by illustrating the tension between the imaginaries of the classroom.

At the end of the chapter I argue that it would be beneficial for history education to acknowledge the existence of different imaginaries. I suggest that in order to include communal knowledge as valuable historical knowledge in the classroom history has to be taught in the modular way rather than in a chronological way. Teaching history in a modular way would make it possible to discern and to acknowledge the differences between imaginaries and to refine our understanding of historical knowledge.

The danger is though that in writing about differences between the imaginaries, their overlaps and tensions people might misinterpret this as an attempt to objectify the imaginaries. Thus I must stress that it is not my intention to present imaginaries as objects that exist independently from each other when I compare and contrast them. Rather, following Helen Verran (2001, p. 235), I assume the imaginaries are distinguishable only in relation to each other. As such, it is only when writing about overlaps and differences that I *can* identify their distinctive characteristics. The tensions between the imaginaries triggered ordering practices among the actors. Thus, by presenting the imaginaries as being in some ways opposed to each other, I hope to clarify the tensions between them and then to analyse how these tensions were dealt with.

6.1. Against a foundationist analysis

In *Science and an African Logic*, Helen Verran (2001) analyses papers she published in the 1980s about how Yoruba speakers encountered numbering, generalized and gained certainties. She criticised her past scholarship for its unreflected relativist analysis. In a philosophical discourse on relativist and universalist analysis, she positions her more recent claim for a generative critique as neither relativist nor universalist. In the following I will introduce Verran's generative critique and demonstrate how it has informed my investigation of co-existent imaginaries in the classroom setting.

By analysing her own past work, Verran provides an example of the limitations of relativist approaches. By her own analysis, that earlier work can be criticized in three ways. Firstly, by distinguishing between Yoruba speakers and English speakers it had created an ultimate division. By dividing these groups, Verran hardened and solidified the boundaries between them (Verran 2001, p. 30).

Secondly, her earlier work attempted to make 'Yoruba logic' fit into 'English language logic' (2001, pp. 30 – 31). In retrospect Verran criticises the fact that 'the two splendid objects that [she] had "discovered" exactly fitted the form of

objects that [she] had shown as participating in English language logic' (Verran 2001, p. 31). She notes that she had once presented Yoruba logic as a special case within English language logic. As such, in attempting to identify differences between these logics Verran had unwittingly retold an 'imperial universalism' by pulling 'their' logic into 'ours' (2001, p. 31).

Thirdly, Verran's early study of the Yoruba contained an implicit moral economy established by her positioning of herself as a 'removed observer' and therefore the voice of the authority. 'This voice, legislating from a position of certainty, tells the ways contemporary Yoruba should understand themselves and their knowing' (Verran 2001, p. 31). This criticism echoes Haraway's critique of the "God's eye' position adopted by many social researchers (see p. 43), but has a slightly different focus. While Haraway argues that ANT researchers position themselves as distant to the connections and associations that they observe as if they were not involved in the research, Verran points out the objectifying practices in her own research. She argues that she applied an objectifying perspective on the numbering and generalizing practices of Yoruba speakers, and pulled 'their' world into 'her' world by assuming that she knew how to do numbering and generalizing while they did not. Verran describes this insight into her past moral economy as 'perhaps [the] most painful' (Verran 2001, p. 31).

Verran argues that this critique of the effects of her relativist research could also be applied to effects of universalist approaches to social research. Both approaches fail to describe the fact that research participants concurrently 'generate new ways to go on' and regenerate 'old ways of going on' (Verran 2001, p. 29). These approaches fail to emphasize the enormous creativity of the research participants and to focus on the newly generated reality. Rather, these research approaches imply a homogenizing foundation:

> I argue that an unacknowledged, even denied, uniformitarianism is embedded in relativist analysis, and that the foundationist framing that universalism and relativism share is its origin. (2001, p. 32)

In universalist analyses, knowledge refers to the underlying givens of the world. It mobilizes and is framed by a specific ontology, one which implies a specific realness comprising givenness. 'A stone, for example, is structured separations: bit of real matter located in real space and enduring across real time—a material object' (Verran 2001, p. 32). Similarly, relativism has given objects. In relativist analyses knowledge is 'a system of categories emerging out of various schemas of symbolizing that build on social practices of working the material' (Verran 2001, p. 32). As the real is understood as having been 'worked-up', there is a sense of abstractness of objects in relativist analyses (Verran 2001, p. 32).

According to Verran (2001, p. 36), both approaches, the universalist and the relativist, have limitations in their attempts to understand the 'realness' of the world. First, they assume an ordering of the world, a structuring in which objects are separated by boundaries in space and time. This understanding of the world as comprising separated objects is not acknowledged, or even actively denied. Being unaware of the underlying separation, universalists and relativists do not understand their structuring of the world as objects as a translation of realness into objects. This lack of understanding of their own foundational assumptions means that 'foundationist explanations *fail* the critical project. They actually make it impossible to imagine futures different from the past' (Verran 2001, p. 35, emphasis in original). Responding to the limits of foundationist approaches, Verran (2001, p. 33) claims that we need a 'new story of realness, of how and where realness originates'. This focus on the creating and generating of realness prompts Verran to explore framing images and stories from which imaginaries emerge that, in turn, mobilize practices through which reality comes into being.

Drawing on Verran's analysis of the foundations implied in relativist and universalist analysis, I ordered classroom reality around imaginaries, which I in turn divided and brought in opposition to each other. I ordered the imaginaries based on my analysis of identified associations, on the ontics that the actors

applied, on their framing stories and on their practices, which resulted in the enacted historical knowledges. In providing this information I hope to clarify that I do not consider myself to be a removed observer merely representing the ways in which curriculum developers enact historical knowledge. Rather, I hope to have eschewed both relativist and universalist analyses, and to have prepared the way for a generative critique through which the future can be thought of differently from the past. This generative critique also allows us to imagine a different future of engaging with the past.

Having thus raised our awareness of the traps of analysing co-existing imaginaries, I wish now to attempt to describe this co-existence in a way that avoids foundationist analysis.

6.2. Overlappings and tensions between imaginaries during the development of the History curriculum

When the Standing Conference (2003) recommended introducing education standards, history education scholars and curriculum makers initially debated whether the requirement to develop standards and competencies should be followed or resisted. In fact this debate about standards and competencies was also about another imaginary, different framing stories that would be accompanied by different practices. As previously explained, those who had argued for the implementation of educational standards in History began to develop competency-models (see p. 149) and thus associated with an imaginary other than the one previously employed. However, this imaginary apparently comprehended a vast diversity of framing stories and pictures. Christoph Hamann stated that the competencies needed to solve problems in History were considered to be more complex than in other subjects. For other subjects the curricula-makers articulated a content-orientation with accumulatively acquired knowledge, but for History the most highlighted competency that was expressed as 'students shall learn to think historically' (Hamann interview 06/07/10, p. 7, see p. 149).

By initiating a paradigmatic change through distancing itself from an emphasis on content, and by defining skills as standards, the History curriculum mobilized a significantly different imaginary than previous curricula. Rather than applying stories of topics that have to be learned, it now asserted that history education aimed to assist students to make independent individual judgements. Through these different stories about History education the knowledge about the past was re-imagined, while the previous imaginary still existed.

Hamann described these imaginaries as being in tension with each other. He talked of heated negotiations over what to teach, how to teach and what the outcomes of history education should be. He also spoke of his experiences of being lobbied by various interested parties .

In terms of my research, the most important difference between these imaginaries is the difference between the two types of knowledge that emerged from them, the way these knowledges were enacted, and their effects on history education. As part of my investigation into the ways the enactment of historical knowledge in the classroom is shaped, I contrasted the chronological way of teaching history with the modular way suggested by Christoph Hamann . When Hamann explained this via the example of the film *Rosenstraße*, his argument not only involved information as to the way it might be taught, but also referred to a different type of historical knowledge. The fact that the enactment of knowledge can start with watching and discussing a movie suggests that such knowledge enactment does not necessarily have to be ordered around defined points in space and time. Through the openness towards the ontological basis of the knowledge implied in his argument, Hamann indirectly referred to a different historical knowledge. Knowledge that is taught in a modular way no longer has to clot solely around spatiotemporal particulars. Historical knowledge enacted in this way can, for example, also clot around morality, with it positions in space and time comprising a second-level of ordering. Whatever knowledge is enacted in this second imaginary, it is of a specific sort. Knowers must have participated in the enactment of knowledge in order to know which sort of

historical knowledge has been enacted. Drawing on Sørensen's work, I classified the knowledge emerging from this imaginary as communal knowledge (see p. 56). Communal historical knowledge that is not clotted around spatiotemporal particulars cannot be taught in the mandated chronological way. Thus, another way of teaching history is needed.

In the process of developing the History curriculum attempts were made to reduce the tension between these various imaginaries. For example, due to the regulations governing the curriculum development process, specific people in defined professions, guidelines and practices were included while others were excluded (see p. 145). Sets of literature, policies, procedures and timeframes were thoughtfully selected and associated in order to enact *one* outcome – a specific approach to deal with the past as outlined in the History curriculum. When defining chronologically taught History, the other imaginary in which historical knowledge could be enacted with non-spatiotemporal particulars was subjugated. In effect, the tensions between the different imaginaries were reduced by the demands of one of the imaginaries being silenced.

Despite this, the tension remained and found expression around negotiations about whether or not History should be taught chronologically or in modules. Hamann explained that in order to deal with the differences between these two approaches the curriculum developers introduced the concept of longitudinal cuts (see p. 160). These longitudinal cuts were aimed at enabling teenagers to enact a knowledge that was not based on chronology. Topics such as 'housing' could be discussed in each of the double year units. The longitudinal cuts also offered the framework in which teenagers could enact historical knowledge with an ontological commitment other than those clotting around spatiotemporal particulars. However, as the topics in these longitudinal cuts necessarily had to be discussed chronologically, the historical knowledge to be enacted was clotted around spatiotemporal particulars regardless. When the completed curriculum circulated the imaginary in which historical knowledge that was clotted around spatiotemporal particulars was to be enacted, the tension

between it and the modular imaginary, which had co-existed during the curriculum's development, was no longer visible.

Another way of disguising the differences between the imaginaries was expressed through the process of defining competencies. I described the process of defining competencies as selecting practices, their ordering around effects and, finally, as associating these practices with the attribute 'past' (see p. 155). This defining of competencies was made invisible. However, the fact that the process of the making of the competencies was no longer visible did not dissolve the differences between the imaginaries. The gap between the two aims, factual knowledge on the one hand and operational skills on the other, remained. The definition of competencies did not reduce the tensions between the imaginaries, but only silenced it.

6.3. Tensions between and overlapping of the imaginaries in the classroom

I have described several incidents in which at least two imaginaries unfolded. In order to elucidate the concurrent tensions and overlapping between the imaginaries, we must return to the previously described situation in which Isabel and Karl discussed what information could be used in the debate. Lena had questioned whether Heinrich D. had any alternative but to beg, given the incredibly high level of unemployment at the time (see p. 80). Adding to this, Isabel questioned how Heinrich D. could find a job when he did not have a degree. Karl responded by asking how Isabel knew that Heinrich D. did not have a degree. She explained that she raised this question to illustrate how little they knew of Heinrich D.'s life and circumstances, as a caution against them and their fellow debaters making quick and easy judgements. Karl countered that if Isabel was not certain that Heinrich D. did not have a degree then she could not use this argument.

I have argued that Isabel's and Karl's statements differed in the type of morality that they applied. While Isabel appealed to ethical values, Karl's judgement of

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Heinrich D. stemmed from his conviction that it is immoral to break the law. I then I suggested that although these statements were premised on different types of morality, the ontological basis of the knowledge enacted in them was the same, as both teenagers ordered the past around spatiotemporal particulars (see p. 87). Isabel's and Karl's statements exhibited differences only in the qualities that they attached. I have also argued that the historical knowledge enacted in the classroom was done so within different imaginaries that applied the same ontics. Enacting different types of historical knowledge within these imaginaries the two teenagers employed different framing stories, associated different elements and ended up with different results, while at the same time clotting the newly enacted historical knowledge around spatiotemporal particulars.

One imaginary consisted of framing stories and pictures that led to the enactment of a history with an ontological commitment towards spatiotemporal particulars. The clotting around spatiotemporal particulars was the defining characteristic of historical knowledge enacted in this imaginary. In order to enact this type of historical knowledge the teenagers had to be introduced to this imaginary. They had to learn to apply specific framing images and stories that lead to the application of specific knowledge practices.

The other imaginary I have described was ontologically committed to sortal particulars. In the example of the teenagers discussing the issues of compensation for Heinrich D. the framing stories and pictures clotted around particulars of a moral sort. This type of historical knowledge was enacted through creative acts of associating and by the creation of a new ontological basis. The framing stories and pictures of this imaginary were not necessarily circulated but created. Participation in the enactment of this knowledge was intrinsic to the teenagers becoming 'knowers' of this historical knowledge.

I suggest now that the imaginaries that unfolded in the discussion between Isabel and Karl were similar to the imaginaries that emerged during the

development of the curriculum. The imaginary that Karl drew on implied knowledge practices aligned with those that enact factual knowledge. The imaginary that unfolded through Isabel's statements did not include a strict focus on factual knowledge. Rather, by referring to a fictional detail of Heinrich D.'s life she exemplified the unknown. The imaginary in which Karl enacted historical knowledge understood the clotting around spatiotemporal particulars as constituting history. In contrast, the imaginary in which Isabel enacted historical knowledge allowed for different ontological commitments, the clotting around spatiotemporal particulars being but one of them.

However, the separation of the imaginaries is not 'an ultimate division' (Verran 2001, p. 29). It is important to note that although the historical knowledge differed between these imaginaries, some aspects of the enacted knowledge overlapped. Thus, the relationship between the imaginaries is not necessarily as dualistic as it might have appeared in my analysis to this point. Instead, I here want to stress that in terms of their relationships to each other, the overlapping of imaginaries is as crucial as their differences. Further drawing on Helen Verran's (2001; Watson-Verran & Turnbull 1995) work, in what follows I argue for acknowledgement of the simultaneous overlapping and differences of co-existing imaginaries. The tension that emerged between the overlapping and the differences is, in Verran's terms, generative. In this tension the actors in the classroom maintained the ordered/ordering microworld by applying the ordering practices described below. Through the emergence of these new practices a new reality was enacted.

6.4. Ordering practices in the classroom

I identified five ordering practices as maintaining the ordered/ordering microworld: enacting power, negotiating, regulating, prioritizing and blackboxing.

In the introduction I described a situation in which Mrs. Züge explained how little food most people had to live on in the 1920s. When some teenagers made

jokes about this amount of food Mrs. Züge responded by suggesting that they could not appreciate how little this amount actually was (see p. 11). The teenagers' joking was not one of the knowledge practices cited in the History curriculum, nor was it part of the imaginary circulated by Mrs. Züge. Her remark indicated that the teenagers did not respond to the requirements and did not enact representational knowledge. As a consequence of not applying the knowledge practices that enact representational knowledge, conflicts occurred in the classroom. In this instance, different ontological commitments and different knowledge practices were in conflict. In order to 'make' teenagers enact the representational historical knowledge, Mrs. Züge had to exert power over them, which in turn had to be enacted by the teenagers. This power was needed to define framing stories and pictures, practices and associations that lead to the enactment of representational knowledge. This power was also applied in order to maintain an ordered/ordering microworld. Consequently, when the enactment of power by the teenagers was insufficient, conflicts occurred around this enactment. Examples of this were when teenagers chatted when they were meant to be taking notes, and when they associated with actors other than those prescribed by the teacher and/or the curriculum. This particular ordering practice, *enacting power*, had a double function. As described in Chapter 4, I understand enacting power as an ordering practice in both fields, exerted to maintain the ordered/ordering microworld, the network that would enable specific actors to enact knowledge, and exerted to enhance the knowledge practices that enact representational knowledge.

Another ordering practice applied in both the maintenance of the network and the knowledge practices was *negotiation*. I described the negotiation of power when Hassan refused to enact Mrs. Mohn's authority. In this sense, negotiation was a practice used to maintain the ordered/ordering microworld. I also described negotiations about knowledge practices, such as the one between Isabel and Karl about what counts as historical knowledge in the debate. Both of their statements pointed to internalised versions of external regulations as to what counts as knowledge.

I suggest that *regulating* classroom activities and knowledge practices was another ordering practice that applied to the maintenance of the classroom and knowledge practices. In Chapter 4 I described the different forms of regulations that I observed in the classroom, regulations that maintained the ordered/ordering microworld and regulations that guided the enactment of historical knowledge. For example, regulations that maintained the ordered/ordering microworld required students to choose specific subjects and return to the school a form signed by their parents (see p. 110). Other regulations ordered what they were to learn about the past and how it was to to be taught (see p. 135), the classroom size, the furniture and the lighting (see p. 104). Regulations defined time frames for the classes and for returning forms, signed by parents, to the teacher. They also defined practices and associations that were considered necessary in order to enact historical knowledge. Finally, these regulations standardized the classroom, the socio-material interior of the classroom and the classroom activities. Regulations, such as the History curriculum, that claimed to be guiding for History classes, ordered the knowledge practices in the classroom. Defining knowledge practices and the framing images and stories in the History curriculum shaped the knowledge practices and attributed some of them more legitimacy than others (see p. 128). Thus, besides the enacting power and negotiating, regulating was another ordering practice applied to deal with differences between the imaginaries and to maintain an ordered/ordering microworld.

In Chapter 4 I defined the maintenance of the ordered/ordering microworld as being also a knowledge practice. As such, I argue that ordering practices that deal with maintaining the ordered/ordering microworld can also be considered as knowledge practices that deal with the tensions between different imaginaries. However, as this thesis focuses on the enactment of historical knowledge, I will now analyse two more ordering practices that were prominently involved in dealing with the tension between the two types of historical knowledge that emerged in the described imaginaries. These two

practices were the *prioritizing* of one type of knowledge over the other and *blackboxing*.

As the curriculum required teachers and students to enact representational historical knowledge, this was *prioritized* over communal knowledge as being the legitimate outcome of knowledge practices within the classroom. Representational historical knowledge was attributed to be more 'legitimate' than communal historical knowledge because it coincides with the guidelines as to what and how an objectified history is to be taught. In order to enact representational historical knowledge an imaginary similar to the one that enacted previously historical knowledge had to be enacted. This imaginary required the mobilization of stories and pictures, practices and associations similar to the ones used in the previous knowledge enactment. I described the situation in which one of the teenage boys, Murat, suggested that Heinrich D. could have gone into a labour camp rather than begging, which was illegal and, in the minds of most of the teenagers, therefore immoral. I identified the historical knowledge emerging in this situation as communal knowledge. In the context of the debate such an issue could be discussed, but according to the requirements of the History curriculum this form of communal historical knowledge, with a commitment to ontics different from those of the spatiotemporal, was illegitimate. As knowledge that clotted around particulars other than the spatiotemporal was not acknowledged as historical knowledge, the prioritizing of representational knowledge over communal knowledge thwarted the History curriculum's aim to enable students to make independent judgements about the past (Senat Berlin 2006, p. 9).

I described the knowledge practices that enacted an objectified history. By re-presenting spatiotemporal particulars, the object 'History' emerged. However, the framing stories and pictures and the collective acting that enacted the object 'History' were no longer visible in the classroom. It was only because history was understood and enacted as an object that teenagers could be required to *connect* to it, rather than be asked to *enact* historical knowledge. Moreover, the

making of the object 'History' was not only invisible, it was also actively blackboxed (see p. 81). By blackboxing the differences between the imaginaries, their various knowledge practices, stories and pictures one of the imaginaries was prioritized over the other. The possibility of enacting a legitimate historical knowledge other than one that clotted around spatiotemporal particulars was no longer contemplated. This prioritized way of enacting historical knowledge became the only legitimate way, resulting in all other knowledge practices being blackboxed.

To this point I have identified the following ordering practices used to address the tensions between different imaginaries: enacting power, negotiating, regulating, prioritizing and blackboxing. As different as these practices are, they had similar effects on the enactment of historical knowledge in the classroom. All these practices smoothed out the differences between the imaginaries through which different kinds of historical knowledge were enacted. In order to investigate this smoothing out of differences through these ordering practices, I wish to refer to a theoretical tool described in Chapter 2 — Michel Callon's (1986) concept of 'translation' . Using this, I will argue that these ordering practices were employed in the process of translating communal historical knowledge into representational historical knowledge.

In the translation, actor-networks connect and change. Callon describes the process of translation in terms of four processes that, as he states, are not as clearly distinguishable in reality as they are in his text. These aspects are: problematization, interessement, enrolment and mobilization. I argue that the described practices (exerting power, negotiating, regulating, prioritizing and blackboxing) enabled the translation of the requirements of the History curriculum into the classroom situations. In the process of problematization the teacher and the teenagers asked questions of how to engage with the past. Interessement occurred in activities through which the actors became interested in the process of how to engage with the past and when they negotiated the terms of involvement. In the process of enrolment the actors formed allies and

finally mobilized newly enacted historical knowledge. The described practices (exerting power, negotiating, regulating, prioritizing and blackboxing) ordered each of these four processes and different imaginaries were mobilized in these ordering of translation processes.

Rather than making the differences between the imaginaries invisible, as described in the process of the curriculum's development, the actors in the classroom smoothened out the differences by applying the identified ordering practices. The tension between the imaginaries was thus lessened. However, the imaginaries did not turn into something more robust, as universalist or relativist thoughts would have it.

6.5. Acknowledgement of different imaginaries in the classroom for history education – a generative critique

In the previous chapters I have described how different types of knowledge were enacted in a classroom situation. I have investigated the broader spatial and temporal settings through which these types of historical knowledge came into being. By doing this, I have provided opportunities for a generative critique and for effective intervention. In this chapter, I have analysed the generative tension between different imaginaries for the development of the curriculum and for the classroom. I have clarified that these imaginaries were not understood as being representative, but units that I created based on ontics, framing stories and pictures, associations that were made and resulting practices. In what follows I take the critique one step further. Based on my comprehensive investigation of knowledge enactment, the local as well as the spatial and temporal extensions of this, I will show that the currently applied chronological way of teaching history should be replaced by a modular method. In this way, I encourage us to imagine both a future that is different from the past, and a different future for the past.

As a result of my research, I suggest that enacting power, negotiating, regulating, prioritizing and blackboxing of different imaginaries and their effects

is not the most effective way of dealing with different types of historical knowledge in History classes. Instead, I argue that these different types of knowledge co-exist regardless of these practices, and rather than silencing or smoothing away the differences, an acknowledgement of the enactment of different imaginaries, different knowledge practices and, resulting from that, different types of historical knowledge, could be extremely beneficial for history education.

Most obviously, the acknowledgement of different imaginaries would enable teachers and teenagers alike to investigate the tensions and overlaps between different knowledge practices and different ontics. Acknowledging different imaginaries would allow them to reflect on the process of the enactment of historical knowledge, rather than enacting power, negotiating, regulating, prioritizing and blackboxing other knowledge practices. As a result of acknowledging different imaginaries in which historical knowledge is enacted, teachers and teenagers would be enabled to make reflective judgements about the past. The acknowledgement of different imaginaries would also encourage them to create new values that they would then have to justify in terms of their applicability. Acknowledging different imaginaries would make teachers and teenagers aware of *what* is known and *how* it is known. As Verran (2007, p. 108) puts it, students would benefit from learning to manage interruptions and dissonances that accompany the process of dealing with different generalizations. 'Not only that they learn to know, they also become aware *that* they know and *how* they know.' (Verran 2007a, p. 109, emphasis in original) Also, if teachers were not required to exert their power in order to regulate, silence, prioritize and blackbox rival imaginaries, there would be far less conflict in classrooms and therefore many more opportunities for experimenting with and reflecting on knowledge practices.

The chronological method for teaching about the past does not support an increasing awareness of different imaginaries in the classroom, as it excludes all imaginaries that do not enact representational knowledge with the same

ontological commitment as the previously enacted historical knowledge. As an alternative, I suggest that history be taught in a modular way, one open to the possibilities inherent in reflecting on the framing images and stories and knowledge practices through which all historical knowledge is enacted. Teaching history in this modular way would allow teachers and teenagers to ask fundamentally new questions, to discover novel answers and to re-enact old ways of dealing with their experiences of time.

Teaching History in the modular way requires the teacher to act differently in the classroom though. The teacher would have to put less effort into enacting the power that stabilizes the actor-network ordered/ordering microworld and on training the students in practices that enact competencies defined in the History curriculum. Rather, the teacher would be required to train the students in reflecting on the process of knowledge enactment. This requirement, in turn, entails changes in History teacher education as well.

7. Reflections

7.1. Contribution of this thesis

This thesis contributes to research done in the fields of history education and of STS. In the field of history education it identifies gaps in our knowledge of what it is teenagers actually do when they engage with the past. It offers novel and detailed description of their engagement with the past, of all the elements involved in knowledge production processes in classrooms, and it suggests a way of effectively intervening in history education.

Drawing from extensive data collection of classroom activities and teenagers' sentiments and attitudes towards history and justice, this thesis describes how teenagers deal with the past when they are not yet introduced to a specific imaginary. It demonstrates that teenagers engage with the past in different ways, some of them very creative. Rather than enacting a historical knowledge that re-presented previously enacted knowledge, the teenagers enacted a different knowledge by using different framing stories and pictures, by applying different knowledge practices and by enacting different ontics. In presenting these creative approaches to enacting historical knowledge as achievements, it argues that History classes can be a place where students are trained in challenging previously enacted imaginaries.

Another key argument is that the current focus in history education research on what is involved in 'learning' processes allows only partial insight into these processes as the research design for them limits the data they collect. As this thesis has demonstrated, knowledge practices and historical knowledge emerge in tandem with other actors, all of which need to be included in any analysis of learning processes. As such, the remit of future history research needs to be expanded to include these diverse elements. I have also suggested that knowledge enacting processes be investigated by questioning how the research participants order reality, rather than by the researcher imposing categories on

them, categories which might be more relevant to academic discourses than they are to the participants. Similarly, I have argued that the knowledge, the practices through which this knowledge is enacted and the ordered/ordering microworld that order these knowledge practices are intrinsically interwoven. My research has included an analysis of the relationships between knowledge practices, the curriculum, the classroom, the exertion of power, teenagers and the teacher. The selection of actors involved in the enactment of historical knowledge in the classroom was guided by an empirical investigation of what impacts on the knowledge practices rather than by theoretically defining influences on the enactment of knowledge. This perspective allowed me to investigate the complex process through which teenagers connected with the past in far greater detail than previous research in this area.

Based on the results of my research I have suggested that teaching history in modules can incorporate different types of historical knowledge more effectively than teaching history chronologically. By describing the process of teenagers enacting historical knowledge in classroom situations it is hoped that this research can inform: History education discourses; the development of History curriculum; the training of History teachers; and education practice in actual classroom situations.

By applying STS theoretical tools, methodologies and methods in History classes for the first time, this research also contributes to the research field of STS. I was able to make extensive observations and to identify main actors, resistances, associations and socio-material practices in the process of knowledge enactment. As a result, my findings offer fresh insight into the possibilities of data collection in school settings, and provides a new, more detailed understanding of knowledge practices in a classroom, specifically practices that enact historical knowledge in an actor-network of teenagers, a teacher, a classroom, power and a curriculum. I have described in detail the knowledge practices of curriculum developers, teachers and teenagers and have demonstrated how these practices are shaped by political guidelines,

academic discourses, power and the physical layout of a classroom. The practices that were applied in order to associate and to adapt have been analysed, as have the effects of these associations. The central insight gained through this research is the understanding that knowledge practices in the classroom are extremely diverse, are creative and that they co-exist rather than cancel each other out.

Within the field of STS I have also contributed significant insights into the knowledge practices of teenagers who engaged with the past. I have described and analysed their particular way of associating elements within imaginaries and, by studying the effects of their knowledge practices, have argued that different historical realities emerge from these different imaginaries. Additionally, the thesis analyses how these different imaginaries were ordered within the classroom.

Furthermore, I have described the specifics of the different types of historical knowledge enacted in the classroom, the practices through which it was enacted, the associations made in order to enact it, and the ontic/epistemic commitments of these types of knowledge. What makes the historical knowledge in the classroom particularly interesting in terms of STS research is my observation of the co-existence of representational knowledge, based on spatiotemporal particulars and enacted through practices that simplified and objectified the knowledge, and communal knowledge that featured particulars and practices not yet established. I have analysed the tensions that occurred through this co-existence, and how the curriculum developers, the teacher and the teenagers responded to these tensions.

The fact that the interwoven character of the named actor-networks is here revealed to be both a contribution to STS as well as to history education indicates that this thesis contributes to an interdisciplinary community of discourse. I suggest that this thesis offers insights into 'learning' processes that cannot be gained with methods and analytical tools used in conventional history

education. In turn, in the field of STS, little is known about knowledge practices in schools. Hence, situated at the intersection of these disciplines, my thesis fills a gap in the literature of both fields.

7.2. Areas of further research

Attempting to answer my research questions, I noticed that the more I tried to find answers the more questions emerged. In this section I want to restate the most obvious questions that arose as my thesis progressed, but also the questions this thesis has generated for future research.

By tracing the emergence of historical knowledge in the classroom I could describe how it was enacted. Following other actors might tell different stories about the enactment of specific realities at school. Future research on teenagers that investigates associations and movements would provide insights into the otherness of teenagers' reality.

Further investigation of teachers' practices, associations and attachment of attributes (and those of the actors entangled with the teachers) would reveal the large number of practices involved in enacting the teacher's role that are not part of academic or institutional considerations. My research revealed the teachers as being translators between the requirements of school, previously enacted knowledge and newly enacted knowledge. These translation practices went largely unrecognized, even though the historical knowledge changed each time it was translated, adjusted or transformed. Despite our in depth knowledge of teachers' activities in classrooms, little is known about these translation practices. Conducting further research into these practices, associations and attachments of attributes by and through teachers would provide new insights as to where one might effectively intervene in order to avoid conflicts or to 'improve' education for the actors involved.

Similarly, a broader investigation of power in the classroom might lead to its re-definition, reveal unexpected actors involved in its enactment, and further illuminate its distribution and dynamics within the school context. Following Susan Leigh Star, it might give answers to the question *cui bono*? As different actors are involved, different forms of power have to be enacted, ordered and maintained. Analysing these practices might produce knowledge about associations in which conflicts emerge, how conflicts are dealt with and how solutions to conflict emerge from collective acting.

Investigating practices, associations and attachments of attributes while focussing on the classroom would contribute to the ongoing negotiation concerning classroom designs. Providing answers to questions such as: How do different classroom arrangements affect different knowledge practices? For whom and for what politics are layouts of classrooms standardized? The enactment of body practices and incorporated knowledge could also be investigated when applying STS methodologies to research in the classroom.

In addition to previously enacted knowledge, teenagers, teachers, power, and the classroom actor-networks identified in this research as being intrinsic to the enactment of historical knowledge, future research might uncover other important actors in this context, ones implied from a different set of researcher experiences and expectations.

Any aspect of school and of knowledge production in the lives of teenagers can be of interest. Further research could investigate how different ways of communication impact the knowledge practices, or how the teachers' marks shape these practices. Which decision-making processes impacts the knowledge practices in school? Most interesting, however, are further questions of how teenagers do ontics. Further research could ask questions about doing ontics among different age groups. If so, in what way? As my investigation into the doing of ontics was limited to history classes, future research could reveal the imaginaries used in other subjects. How do these imaginaries differ from the

imaginaries circulated by the curricula of these subjects? Are there differences in doing ontics between people of different genders and ethnic backgrounds? A researcher could also study if there are differences in doing ontics between groups of friends, and if so, what constitutes these friendships. The field of open questions is vast and bringing STS into the classrooms can contribute to a deeper, interdisciplinary understanding of classroom activities.

7.3. Limits of the knowledge enacted in this thesis

This thesis is based on an understanding of reality as enacted alongside different gradients of resistance. Due to the limits of language, it is written in a way that sometimes hides this enacted character of my knowledge. That means that the knowledge enacted in this thesis sometimes appears to be representational knowledge, as if it could re-present the reality in the classroom as I observed and experienced it. However, I assume no special status of knowing for this thesis. As with all other types of knowledge it is a result of knowledge practices of different actors that are ordered and are ordering. It has no intrinsic qualities, but is a result of associations I made, ontological commitments, and imaginaries that unfolded during the research and writing processes. As such, the knowledge of this thesis is itself a network effect and that acts and that has its own limitations.

In analysing my research on knowledge practices in the classroom, I suggest that these practices were situated in the classroom in which the identified actors ordered the reality in particular ways. This particularity means that the results of my analysis cannot be transferred fully to other classroom situations. Despite the situatedness of the described knowledge practices and the historical knowledge resulting from these, I want to highlight that there are some insights from this research that can be generalised to other classroom situations. For example, as described in Chapter 5, when designing the debate I intended to elucidate the teenagers' notions of historical justice. Consequently, they addressed questions of morality in the debate. In my analysis I discussed the

newly enacted knowledge in terms of their moral particulars. While I do not assume that historical knowledge enacted in a classroom always clots around moral particulars, I do suggest that there are different types of historical knowledge with different co-existing ontics. This assumption about co-existing types of historical knowledge allows me to argue that History classes can be a place where students are trained in challenging previously enacted historical knowledge.

Following the conventions of Science and Technology Studies in referring to non-inherence, I claim that there was little inherent in the classroom, merely 'gradients of resistance'. Thus, the classroom reality that I have described has little inherence too. Rather, the described situations are results of practices and associations. I hope to have shown in my reflections that I enacted the knowledge in a particular way. I have ordered the reality according to actors, associations, attributes and ontics, rather than representing them. To choose different aspects would have been possible and different effects would have resulted from this. In other words, I have not described reality in this thesis, rather this thesis is the place where these different actors associations, attributes and ontics have been materialized.

Instead of viewing the knowledge enacted in this thesis as representational, as something I 'found' in the classroom, it should, I suggest, be characterized as fluid knowledge (Sørensen 2009: 119). I understand this thesis as a contribution to an academic discourse in which elements come together without forming an increasingly robust object. Instead, each of the elements contributes to the direction of the process. The process of knowledge production is continually performed and open-ended. It is characterized by its instability and its lack of temporal constancy. In this sense I understand this thesis as contributing to an academic discussion about the enactment of historical knowledge in the classroom.

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Appendix – Ethics Clearance

Dear Prof Neumann and Ms Raasch,

SUHREC Project 2009/217 Teenagers' Concepts of Historical Justice
Prof K Neumann, FLSS; Ms J Raasch, Prof J Thomas
Approved Duration to 31/12/2011

I write to confirm standard on-going ethics clearance in line with conditions here outlined.

- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the National Statement on Ethical Conduct in Human Research and with respect to secure data use, retention and disposal.

- The named Swinburne Chief Investigator/Supervisor remains responsible for any personnel appointed to or associated with the project being made aware of ethics clearance conditions, including research and consent procedures or instruments approved. Any change in chief investigator/supervisor requires timely notification and SUHREC endorsement.

- The above project has been approved as submitted for ethical review by or on behalf of SUHREC. Amendments to approved procedures or instruments ordinarily require prior ethical appraisal/ clearance. SUHREC must be notified immediately or as soon as possible thereafter of (a) any serious or unexpected adverse effects on participants and any redress measures; (b) proposed changes in protocols; and (c) unforeseen events which might affect continued ethical acceptability of the project.

- At a minimum, an annual report on the progress of the project is required as well as at the conclusion (or abandonment) of the project.

- A duly authorised external or internal audit of the project may be undertaken at any time.

Please contact me if you have any queries about on-going ethics clearance. The SUHREC project number should be quoted in communication.

Best wishes for the continuing project.

Yours sincerely,

Ann Gaeth

Dear Julian and Josefine,

SUHREC Project 2009/217 Teenagers' Concepts of Historical Justice
Prof J Thomas, FLSS; Ms J Raasch, Dr Vivienne Waller
Approved Duration to 31/12/2011 [Modified November 2011]

 I refer to your email of 16 November 2011 in which you requested to change your supervisor as approved by Prof Pam Green, Director of Graduate Studies. Your request was put to a delegate(s) of SUHREC.

I am pleased to advise that, as submitted to date, the modified project/protocol may continue in line with standard ethics clearance conditions previously communicated and copied below.

Please contact me if you have any queries about on-going ethics clearance, citing the SUHREC project number. Copies of clearance emails should be retained as part of project record-keeping.

As before, best wishes for the project.

Ann Gaeth
for Keith Wilkins
Secretary, SUHREC

All conditions pertaining to the clearance were properly met. A final report has been submitted.

List of publications produced as a result of the PhD project

Raasch, Josefine. "Murat and Nevin and the Divided Past." *Agora – History Teachers' Association of Victoria* 46, no 1 (2011): 33-37.

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