

Being Close to a Cow

– Experiences of Learning and Farming among Students
at an Agricultural Program

Ida Säfström



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Abstract

The purpose of this thesis is to explore learning in farming environments from a perspective of bodily experience. The aim is to create understanding about the role of bodily experience in learning the craft of farming. I want to shed light on what kind of understandings that being mentally and physically close to animals, things and people involved in farming environments can generate. The study is based on participant observation among eleven high school students in their second year at an Agricultural program in Rättvik, Sweden. The students' statements, stories and daily practices, combined with my own experiences of being there, both as a visitor and as a participant, form the basis of the result. It shows how shared bodily experience can generate a sense of belonging and togetherness. It shows how bodily experience in farming environments, which are related to what you have chosen to learn, creates feelings of doing something that matters and is meaningful. The teachers and students I met turn their school into a place where practice and bodily experience is allowed to play a vital part in processes of learning. This thesis also illuminate how closeness to animals, people and things involved in learning processes in farming environments can enhance feelings of care, responsibility and understandings of what it is like to be *with* the world.

Key Words: learning, bodily experience, closeness, farming, students, non-humans

Sammanfattning

Syftet med den här uppsatsen är att utforska lärande i lantbruksmiljöer från ett perspektiv av kroppsliga upplevelser. Målet är att skapa förståelse kring betydelsen av kroppsliga upplevelser i lärandeprocesser relaterade till lantbruk. Jag vill belysa vilka typer av förståelser som mental och fysisk närhet till djur, ting och personer involverade i lantbruksmiljöer kan leda till. Studien bygger på deltagande observation bland elva gymnasieelever i årskurs två på ett naturbruksprogram i Rättvik, Sverige. Elevernas uttalanden, berättelser och dagliga praktiker tillsammans med mina egna upplevelser av att vara bland dem, både som besökare och deltagare, utgör studiens resultat. Det visar hur delade kroppsliga upplevelser kan ge upphov till känslor av tillhörighet och gemenskap. Det visar hur kroppsliga upplevelser i lantbruksmiljöer och situationer, som är relaterade till du valt att lära, skapar känslor av att göra något som har betydelse och är meningsfullt. Beskrivningar av detta blir ett sätt att lyfta fram hur de lärare och elever jag mötte gör sin skola till en plats där praktik och kroppsliga upplevelser tillåts spela en viktig roll i processer av lärande. Det visar också hur närhet till djur, personer och ting i lärandeprocesser i lantbruksmiljöer kan stärka känslor av omtanke, ansvar och skapa förståelse för vad det innebär att vara *med* världen.

Nyckelord: *lärande, kroppslig upplevelse, närhet, elever, icke-människor*

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Introduction & Background

Distant Ways of Living

My great grandmother was eleven years old when she in the beginning of the 1900s spent her first summer at the hill farm (fäbodvall in Swedish). She brought the family's five cows to fresh grazing land surrounding a cabin in the woods around 15 kilometers from her home village Gråda in the region Dalarna. Apart from her neighbor Liss-Anna, a girl the same age, she alone was responsible to care for the animals. Both Liss-Anna and my great grandmother Brita came back to the hill farm each summer until 1963. My mother and grandmother got to experience the same atmosphere, filled with animals and bugs, cooking, singing and working, in other words "the best time of the year", according to Brita. Knowledge has been passed on between generations at the hill farm, and learning has been a matter of active participation in daily routines. I have been to this place to mow the lawns with scythes together with relatives, and we use to make the beds and clean the cabin each spring as to prepare for the arrival of the farm girls and their four-footed friends. But nobody uses the beds or cooks on the stove anymore. The place seems almost like a museum. Another hill farm within a walking distance from ours still keep animals for some time each summer. The sound of cow bells among the trees and small houses and the taste of soft cheese prepared in a cauldron out in the open makes it possible to imagine what it was like to be in the area a hundred years ago. However, being there makes me feel like someone observing an ancient way of living from a distance.

Perhaps I have now lured you to think that this thesis will be about hill farming life. It is not, but it will circle around two themes that were as central at the hill farm as it will be in the following text. It is about farming and about learning. I will soon introduce you to another setting where learning and farming is essential; the high school Stiernhööksgymnasiet in Rättvik, Dalarna. That is where the field study which forms the basis for this thesis takes place. Among eleven students studying in their second year at the Agricultural Program at this school, I spent three weeks taking part in their daily activities. I experienced what learning about farming, through bodily experience, can be like. It was a trip through and between classrooms, barns, meadows, apartments, the canteen and everything it entails: students, teachers, cows, pigs, tractors, tools, smells and sounds. Before I continue with descriptions of these environments and experiences, I will set a background by briefly looking at how both farming- and education systems in Sweden have developed from around the 1800s and forward.

Distance in Food Systems

Between 1867 and 2009, the number of cows in the district of Dalarna (decreased from 44 600 to 12 000 animals (Jordbruksverket 2018)). Perhaps it is not strange that I haven't had as many encounters with cows as my great grandmother. In the 1800s, cows were practically held by everyone in the Swedish countryside. It did not matter if you were a landlord, shoemaker or industrial worker; to have at least one or two cows was given, to secure the household's basic needs (Israelsson 2006). The most common way to meet a household's basic need today is to visit a supermarket and pick and choose whatever you prefer to eat. It might be an onion from nearest village or an avocado from Chile. A walk through a supermarket is a walk through a world full of options. The industrialization of farming and the development of a global food market has led to the possibility to sell and buy food products which are shipped across the world. This has led to physical distances in food systems, but also to mental ones: many people have lost a connection to farming and an understanding of where the food they eat originally comes from or how it was produced. (Clapp 2016). A discussion of what this means

is possibly more relevant than ever, since climate change, pollution, poverty and hunger – closely related to food production, are challenges articulated in both global and local political agendas (see FAO 2019 for publications concerning agriculture and climate change, social development, food safety and health). What is described as a mental distance in food systems, or a “gap of knowledge” (Clapp 2016:17), suggest that it is not only food systems that have changed, but also our ways of gaining knowledge.

Distance in Education Systems

Western traditional education generally takes place in classrooms, often “cut off” from the rest of the local community and people outside the school. In a traditional classroom, we learn from teachers by reading, listening watching and writing, and not to any larger extent by experiences in situations which mirrors practical life outside the school (Dewey 1938). The organization of the school system is more or less based on an idea that knowledge can be decontextualized, which create a distance between knowledge provided by the school environment and everyday experiences of individuals, or a distance between understood knowledge provided by instruction and individuals practical, active knowledge (Lave & Wenger 1991). Studies from different parts of the world show how young people (from around four to nineteen-year-olds) has limited or low understanding of how food is produced and where it comes from (see Dillon et al. 2011 for an overview). In relation to this it is often emphasized how direct experience in farming activities like animal husbandry and gardening can increase young people’s understandings of food production and relations between nature, people and farming (ibid.). One of the three main strategical goals in The Swedish Food Strategy (published in January 2017) concern “Knowledge and Innovation”. It states that the public sector should see to that the knowledge level, in general as well as among children and young, when it comes to food production, food and meals increases, this should preferably be realized in cooperation with local actors in food supply chains. That "awareness about how the most efficient learning takes place is central to the pedagogical shape of efforts to develop competence”, is also stressed. (Prop 2016/17:104, p.83, my own translations from Swedish).

Based on my own interest in farming, I set out to do research with the original idea that food would be the main theme. I ended up describing and discussing processes of learning. And in a way (as I have already implied), the two themes are intervined. A major change in the Swedish education system was due to changes in the ways we produce food. Industrialization created demand for new kinds of knowledges and at the turn of the twentieth century, public school and a common school for children from all classes of society was emphasized as important to meet demands from industries and a developing labor market. From the 1920s and onwards education was officially (in policy documents and political speeches for example) expressed as an important tool in the construction of a democratic society; an instrument for social justice and the building of “folkhemmet” (the people’s home), which the prime minister Per Albin Hansson used as a metaphor for the nation as a home – equal, just and humane. From that point and onwards education continued to be central in the discourse of welfare; it was a way to shape competence and to increase equality by giving young people the same educational opportunities (Lundgren 2012).

From the 1980s until today, there has been a change in the education systems in line with liberal politics, a shift from focus on teaching specific knowledges to the development of abilities (Nylund 2013). The curriculum GY11, based on a proposition and decision made by the center-right government in 2009, mirrors a movement from democratic aspects of education to more emphasis on education as a way to shape employable people, flexible in relation to a constantly changing market

(Ledman 2014). The focus thus shifts from the individual and his/her capacity building to a focus on the needs of the labor market.

This brief description of some changes of the educational system in Sweden shows how it has gone hand in hand with other societal changes as industrialization, and how it has been (and is) shaped in relation to political decision and goals (Lundgren 2012). This thesis will provide a snap shot from an actual situation within the current system; it is an example of how learning can be experienced by a group of young people at a certain program in a certain school. When I read through the curriculum Lpf 94, which contain values and goals that the current high school system should build upon, I notice how it emphasizes the individual students' development into becoming responsible for their own partaking in work and social life; their ability to identify with and understand other people's best interest; and to be able to show respect for and to care for the local environment. It is also stated that it is the responsibility of the school to provide a learning environment that will help the students to develop their capacities to see connections and relations in their everyday world.

Closeness in an Education System

At the high school Stiernhööksgymnasiet in Rättvik, you can attend the Agricultural program¹ for three years. The school's croplands and herds of animals supply the own canteen with beef, pork, lamb, potatoes, oats and rapeseed oil. The school deliver food products to other communal kitchens such as elderly homes and preschools in the village. (Stiernhooksgymnasiet.se). I made a visit to the school in November 2017, together with four other agronomy students from the Swedish University of Agriculture, to investigate the possibilities to establish egg production at the school. The final report was supposed to involve a communicative aspect so we decided to sit down in small groups and talk to the students about what it is like to study at an Agricultural program. Among many things, they told us that "you feel like home" in the barns, and they agreed that being among the cows makes you feel calm and appreciated. The descriptions of their school, themselves and daily activities made an impression on me. When it was time to write a thesis, I decided that I wanted to further explore the same setting, where there is both a physical and a mental closeness between youths, animals, crops, machines, tools and other things that a farming environment or situation can entail. I returned to Stiernhööksgymnasiet and the same class of eleven students in January, 2019. With their permission and engagement, I spent three weeks pretending as best I could that I was one of the them. The basis for this master thesis are the students' stories and actions, as well as my own experiences of both being a visitor and a participant in their daily practices. The result reflects the shared moments, experiences and activities we carried out together in classrooms, machine halls, barns, apartments and roads between these places. With "we" I mean myself, the students, teachers, staff, farmhands, animals as well as tools, machines and other things in the surroundings. Among many other things, we did calculations of nitrogen doses, went skiing, prepared for a test in business economics, milked cows, cleaned the barns, fed pigs, drove tractors, had lunch and coffee breaks. I wanted to understand what it is like to learn in an environment where you pick up potatoes that your friend will eat, or care for a cow that will end up on your own lunch plate. I wanted to explore what being close to animals, people and things involved in farming practices can be like, from a perspective of bodily experience and learning. What is it like to drive a tractor, to use a chain saw or to put on boots and an overall before you enter a barn? What is it like to be close to a cow?

¹ "Naturbruksprogrammet" in Swedish, often called the Natural Resource Program in English but I chose to call it the Agricultural program in this thesis since I think it reflect the Swedish term "naturbruk" better.

An Ethnographic Case Study

I believe it is the ordinary, everyday practices that give clues to what is meaningful and makes sense in people's lives. Both joys and struggles reflect reproduced as well as changed patterns of daily routines; familiar turns and daring maneuvers. Anthropological phenomenology has inspired this research process by reminding me of the importance to see things as they are, without hasty conclusions that sometimes may be considered intellectual (Jackson 1996). To be in the place you want to explore is crucial to be able to create understanding and descriptions based on one's own experiences (Frykman & Gilje 2003). To get a sense of what it is like to be close to a cow, I had to come close to a cow. This is a way to approach research in the place and among the people and things you want to understand more about; to focus on a certain setting and study how something makes sense for participants in a local and practical context (Seale et al 2004). One may question if it is possible to describe "things as they are", or if reality is not always perceived and described from different perspectives; that experiences are colored by assumptions of the past and the future (Frykman 1990). This thesis will reflect reality as I am able to grasp it based on my knowledges and ideas, and it is a reflection which is shaped by the certain methods and theoretical tools that I have chosen to use (Öhlander 2011). I have a different background than the students and they have different backgrounds from each other, so how will I be able to understand their experiences? When one participates bodily in an activity, it is possible to grasp the sense of it and get an insight to what it is like (Jackson 1983). I did my best to participate as if I was one of the students in all everyday activities; from lectures and tasks in classrooms to practice in barns and tractors. The aim with the field work was both to come close - to get familiar with the studied world, and to keep a distance - to be able to shed light on ordinary, taken for granted practices (ibid.). By tending to my own senses and experiences I came closer to an understanding of how certain practices are meaningful to the students. Meaning in this case is something I consider as traceable in what is accomplished by action (Jackson 1996). By for example taking part in tractor driving, it was possible to understand how it becomes meaningful when it generates a sense of belonging and a feeling of being capable of a certain practice. I also consider meaning as what the students themselves describe as meaningful (Latour 2005). By being in different parts of the school, I was able to experience moments where humans, students, teachers, staff, as well as non-humans, animals, tools and machines assemble in constitution of the social (ibid.). I mean that connections, relations and interaction temporarily consist between both humans, animals and things in moments of everyday life. What takes place is something shaped by human actions, but can also be influenced by the behavior of a cow or the appearance of a chainsaw. This thesis result can be called an ethnography; a thick description of a certain setting that provide insight into people's everyday lives (Van Maanen 2011). It allows me to bring attention to aspects of human experience, emotions and effects that would go unnoticed in other kinds of scholarly studies (Dalidowicz 2015). And it makes it possible to show how teachers and students at the Agricultural program at Stiernhööksgymnasiet makes the school a place where learning through practice and bodily experience is allowed to play a vital part. Stories of farm activities in schools can work as basis for reflection on what we value in both our education systems and in our communities (Kirschenmann 2011).

Outline of the Thesis

I have been inspired by ethnographic writings (for example Jackson 1995), where detailed descriptions are presented before discussions based on theory or other research are brought in towards the end of a chapter or a whole book. In that way, I want to let the reader have the possibility to make own interpretations before I present mine. Discussion is however combined with empirical material throughout the three main chapters which make up this thesis' result; "moments of togetherness",

“embodied and situated learning” and “being with the world”. It can be seen as an on-going conversation between empirical findings and scholarly theory (Jørgensen & Phillips 2002). Before the result I have formulated the purpose of the thesis and two research questions. There will also be a presentation of the three analytical concepts “togetherness”, “embodied and situated learning” and “non-human agency”, which I have found most useful to highlight different aspects of the result. After the presentation of the analytical tools follows a descriptions and motivation of the methods I have used, and a closer presentation of my informants, the students in second year at the Agricultural program on Stiernhööksgymnasiet. From now on, I will refer to the group of eleven students as NBL17, which is the short title for their class and program that is used at the school.

Purpose and Research Questions

The purpose of this thesis is to explore learning in farming environments from a perspective of bodily experience. I will study this among eleven students at the Agricultural program in second year at Stiernhööksgymnasiet, Rättvik, during three weeks in January 2019. The aim of the research is to understand the role of bodily experience in learning the craft of farming and I want the students’ statements, stories, daily practices as well as my own experience of being among them, to work as a basis for a discussion of what learning through bodily experience in farming environments at their school can be like. The purpose is thus also to shed light on common denominators when it comes to what kind of understandings that mental and physical closeness to animals, things and people involved in farming environments and situations can generate among the students.

Research questions:

- How does physical and mental closeness to people, animals and things² in farming environments shape the students’ experiences of learning?
- What kind of understandings do learning through bodily experience and closeness to people, animals and things in farming environments create?

² When I use the term mental closeness to a thing, I mean that things can influence human’s emotional experiences in everyday life.

Analytical Tools

Togetherness

A sense of togetherness can be of importance both in daily routines and in more extraordinary events, regardless, it is something experienced in a moment. We may describe it as more or less permanent; like if people can be entities knit together by invisible, fixed strings. But togetherness is often something more fluent; a temporary community, unique in its moment. Through shared embodied experiences we are able to relate to others; “we recognize other bodies as the embodiment of minds and selves like our own” (Sokolowski 2000:153) and we realize that phenomena and things give perceptions not only to ourselves but to “many viewers, hearers, tasters, smellers and touchers” (ibid.). The perceived world is then “not only *my* world, but the one in which I see other people take shape, for their behavior equally aims at this world” (Merleau-Ponty 1962:338). Embodied being in a specific time and place and sharing experience can create shared identity and meaning. I define togetherness as a sense of belonging built on this (Povrzanovik Frykman 2003). The concept of togetherness will help me introduce the central figures of this thesis: the eleven students in NBL17. It will be mirrored in how the students express shared identity by describing themselves as a group, for example by saying that they are “close knit” and “accept each other as they are”. It is also reflected in ordinary daily practices as walking together and joining in laughter. I experienced a sense of togetherness when my presence was acknowledged by the students in different ways, for example when they waited for me after a lesson.

Our sense of being in the world can be said to consist “in a dual sense; sharing identity with others and standing out from others” (Jackson 2012:18). As well as the students mirror plurality and individual differences, there are common elements among them, and these are usually articulated in contrast to others, for example people studying a different program at the same school. It is often in comparison with others that it becomes clear how we view ourselves (Jackson 2007). The agricultural students shared identity become clearer in relation to others, for example when they choose to take on certain attributes, like working clothes and smells, that others at the school don't.

The concept of togetherness is mainly used in chapter one, but it can be sensed in other parts of the thesis where I describe more in detail the practices we carried out at the school. For example when we drove tractors or cared for animals and I came to feel more as one in the group. A sense of togetherness can be traced in moments like these, of shared bodily experience. It is a curious spectacle of smells, sights, movements, feelings and beings. It is a tool which I find useful to be able to highlight how both bodily experience and a sense of belonging or “becoming a member” of a practice is important in situations of learning and being (Lave & Wenger 1991). The definition refers to experience among humans, but in relation to this, place and non-human things like animals and machines become important. These aspects will be further explored by the concepts of embodied and situated learning, and non-human agency.

Embodied and Situated Learning

The theoretical perspectives on what learning is and how research around the subject should be carried out are many. Four traditions have had a large influence during the 1900s and the beginning of the 2000s, these are behaviorism, cognitivism, pragmatism and a socio-cultural perspective. The behavioristic perspective focus on the possibilities to strengthen desirable behaviors in processes of learning where goals are systematically tested. A cognitive perspective criticizes the strong focus of

behavior and not taking people's ways of forming concepts, solve problems and memorizing into account. A field within cognitivism, development psychology, rejects the thought of people's inner as mirrors of the surrounding world, and suggest that understanding of the same depend on active construction of it. Neuroscience influence on cognitivism did however lead to questions about what happens in the brain when we learn. A third influential and reason to re-orientation of theoretical perspective on learning have been pragmatism, which focus on how knowledge function for people in everyday life. This perspective highlight relations between individual, culture, society and language as vital in learning processes and teaching. It started to be combined with a socio-cultural perspective in the 1990s, and resulted in for example emphasize individuals qualitatively different ways to learn and understand. In general, one can say that there has been a movement from focus on learning as dependent on the individuals mind and cognitive skills, to focus on learning as a socio-cultural process, shaped by relations, community and culture. (Håkanson & Sundberg 2012).

A general perception of learning is that it is a way to incorporate knowledge into our minds, thought is privileged over body (Cox 2018). Traditional schooling circles around a one-way transfer of information from teacher to students which takes place in classrooms, behind desks, by reading, listening or writing (Dewey 1938). This thesis is based on another perspective on learning, where knowledge is a way of "accomplishing things in the world rather than intellectually possessing it" (Jackson 1996:8). The basic idea is that it is first and foremost the body which knows about the world; it is with our bodies and senses that we orient ourselves in our surroundings. Learning then happens when one's body aim at things through it and "respond to their calls" (Merleau-Ponty 1962:139). The body thus can be seen as something we are rather than something we have (Cox 2018). This is not to deny that we are thinking creatures or that we can feel disembodied, but a way to look at learning as primarily a matter of practice (Jackson 1996). It is not to say that theoretical knowledge does not matter, just a way to put bodily being as the basis for thinking and development of theory (Østergaard et al 2010). A written instruction would then be the grandchild rather than the mother of a practice. Silence, intellect and reflections comes after embodied experiences and actions – not the other way around (Dewey 1938). The concept which I choose to call embodied and situated learning is a key in this thesis since it makes it possible to explore practical learning closely and in relation to the environment where it takes place. It is a tool that can illuminate processes of learning in bodily movements and actions, where accomplishments show ways to learn which are meaningful to certain people, in certain times and places. From this perspective, bodily experiences are vital in processes of learning, and I have already suggested that nothing is experienced in a vacuum (Dewey 1938).

"To be at all – to exist in any way – is to be somewhere, and to be somewhere is to be in some kind of place. Place is a requisite as the air we breathe, the ground on which we stand, the bodies we have. We are surrounded by places. We walk over and through them. We live in places, relate to others in them, die in them. Nothing we do is unplaced."
(Casey 2013:10).

The primary site of our engagement with a place, with the world, is the body (Ram 2015). Sensation and experience represents the lived relation and contact between body and world (Marshall 2008), and processes of learning takes place with the world where agent and environment mutually constitute each other (Lave & Wenger 1991). This interplay can contain everything from tools and materials to paths, boundaries and weather (Dalidowski 2015). The result of this thesis will mirror this through descriptions of what it can be like to study the theory of driving in a classroom, compared to what it is like to leave benches and papers behind and spend the afternoon behind steering wheels and practice

actual driving. It is reflected in stories by the students, of how it makes sense to them to learn in “real-life situations” - when they experience that they do “something useful”. Like taking part in spring and autumn tillage; where activities contain driving to actual fields and croplands where you sow or harrow. Or like taking part in the daily routines of tending to animals. By learning through practice, we gain an understanding of how parts belong to the whole (Seamon 2012). I see it as a way for humans to learn about their own being in a larger context, constituted by other creatures and things. That will be reflected in my own and the students’ descriptions of what it can be like to learn in barns, tractors or fields; places where you experience responses to your own actions with your own body. Sometimes immediate: like when you “hear” the silence from pigs that have been fed, or when you see the curious turning of a cow’s ears as you come close. Sometimes the result is more indirect or long-term: the landscape change as you sow crops or clear arable land from bushes and trees, or the potatoes you planted in spring are served on a harvest party.

Agency of Non-humans

Until now I have focused on living, learning and meaning as practiced; something accomplished and bodily experienced. This contains an interplay between people and surroundings, as I have stated before. I want to take an even closer look into this relation of people and surroundings; or rather humans and non-humans, or things. Things often seem to come alive by the touch of human hands (Frykman & Gilje 2003), as we pick up a hammer or place ourselves in a car. But are humans the only ones who awaken things, or can it be the other way around too? If we listen to what people say about their own actions and the unpredictable actions of things; ‘follow the actors themselves’ (Latour 2005:61), we realize that things can resist or cooperate, destroy or lighten up your day:

Things might authorize, allow, afford, encourage, permit, suggest, influence, block, render possible, forbid, and so on. ANT³ is not the empty claim that objects do things ‘instead’ of human actors: it simply says that no science of the social can even begin if the question of who and what participates in the action is not first of all thoroughly explored, even though it might mean letting elements in which, for lack of a better term, we would call non-humans. (Latour 2005:72).

Situations where an objects’ agency is made visible can for example be when something unexpected or unusual happens. Then a complete “silent” object become a mediator which force people to struggle or carry on in a different way. (Latour 2005). In Stiernhööksgymnasiet’s barn, the milking procedure usually works out fine and the agency of a cow or a milking machine is not evident, until a cow refuses to walk into the milking machine. When that happens, you are forced to find ways of coping, you need to push and hustle, wait and then be alert. How non-human things influence everyday life is also mirrored in how you need to treat machines to make them work the way you want them to; hold the chain saw in a certain way, use a certain strength at the staring rope, or “drive with feeling”. This show how agency can be seen as not only a human attribute, but something we can ascribe to anything from animals, plants and microorganisms to mountains, vehicles and tools; everything which is part of what is taking place in a moment or a process, has an effect, an influence, *is there*, is part of the social. Agency is about doing, making some difference in a situation (Latour 2005). If we listen carefully and look closely, we can sense things as vital parts of what we usually define as something ongoing among humans. A cow can be the reason you get up in the morning, driving a Massey Ferguson can be experienced as either problematic or as “just magic”. We can use tricks, as theory, to make things talk.

³ ANT is the abbreviation for Actor Network Theory. I will not discuss ANT explicitly in this thesis but I use parts of the theoretical and methodological approach.

That is, “to offer descriptions of actors themselves, and write about what they are making others – humans- or non-humans- do” (Latour 2005 [see Acrich 1992 and Acrich & Latour 1992]).

Research Methods

Walking in Someone Else’s Rubber Boots

Stories and statements generated through interviews may reveal what’s meaningful in people’s lives, but they may also be constructed versions of reality rather than direct reflections of it (Jackson 1996). I have suggested it before but I think it deserves to be repeated in this chapter about research methods: to be able to understand as much as possible about other peoples’ everyday lives we need to expose ourselves to the same situations and experiences as they do (Frykman & Gilje 2003). I went to Stiernhööksgymnasiet with the perspective that knowledge of the body is equally important in everyday life as knowledge of the mind, and that meaning therefore does come to light not only in words, but also through action (Jackson 1996). My main method during the fieldwork was therefore to participate, to turn to practice and see and feel with my own body and senses what happens in a setting, instead of relying on spoken explanations. I attended classes and participated in all daily activities carried out at the school from morning, to lunch, to afternoon. Observation and participation gives a direct and close insight into what and how people carry out and make sense of every day practices (Bryman 2012). I would like to emphasize the participation part in this research process since I was in the field primarily to share experiences, and to share experience is to share life as it is lived, sensory (Hansen 2003). Sight, hearing, touch, scent and taste became vital as tools to grasp what being in a certain place and time is like (Swedberg 2011 [see Simmel 1907/1997]). To attend to my own senses and feelings was necessary since I wanted to write detailed descriptions based on my own experiences of being at Stiernhööksgymnasiet; it was key to be able to describe and interpret what happened in the field (Hansen 2003). Tools to help me document the happenings and experiences were a dictation machine and a field diary. I wrote in the diary as soon as I had the opportunity, often in the afternoons or early evenings when my memories from the day were fresh. I used recordings (often noisy but still useful, since I kept the recorder in a pocket while we moved around) to refresh my memory of the environments (for example sounds) and activities we went through.

To be there and experience the same things as the students was also a way towards emphatic understanding (Povrzanovik Frykman 2003). Even though we have different backgrounds and may perceive things in different ways, practical mimesis can make us discover common grounds, reciprocity of viewpoints and insight about what it is like to carry out different activities (Jackson 1983). One of the main aims with this thesis is to explore and create understanding of learning from others’ perspectives and emphatic imagination then become vital. During my stay at Stiernhööksgymnasiet, I literally walked in the same clothes and shoes as many other students have. There were boots and blue cotton overalls to borrow in a barrack outside the barn. I stood out from the rest and you could tell that I was a visitor since I wore that overall. Most of the staff and students namely had their own working clothes; black or dark green pants, sweatshirts and perhaps a headband or a beany. But we were all wearing rubber boots, and we were all dressed to spend hours among the animals – prepared to take on dung, dirt, milk or even blood on our bodies. In that way, I came to feel as a participant. Until I had trouble milking a cow by hand, and it was obvious again that I was a stranger in that environment. In moments like these, it becomes clear how ethnographic research can generate insight into what it means to be both a visitor and a member, an observer and a legitimate participant in a certain context (Seale et al 2004). It is a matter of coming close enough to feel as part

of an event, and at the same time being able to take a step back and discover what's extraordinary about the taken for granted in everyday life. My time spent at the school gave an insight into other's learning processes, but it also gave me new knowledges and experiences. It has for example resulted in a newfound curiosity about tractors; machines that I have rarely noticed before now catches my eye as soon as I sense one.

In my collection and analysis of data I have been guided by questions arisen from my everyday interactions with the students: How does a group of students at the Agricultural program at Stiernhööksgymnasiet carry out their daily activities in classrooms, barns, machine halls and tractors? What is it like to be an Agricultural student at Stiernhööksgymnasiet? What is it like to drive a tractor, use a chain saw and milk a cow by hand? What is it like to put on rubber boots, an overall and walk in to a barn at seven in the morning? What is it like to change clothes after a morning in the barn and walk in to the canteen for lunch?

Matters of Concern in Statements and Stories

As an additional method to participation, I carried out focus group discussions with the students. People's stories generate information about how things are perceived and experienced (Silverman 2015). They also indicate what's important and meaningful in peoples' everyday lives. Whether stories are told by an individual or in an interactive setting with other people, they can be constructions made to make sense and shape identities (Arora-Jonson 2005). I wanted to let important themes emerge during the process of collection and analysis of empirical material (Cresswell 2014). The aim was to let the students, my respondents, to be the ones to decide what was important to discuss, to let them "lead the way" and decide what matters of concern are (Latour 2004). Therefore, I found it suitable to ask for the opportunity to sit down and talk in more formal interview-like settings after I had spent some days participating in the students' daily activities. The participation meant that I was busy and in movement among machines, tools and animals most of the time. Focus group discussions was an opportunity for me to record statements and listen more carefully to how the students described their lives at the school. It was also a way to learn more about their backgrounds, future dreams and what they do during periods of the year when I cannot be there, such as spring and autumn tillage. Individual interviews can encourage respondent to speak freely of what is important to them (Bergelin et al. 2008). I did however arrange focus group discussion since they can generate more discussed and nuanced pictures of reality as well as collective identities and opinions. In a group discussion, people have the opportunity to build on each other's expressions and arguments, question statements and reach new conclusions (Wibeck 2012). This happened in the focus group discussions as the students agreed, disagreed and presented different versions of what it can be like to for example be a student at their program, drive a tractor or have practice in the barns. We talked, in four different groups, while sitting around kitchen tables in their apartments, in the school cafeteria or in sofas in a common room close to the machine halls. It turned out differently in every group when it came to length (from 28 to 48 minutes), how and what we talked about. Focus group interviews are dynamic and complex, but I prefer to look at the complexities as a chance to embrace nuances and particularities of everyday life in a specific setting.

Writing a "Picture"

A written glimpse of a three week stay does not make justice to what happens there from week to week and month to month. Things may have been ongoing when I arrived and will continue when I am no longer there, I may have misunderstood things and my intentions may have been diffuse to the people I met. I cannot say much about what it is like when the students plant potatoes in spring, or

when they pick them up full grown and serve them at the harvest party half a year later. What I can do is to retell what is temporary, what happened when I was there, and I would argue that that is worth something still; to articulate taken for granted practices in a both complex and simple local context, which can say something of a larger social picture (Sharrock & Button 1991). My intention with this thesis is to present, or actually to write, a “picture”. I imagine that the written text to me is what a painting would be if I was painting. I mean that the result is based on and shaped by my choices, interpretations, interest and even style of writing (Van Maanen 2011). But this need not be an obstacle or a risk, as long as it is transparent to you as a reader where I draw my own conclusions and when I am inspired by others (ibid.). I let the students (and other actors which I will say more about later) speak before I start to use theoretical tools to highlight certain aspects of expressions or actions. As someone doing research I see it as a responsibility to keep an open mind and not assume things before I explore a situation, to let people speak for themselves through what they do (Jackson 1996). Theory should suit the data and not the other way around (Swedberg 2011). The same data can of course be theorized in multiple ways though, and my earlier knowledges, choices of methods and theoretical concepts shapes the result (Öhlander 2011). It is however the students, animals, teachers, machines, tools and surroundings which provide the colors with which I am writing this particular ‘picture’.

Ethical Reflection

Informed consent among the ones being part of a research process is important (Bryman 2012). Research can only (by law in Sweden, since 2004) be carried out if a participant has given consent after he or she has been thoroughly informed about the research. This information should for example include the purpose, a general plan and the methods of the research process (CODEX 2018). Before I came to the school to do research I met the eleven students in NBL17, at their school, and explained to them that my intention with this study is to describe what studying at an agricultural program can be like, and explore learning thorough practice in a farming environment. I mentioned the curious fact that I am becoming an agronomist, who has no wider experience of practical farming. I asked what they thought about the idea and if it would be alright if I came back to join them for a time. The eleven students gave their consent for me to use their names, stories and our joint experiences as basis for this thesis. They welcomed me to do my field study by taking part in their daily activities for three weeks and arrange focus group discussions during this period.

A Presentation of the Students

I am using the students’ actual names or nicknames, i.e. what they most commonly call each other. They are all turning 18 in 2019. Some of them grew up on farms which for example produce milk or grow potatoes. Others have relatives, like grandparents, who have kept animals and small scale crop production. All of them have had or has experience of farming from before, but to different extents. Some had never driven a tractor and some had practiced quite a lot before they started the Agricultural Program at Stiernhööksgymnasiet.

Adam grew up and lives on a farm which grow potatoes. He has thought about the opportunities to take over his uncle’s farm where they keep cattle, but would like to try different things and workplaces before settling somewhere.

Amanda moved to a farm with her family when she was around ten years old. They have sheep, horses, cats and dogs. She first thought that she would study horses or music, but realized during a visit to Stiernhööksgymnasiet (when the cows were let out in spring) that it is a place where she

belongs. She hopes to have cows in the future, perhaps even rent or buy two neighbor's farm land. She likes to spend her days among her own animals or the animals at school, loves to listen to music, sing and spend time with her friends.

Bulten's grandad and generations before him were farmers but in a small scale, "moonlight farmers" as we sometime say in Sweden, which means a hobby farmer or someone who spend spare time on farming. When he was young he helped out with picking potatoes, ploughing, driving and enjoyed it a lot. Ever since he was very young he knew he wanted to be a farmer. He would like to buy some land which was owned by the family before, perhaps have animals himself in a small scale but work on a larger farm in some nearby area. He likes to spend time in the forest, go hunting, fishing or drive snow mobile. If he is not busy

Felicia moved to Dalarna from the most Southern region of Sweden, Skåne, before she was about to start fifth grade. She has always liked and spent much time with horses, but found a new interest in motors when she moved to Dalarna. The family thinks she will start some own business one day. She wanted to study music or horses but after a while at the Agricultural program she did not regret the choice, since both students and teacher have come close.

Filip's grandparents are moonlight farmers and have kept cattle. He might want to take over the farm and develop it, but he first wants to work abroad, perhaps in Canada or Australia (not necessarily with farming), before he settles somewhere.

Hampus' family has a farm with around 70 milking cows. He thinks that he probably will work more at home later. A vision or dream about the future is to be able to buy land from a neighbor and extend the farm. He does have a brother with an interest in farming too, so they might be able to manage it together.

Ida's family lives in a place where there is a small barn and farmland, but the land is rented to a neighbor nowadays. They have some cats, rabbits and chickens but she would probably like to keep more animals in the future.

Maja's family did not own a farm but lived in the countryside surrounded by sheep and animals until she was ten. Since they moved to town Maja has longed back and to the countryside and knew she wanted to study agriculture. She loves to spend time with her family, horses and being outdoors, in the woods or near a lake. She is concerned about environmental issues and hopes to become self-sufficient on vegetables and greens in the future.

Malin grew up and lives on a milk farm where she sometimes works during weekends. They have around 130 cows and a newly renovated barn with a milking robot. She and her sister is interested in taking over the farm, which has gone through the family for generations. But she probably wants to experience another workplace and not start to work at home straight after graduation. She enjoys both watching and participating in different sports, like soccer and ice hockey.

Mina's grandparents have kept cows on a small farm, in the beginning milking cows and then suckler cows. Mina was always interested in following around, watching and helping when she was younger and she thinks that is where her interest in farming comes from. Even if she has thought about doing other things she thinks about taking over the grandparents' farm and continue with what they started. Even when a supervisor at her elementary school advised her to study "something better", since she

had good grades, she chose the Agricultural program in high school. She has an interest in painting and has played the transvers flute.

Våfflan lives on a farm which has been passed on through generations. They do not keep animals anymore but manage fields and forestry. She has spent more time with horses than other animals and is not sure that she wants to be a farmer, but has always had an interest for animals, tractors and other machines. She likes to drive “pilsnerbil” – an uglier version of a hot rod, to drive machines and to meet people.

Some of the student’s names figure more often than others in the descriptions. This is partly because the class sometimes divides in two: those who have chosen to focus on entrepreneurship and those who have chosen animal keeping and tractor driving as their orientation. Then I followed the ones in the latter group, since I was particularly interested in experiences of being close to animals. I also followed one or two certain students when we divided in the barns and it came natural that I went with the same person/persons next time, to see and take part in the daily routines in another area of the farm. When it comes to quotes, the mere fact that some people are more keen on talking than others may give the impression that some said more than others. I have tried to make all the students visible, but rather picked stories and quotes in relation to certain themes than in relation to the students as individuals. They have all been equally important contributors to this thesis result though.

Stiernhööksgymnasiet and Dalarna

The first lesson I attended during my visit started with a discussion of what the class wanted to do when they were to get a visit from students from another agricultural high school, situated in a southern part of Sweden. The suggestions reflect some characteristics of the area; visit a factory where they produce crisp bread, visit a hill farm, attend an ice hockey game, go ice fishing, eat coal buns (similar to pancakes but cooked over an open fire with pork before you add lingonberry jam or soft cheese). As it says in Filip’s cap, the region of Dalarna is sometimes pictured as “the heart of Sweden”, and lake Siljan with its surroundings of mostly rural areas, is sometimes referred to as the heart of Dalarna. Stiernhööksgymnasiet is situated just a few 50-100 metres from the beaches of Siljan. Other symbols of the county, like the red paint of Falun (a copper mine town), the Dala horse (a national tourist symbol) and a tradition of wearing traditional folk costumes, has contributed to the fact that Dalarna has been idealised and romanticised, but also pictured as a place where genuine folk tradition is allowed to reiterate and persist (Crang 1999). The landscape consists of forests, lakes, crop- and grazing land as well as mountains and scales in the northwest parts. That enables diverse activities around natural resource management like farming, gardening and fishing. As in other parts of the country, mechanization and rationalization have led to the fact the many people found ways to get an income outside farming during the 1900s. (Larsson 2000). Even if large-scale farms and food production businesses have been established, there is still a sustained and developed culture around small scale farming and processing of food (see dalamat.se).

About 400 students attend 11 different programs at Stiernhööksgymnasiet. Most of the youths stay in shared apartments during the weeks (they are not allowed to stay weekends unless they work, for example shifts in the barn). A large road cuts the school’s premises in two. The apartments and the main building with a lecture hall, auditoriums, reception and a café, are situated on one side of the road, closest to the lake. The main building is where lectures in for example economy and natural science are held. Students studying vocational programs spend most of their time on the other side of

the road. Even here there are there are lecture rooms and a café, but also machine halls, meadows and barns which keep horses, sheep, cows and pigs. In addition to this, the school holds arable land in different areas of the village. The students move around and spend time in many different places at the school every day. It takes around fifteen minutes to walk from the apartments to the largest barn situated in the opposite “corner” of the premises. Their classrooms are manifold and spread out. When I use the word lesson, it can be about listening to lectures or accomplish tasks in a classroom, or it can be about practice in a barn, a tractor or machine hall. Where these lessons takes place become clear in the descriptions making up the result.

Moments of Togetherness

Close Knit

It is minus seventeen degrees and the snow makes creaking sounds under my feet as I hurry towards Stiernhööksgymnasiet’s barn, half past six in the morning. When I reach a tunnel, under the road which cuts the school’s premises in two, I see contours of four people walking slowly towards me. And I wait. It is still dark outside but when they come close I can see that it is Maja, Malin, Amanda and Ida. We say good morning and then we walk in silence, do not say a word, while we pass machine halls, parking spaces, a large horse riding stable, meadows and barns. Then I let the others know that I will hurry ahead, to change clothes before they arrive, and we are about to carry out morning routines among the school’s cows, pigs and sheep.

When it is time for lunch during my first day with NBL17 at Stiernhööksgymnasiet, I am the last one to leave the classroom. After a chat with the teacher Lars I hurry outside to catch up with the students and I am relieved to see that they are walking slowly and turn their heads around to see that I will catch up. Although I know where the canteen is I want to reach it together with the class. Feelings I recognize from beginning of terms at new schools comes back; being afraid of ending up alone. It is obvious that I need guidance at this place, and that is also what I get from the eleven students from Monday to Thursday, from morning to early evening, during three weeks. We walk between classrooms, apartments, the canteen, the main building, the machine halls and barns. They tell me where to go, where to meet them, point me in the right directions and most of the time I simply follow them around. Back and forth, from one side of the big road to the other, then back again. Sometimes we split up, sometimes all of us move together. When we walk between different parts of the school there is time to talk or be silent, to joke or be serious. There is time to measure your strength by carrying someone on your back or jostle until you get off balance on the slippery snow. I feel safe when I walk with them, and worried when I walk ahead or lack behind. When everyone split up in the barns or in the machine halls I do not know where to go. I get relieved each time I see that there is a spot left for me at the lunch table and feel lonely when I enter the crowded canteen by myself as the students go for quick showers between sessions in the barn and lunch.

A morning class during my second week at the school starts by Lars showing us a “group dynamics circle” which reflects development stages within a group that evolves over time. This class apparently stepped in to the “honeymoon phase” earlier than expected and today it is concluded that they probably have reached the last phase early too; “maturity” or “the effective work group” – which is characterized by a strong sense of belonging within the group (Lennéer Axelson & Thylefors 2005). During an interview when we talk about the students’ different opinions when it comes to tractor brands Adam says that the discussions started already the first week and Hampus brings up the circle

again: “It was like Lars explained that with a honeymoon, or what it was. That circle, we were like already half of it, kind of, after only a few weeks.” I ask why they think that is. “Well... I guess it’s that everyone has the same interest”, says Hampus. “Good companionship and that everyone is interested in the same things”, says Filip. At least five of the different teachers I meet, after class or during breaks, agree that the class is special. They, as a group, are described as humble, nice and responsible. “I always walk into the classroom with a smile on my face”, Mikael (teacher) tells me when we discuss my first day at the school. Felicia mentions during an interview that she was a bit unsure if she would continue the program in the beginning (she wished to study music), but adds that she has no regrets now: “because now you have become close. I mean all teachers say that too, that we are like the best class they’ve had, in several years”. “We are just being ourselves and we accept others as they are”, she says. “We are pretty close-knit” says Malin in another focus group, and Ida builds on that:

We are very different, every one of us. In some way that’s okay, to be different. So, it just is like that, we can be with each other anyway. And then someone is like this and someone is like that, well then that’s the way it is, you can hang out anyway, and be nice. So, I guess that’s why everyone get along. (Paus). Cause everyone think like that.

During lunch one day Amanda describes the class as if they are “one person”: while everyone in the class has his or her own personality, they feel like one. Våfflan agrees and repeat this during the focus group we have the same evening. When I ask how they would describe their class she answers “Yes that’s like Amanda said, one person with many personalities.”

The metaphor of a family is used several times to describe themselves as a group. We discuss what it is like to stay at the school during weeknights and Malin says that ”you become like a family in a way”. Våfflan also describe the way they behaved in first year as if they became a family; grumpy old women and men whining on each other when they shared rooms and someone walked in with muddy boots on. In another interview Felicia confirm how living together during weeks and spending much time together makes you “become very close to each other”. Maja says she already has separation anxiety since it is the best class, and best friends, that she has ever had. Bulten says he has not had such a fun class where he has agreed with everyone before. He points out that everyone have goals, similar interests and think it is fun. Våfflan builds on his description and says that she thinks they are likeminded. At some other programs people seem to feel the pressure to wear makeup and look a certain way, but they can show up with dirt on their pants without anyone making judgments. “Yes you dare to be yourself and you dare to look like a hillbilly, or like Barbie if you would like that”, Bulten adds and Våfflan continues:

No one judges you. And that I think has got a lot to do with why we agree, that is because everyone can be themselves. That is why we agree so well I think.

Bulten and Våfflan then describe the hard work and rough conditions that practice at the school sometime contains, for example when you harvest potatoes in hard wind and rain. Then you might through a “moldy potato which smells like hell” on someone sometimes, Våfflan says and we laugh. Bulten says their days contain “A lot of craziness and pranks and nonsense”. This is something Adam highlight too: “If we do something together, at least we have fun. No one is excluded”. “No we are a close group”, Filip ads. “You don’t have that much of a choice”, Adam says and laughs. That the jokes are frequent, both between students and teachers, is something I notice from day one. It makes me feel

a bit stiff, I laugh but I just can't make fun in the same way as they do. How they tease each other suggest that they know each other well. During my second lesson in the barn, while we are shoveling dirt of the floor around the calves, Amanda and Malin starts to talk to each other with a dialect from the most southern part of Sweden. I dare to join in, exaggerating the dialect as much as I can and laughter from the others confirm that I have succeeded. While we walk between the apartments and the barn another day we start to shout things in this accent again. They say I am good at imitating and I feel closer to them than I have before.

A sense of togetherness which arise through bodily experience does not only matter in extreme situations but also in trivial moments of everyday life (Povrzanovik Frykman 2003). As when we imitate a dialect we usually do not speak which make us join in laughter and sense that we can relate to each other in a way. The bodily experience of walking together can also result in "fleeting moments of companionship" (Doughty 2013:142). These moments are not dependent on communication as conversation, but can equally be results of embodied practice; a shared movement and direction through a place (ibid). During walks between different parts of Stiernhööksgymnasiet we share pace, destination and we feel the January cold biting our noses. That we wait for each other and care to not leave anyone behind reflect acknowledgment and acceptance of each other as parts of the group. Belonging is confirmed in this practice, in these moments of togetherness. The students and I were several bodies moving like one, in a line (on narrow paths in the snow between the larger roads) or in a row, silent or talking, calm or exited. In (perhaps a rather philosophical) way, it mirrors how they describe themselves; that they are many and one at the same time. They have their own personalities but similar interests, they have different backgrounds but they have come close and are close knit. For example by the simple fact that they agree that they can't agree on the best tractor brand.

Weirdoes or Heroes

How we view ourselves often become clear when it is articulated in contrast to others (Jackson 1996). I have already implied that this way of shaping shared identity happens at Stiernhööksgymnasiet. When for example Våfflan and Bulten says that no one cares if you show up with dirt on your pants, while people from other programs seem to care about wearing makeup. During my first visit at the school in 2017, we asked how the students think others at the school look at them, and someone said "Well... surely they must think that we are a bit weird". It made me curious and observant to similar expression as I came back in 2019.

During a quick guided tour with one of the students on my first day at the school I learn that the main building is where "the smart ones are". Who? I wonder. Those who study economics or natural science of course. During a lesson in physical education and health, the teacher is lecturing about doping and the session is ended by a general discussion of body ideals. The teacher Maria ask how we think around ideals, if we for example would compare to how we think it is like at other schools. "It depends on what side of the road you are", someone says and others agree. "Yes that's usually talked about yes...", Maria confirm. "Perhaps you don't feel that you must wear the latest jeans or so?" she asks. Several answers with one or two no's and someone adds that "that's probably why we go to the right in the canteen too". To spend most time on the "right side" of the road or to go to the right part of the canteen means that you study a vocational program, like Electricity- and energy, Building or Agriculture. It is mentioned several times and that is what we do, every day. Maria suggests one more comparison; perhaps it is important how to dress a certain way in other high schools or in larger towns like Falun or Stockholm, but "in your group (she turns to the class), it doesn't seem like that, that you

can feel that kind of pressure?” The class agrees and Bulten ask “who has the energy to walk around and care about what someone else is wearing?”

The students tell me that the staff in the kitchen has forbidden them to stumble in with their working clothes on during spring tillage, when they might arrive straight from a tractor or a field. This has led to the fact that some of them eat in their long johns; “no worse than a lady in sport tights” as someone put it. Each time I enter the canteen after having spent the whole morning in the barn I feel both worried and proud that people might sense, from the smell of my hair, that I have been shoveling shit all morning. The students usually go to their apartments to take quick showers and change clothes between a session in the barn and lunch. When I am about to carry out a focus group discussion it is suggested that we meet in an apartment since one of the students has been helping out with hoof trimming during the afternoon and don’t want to sit in the cafeteria smelling of cow shed (“fjös” in Swedish, a dialectic for barn). Even if you change clothes or shower before you enter the canteen or a cafeteria, who you are is traceable in various ways; I think of hearing protection that many students from the vocational programs wear around their necks, there are caps that reveal an interest in tractors, and pins that says “Stick ut!” (stand out), which is the slogan for Naturbruksgymnasiernas riksförening, (the National association for Agricultural colleges in Sweden). Jackets and shirts with logos confirm what program you attend.

‘Us’ become apparent in relation to ‘them’ at Stiernhööksgymnasiet when it comes to what side of the road you spend most time, or what side of the canteen you eat lunch every day. In this way, a sense of shared identity or togetherness is accomplished through bodily experience and practice (Jackson 1996). It is also expressed by how you decide to dress and look. When the students say that they do not judge or care about how other people dress, this might seem passive, but it can also be seen as an active choice. An active choice is also to dress in an appropriate manner for work to be done in fields, machine halls or barns. To show that you are prepared to take on certain smells or dirt, like the Agriculture students do as they work amongst animals, in croplands or machine halls, can create a sense of togetherness and work as an expression of shared identity (Daughty 2013). That an odor is avoided by some people can at the same time generate a we-feeling within a group (Largey & Watson 1972). My own feelings of both pride and anxiety when I enter the canteen with the smell of cows and pigs from my hair mirror the double-sided experience of differing from the majority. You may be seen as weird, compared to other students, as you walk into the canteen in dirty work clothes or long johns, perhaps smelling of barn, but that need not be a problem. The label is used by themselves to their advantage, it can also be seen as a way to assert the right to be different (Barker 1998). It mirrors a culture where attributes simply mark your interest or that it is “the inside” that matters. To care in this way seem to strengthens a sense of togetherness in the class. At the same time as the farming students suggest that they might be seen as weird or not belong to “the smart ones”, it is very clear that they consider their own daily activities to be meaningful and important (which I will come back to later in this thesis). For example, they produce most of the meat and potatoes that is served in the school canteen. This is something which I suspect make you walk in for lunch, wearing long johns or smelling a bit of pig or cow from your hair, with pride, just as I did. I am reminded of a picture I saw at the school’s open house event where Hampus wear a hoodie with this text written on its back: “I’m a farmer, what’s your superpower?”

Learning with Friends and Work Colleagues

The students insist on calling their teachers at the Agricultural program friends or work colleagues, and they do not teach you – they *help* you. They explain how they carry out daily practice together,

sitting side by side in tractors and machines, shoveling dirt side by side in the barns. When we talk about what it was like to drive a tractor for the first time Malin explain how the teachers are considerate if you have no experience of driving from before and continue by describing how she sees them:

“I mean those at the farm (the Agricultural program, “jordbruket”), you have come close to since we have spent much time there. And they become like... I mean they are our friends. They are not our teachers they are our friends. It becomes like that. Because you become so close.”

I ask why she think that is. She and Ida thinks for a moment. “Well we spent a lot of time with them last spring and autumn, that could have affected...” Ida says. “Then depending on what you drive - when I was driving a barrel and I had Alex with me for one whole day and we sat talking about everything between heaven and earth, so... you talk pretty much with each other, about a little of everything” Malin says. That the teachers are seen as friends, or work colleges is confirmed by Bulten, Mina and Våfflan. We talk about what happens during spring tillage and Våfflan starts to compare the difference between high school and elementary school: “I mean everyone help out. I think that’s a big difference, I mean from elementary school, that the teachers and the pupils – it’s like everyone is with everyone and it’s like it’s a completely different community (gemenskap in Swedish). “Yes... those at the farm (the Agricultural program, “jordbruket”), I can’t call them teachers, they are more like friends. I mean it creates some kind of belonging because, like with Lars you can laugh and joke with him and Brygelsson and all of those.”, Bulten says. “I mean you never see them as a teacher. You see them as like a... like a fellow human”, Våfflan says and Bulten answers with “yea, work colleague almost”. When I ask why, they say that it depends on the teacher’s attitudes towards them, that you can laugh and joke, that they give them self-confidence and trust what the students do, for example by letting them handle large and expensive machines. “They encourage us to try”, Mina says. And Bulten tells us about his worries when he was transporting a tank filled with dung through Rättvik, he had a teacher with him but after all, that person would not have time to do anything if he messed up, “there’s no emergency break really, to stop everything”.

Apart from regular, daily activities the students and teachers seem to frequently engage in activities outside the usual schedule. Apparently, Lars stumbled in stating that it was milkshake day a sunny morning in spring and then they spent the rest of the day making and enjoying milkshakes. As far as I know, they have not yet had a snowball fight which was discussed in the beginning of a lecture. They did however arrange a bandy tournament between students and staff some weeks after I left. With assistance from Marcus who works as a teacher in the barn they recorded a video of the class doing line dance in disco light among the cows. The idea came from another Agricultural Program and spread through social media, radio and newspapers in Dalarna. Activities out of the ordinary seem to be part of the ordinary at the Agricultural program on Stiernhööksgymnasiet. And the jokes are as frequent between teachers and students as among students. In the staff room, there is a framed photo of the students dressed out as the teachers. Someone ask me if I can see who is supposed to look like who but to me it is impossible. We agree that it would be fun to make a test in the end of my stay, to see if I have figured out characteristics among the staff. The students sure has, you can tell by the way they have used clothes, things and gear to represent caricatures of their teachers.

The relations to teachers are by the students described more as a network of helpers, friends or colleagues (and animals and things which I will come back to later), rather than a class. In a classroom, it is usually clear who the teacher is. It is Lars, talking in front of the whiteboard where he

has made notes, walking around with a pointer in his hand while we sit and listen (free to make comments at any time though). It is Elisabeth, changing slides on her power point and pressing play to watch a movie about the plague. It is Mats, handing out an exam and observing us while we write. In the barn or in the machine halls it is not as clear, everyone moves around, you stand or walk or sit side by side, you do the same tasks, carry out activities together. You may need to ask for help, and then they help, by explaining and showing how something is done. I see what the students mean when they describe the teachers as work colleges; sometimes you spend a whole day in the same tractor, sowing or ploughing or transporting a barrel, which Malin said. During my last session in the barn, Karin the foreman suggest that I accompany her. She tells me about her work and a trip she made to visit enormous farms in the USA. All the while we work ourselves through the cow beds in two long aisles, clearing out dung and spreading fresh saw dust, changing water in large tubs by swinging them upside down. She is an instructor, a teacher, but she is also a fellow worker.

To articulate teachers as friends or colleagues is a way to articulate difference, from other classes, other programs, other ways of learning. To carry out activities in practice where student and teacher work with the same tasks and side by side brings the teachers into the moments of togetherness. The students in NBLA17 come to experience themselves as entrusted and capable of managing the same tasks as working people do. This creates situations where learning circle around participation and feelings of belonging to a community; belonging is mirrored in the fact that you are granted to the right to develop certain skills (Lave & Wenger 1991).

Embodied and Situated Learning

Behind Desks and Steering Wheels

Each Monday during Lars' lesson in crop production, we prepare to take a license to drive a wheel loader. We work with a booklet, fill out the most common accidents, who is responsible to keep a good work environment and examples of environmentally dangerous waste that occur in a machine-driver's work-day. The chapters concern ergonomics, safety control, technique, how the machine is built and how you serve and maintain a well working wheel loader. Everyone sit in the same places every time we are in that classroom, except me. I did not think of it in the beginning, but when I decided to occupy a chair in the front one day, and Bulten remained standing it was obvious that I had disrupted a pattern. Usually three students sit in a row in the front, three in a row at the back, close to the wall at the right side of the classroom, you sit two and two or by yourself behind desks arranged in a row. Hampus always sit furthest away to the left in the room, but the chair is turned towards the rest of the class so his face is the only one (apart from the teacher's), that you see if you sit at the back. The ones sitting next to each other chat quietly and look for answers on their computers as we fill out the wheel loader booklets. Lars walks around and help if someone ask for his attention. In the end of the session it is time to watch instruction videos of how to drive a wheel loader. The projector is turned on and the lights are switched off. The video illustrates how you should manage the bucket on a wheel loader: make sure to establish a high ground pressure on the front wheels, adapt engine rpm (revolutions per minute) to prevent the wheels from slipping, make sure to keep the ground as clean and level as possible, always go into the material with the machine running straight ahead, lower the bucket parallel to the ground, give gas and lift the bucket, then reverse out. The voiceover repeatedly says "let's take it one more time", and the same sequence is showed all over again. It results in some sighing and even swearing from the class. The voice then tells us that it is important "to drive with

feeling”. What does he mean? What is this feeling? I can tell you how I felt, when I got to drive a wheel loader and some different tractors:

Henrik is taking care of the afternoon class instead of Mikael. Usually it is time for biology of soil and crops but he has been told that we have some stuff to tick off from a list, the things I need to try before my visit at the school comes to an end. We decide to start with some driving, tractor and wheel loader. “May we drive too?!” someone asks. Felicia says she wants Amanda to drive while she sits beside. “Are we going to watch? I want to watch Ida driving.” Many are smiling and someone tells me that “no pressure now, when you’ll have an audience...” I laugh, but I am nervous and afraid to make a fool of myself. I do know though, that everyone in the class has been in the same situation before, and their excitement makes me encouraged. Even if the atmosphere in general is friendly and relaxed, something happens when we get off the chairs and move out of the classroom; everyone seem exited and motivated. When I arrive to the garage, Philip, Hampus and Amanda have already jumped into different tractors and are driving towards a specific area suited for driving practice (it is similar to an empty parking lot), situated between the garage, a road and some horse meadows. The machines are overwhelmingly big when I see them from a close distance, a back wheel of the biggest tractor is much taller than I. The wheel loader is apparently the easiest to drive so I will start with that and have Malin by my side as an instructor. We climb up and squeeze in to the cabin where she stands beside me, almost behind me, and point exactly on what pedal and stick to use. The pedals are much stiffer than in a car and I move my left foot from the break very slowly as it starts to move. We are far above the ones standing on the ground and it is bumpy, but in a soft, almost comforting, way. To steer is heavy but not very tricky when I go slow and on flat ground. We zigzag between cones and I manage to go backwards too. Amanda and Felicia is driving past us in a completely different speed, waving and clearly listening to some music from a mobile phone, you can tell by their moves and mimics. Then it is time for me to try another one, the “little red”. I get nervous again, there is suddenly a gear stick in the picture which needs to be managed. But there is no problem driving around on gear one, Bulten is hanging out the door (there is no room for two people in this machine) and thankfully take the hits from the waving door until I have finished some slalom with this very growly thing too. Bulten says he thinks I am brave and it feels like the nicest thing anyone has said to me in a long time, I am filled with pride. Finally, I need to try the biggest and newest one; a John Deere. Maja accompany me and in this tractor, there are seats for two. When I land in the chair, it automatically adjusts the height to suit my body. The radio is on, the screen in front of us is filled with symbols, lights, buttons, and there are several sticks to the right. It is warm inside and I start to sweat since I am wearing a down jacket that was more appropriate in the other two machines. The gas pedal is sensible and we make small jumps forward as I try to find the right position for a nice speed. This tractor has springs in the seat so we swing smoothly up and down. Henrik takes a photo when we approach him, I can tell that he is smiling and I am too, I feel genuinely happy to have been driving with support from the students who also have been driving a tractor or wheel loader for the first time some time. Maja and I switch places and she accelerate as we drive towards the garage, you can tell that she has done it many times before.

After this driving session I felt relieved; I had done something that all members in the class could relate to. I had been introduced to an important activity of their daily practices. And it was not about sitting behind a desk and listen or read. It was about being brave, to manage a big machine by movement of feet and legs and arms. Descriptions by the students about driving mirrors my own experience; “a little hard”, “nervous” and “very scary” in the beginning, but “funny too”. “Very nervous but also exiting”. They could also add perspective to what it is like to drive when you have practiced it for a while: “pure routine, you don’t think that much it just happens” or ...”when you got to drive on the road, you felt so damn big”. This mirror how some ways of learning is about being able

to take part in an activity which has meaning in a certain context, and about participation in activity which makes you come to feel like a member of a community (Lave & Wenger 1991).

I could not have experienced in the classroom what it is like to drive a tractor or a wheel loader. Watching videos, listening and reading about it does of course give important clues and guidance to how it is supposed to be done, but it does not give rise to experiences of what it is really like. Sitting in a classroom though, is surely also an experience. So, what is the difference between being in the classroom and spending the afternoon in tractors? What are the characters and effects of these different experiences? They make us learn in different ways; an experience can be both interesting and intense, but disconnected. Disconnection in this case means that what you do, does not necessarily make you feel that you will be in control in a future practical experience (Dewey 1938). To read or hear instructions of how you drive a tractor is important. It does not, however, guarantee that you will do it this way in the future. Driving a tractor in practice on the other hand, will (if you don't fail completely) result in a feeling of being capable to do it in a controlled and safe way the next time too. To press the gas pedal and handle a steering wheel gives a bodily experience of being able to respond properly in a situation of driving.

Get to Work and Be of Use

When we talk about driving tractors Maja says “It wasn't until the spring tillage that you actually learned, for real”. A fact is that you can't drive as fast at the driving plot as you would do on a road. Amanda adds that you may get tired of it pretty soon. Felicia says that in the end of the practice on the plot, they were just driving around in circles and couldn't wait to get out on the road. “What is the difference then?” I asked, and here's what the three of them said:

F: I mean you get to *do* things.

M: It's like what you do matters. It's like a big thing...

F: You don't just drive around in circles...

A: You don't just waste gas by driving around and around (laughs)

F: It was more fun to get to work.

A: To make some use.

During our focus group discussions, I ask the students to tell me of events during the year which I won't experience since I am visiting them for a limited amount of time. Everyone agree that spring- and autumn tillage should be highlighted. That is when they get to do “everything”, as it is expressed by at least one person in every focus group. Everything, in this case, means to sow, harrow, spread shit (fertilizers), perhaps plow and then harvest, thresh and make hay bales. Bulten says it is very special to be part of it, because “you get to be there during everything”.

To transfer something, to get somewhere, to help and do something that matters and “to make some use”, is emphasized in general when we speak about daily routines at the school. Hampus says that the ones who have chosen to study entrepreneurship can be called up to the barn to help out sometimes. “Yes we cooperate” says Filip. Adam (who has chosen farming and not entrepreneurship) confirms that his classmates are the ones who help if there are any troubles. “With a dung pump or something”, says Filip, “then we help out”. One day they tell the rest of us that they have spent the whole morning clearing an area from bushes and trees. “And what a nice classroom that is”, teacher Mats says, “in a slope, on the edge of the forest, with a view over Siljan”.

Activities like these – carried out in a barns, fields or machines, are often compared, by the students, to how it was in elementary school or to tasks which are usually done in classrooms, like writing essays or practice math.

(...) I mean I haven't hated school it's just that I have always felt like this is not what I want to do (referring to elementary school). I don't want to sit at a desk (...) I have always wanted to do something with my hands, I mean work, I mean feel that you do something, not only sit and write 1 + 1... (Våfflan in focus group)

Later she adds: “here it really feels different, compared to everything”. And Mina continues: “It feels like you do something that means something.” They both compare to writing essays in elementary school, “Yes and then you got a grade and that was it, Mina adds, “It kind of felt meaningless in some way, waste of time.” Våfflan raises the question why they do not learn about things like buying houses or paying bills, things that they “actually need”. To describe tasks and experiences of the past, from elementary school as “meaningless”, makes it clearer that much of what they do today reflects the opposite: it is experienced as meaningful. It is also illustrated in a story told by Bulten: he recalls how a teacher he had during his first years in school used to criticize him for gazing out the window instead of focusing on the mathematics on the paper in front of him. “You will never get a job by looking through a window” she said. “Now, when you have ended up here today, that is like - it went well after all. And you can sit and gaze from a cabin the whole day; that's looking through a window” Bulten says. “You can look through a window and still be doing something sensible?” I ask. “Yes, something very sensible”.

The farming students at Stiernhööksgymnasiet study a lot of theory; biology of animals, biology of soil and crops and business economics for example. When they were about to get a license to drive a tractor they had to do a theory test, not a driving test. When they are now about to get a license for driving a wheel loader, we fill out booklets of questions around it. During a focus group discussion, Adam, Filip and Hampus explain that they think a mix of theory and practice in school is good. However, it is in the “real-life situations” that all the students emphasize that they learn or that learning feels meaningful; when they are involved in spring- and autumn tillage, when they get to drive on the roads, when they work in the barns. I had to practice my way of mucking to make it as clean as possible amongst the cows and pigs. Blisters on my fingers suggest that I haven't succeeded completely just yet. Learning can be seen as an incorporation of movements into our bodies, until it flows naturally in the shape of habits (Merleau-Ponty 1962). When you have mastered a skill, your everyday dealing is experienced as a spontaneous response to the demands of a situation (Dreyfus 2002). As Filip, Hampus and Adam described it when we talked about driving tractors the first time compared to nowadays:

A: Well now it's pure routine, you don't think that much it just kind of happens.

H: It's just to jump in and... gas. No not really but... (laugh)

A: Yes, in the beginning you kind of were a bit unsure (laugh)

F: Then you had to reflect on what you were doing sometimes and... now it just works.

Dirty Work

And I thought my hands got dirty in the barns... Well not compared to what they look like after a few minutes in the machine hall. I feel restrained from touching anything since it may result in spreading the oil and dust to clothes, machines, tools and others. During my last day at the school I get to spend

time in the machine halls. We walk in from a “regular” corridor with “regular” classrooms to where the rest of the class and some staff and mentors are sharing the space with several large machines. The roof is high, the doors are ginormous. It is a jungle of steel and rubber, filled with things which I don’t know the names of or don’t know how to use. I have no clue of what anyone is doing or why. Someone is welding, which generates a burnt smell. Våfflan and Felicia are waiting for advice, they are about to install a horn in some other kind of machine and the only thing I can think of at the moment is how well the red and pink colors of their dyed hair goes with the green tin cover of the machine. Adam is moving around with some small thing on wheels and Mina with some tools in her hands. On the walls, there are large flags, pieces of fabric of different brands of farming machines like Väderstad and Fendt. Henrik says we can change motor oil in a tractor and Amanda protests. Last time, most of the oil ended up on the floor instead of in the spill box... After a while we are convinced to try anyway. We have a written instruction and Lars and Henrik are there to help. First we need to get the tractors, I sit beside while Maja drive, I am very aware of how I climb out of the tractor, I do not want anyone to see me doing the most common mistake (I learned this during the first week), which is to climb out turned forwards. When the tractors are parked, we need to find a bowl to put under the tractor to avoid last times incident. We walk to a room where there are cans of different sizes and discuss which one has enough space to contain the oil we are to tap. After a while we conclude that it is not worth taking any risks, and chose a huge bowl to put under the tractor. We find the plug, Amanda crawls on the floor, I am not dressed for this kind of work, (which a student also comments, referring to my pants and jacket as fancy sports clothes), I can borrow an overall but feel too lazy to go and change and perhaps more importantly, do not want to show that I am caring too much about my clothes... A wrench is needed, and when the plug is about to drop I am keeping paper around it to prevent a leak and we count down until it is released and oil pours out. It is in such a different shape than all fluids I have been in contact with all morning (milk, pee, water, dung and coffee). The oil seems heavy and is completely black. I read the instructions and there are at least four words I have not heard before. Fortunately, there are pictures. We should turn loose the filter with a certain tool and (probably for the tenth time) we need to ask Henrik “and what is that?”. He shows us to the right drawer. One of a least a hundred it seems. There are things hanging on the walls, laying on benches, in drawers, in cupboards. This thing, a kind of adjustable spanner, makes my arm stronger and suddenly the filter is loose. We notice that the last oil is running very slow and Henrik suggest that we should “clean” the tank with some new oil. The question is, what kind? SE40500? Or 163378292? If you find some with a letter that comes after G it is apparently good. Allright. There are five barrels to choose from and when Lars shows up in the room of tanks he suggests that the first tank will be a good choice. Suddenly I realize that I do not find it uncomfortable to have oil and dirt on my hands anymore. It feels good that they are filled with fat and dust; I don’t need to worry about getting them dirty because they already are.

To Have a Cow’s Eye

I am getting closer to the cows, there are just windows between us and them. We have a lesson in animal’s biology and Elisabeth is lecturing about mastitis, milk fever and other diseases. The classroom is situated on the second floor in the large barn and if you stand close to the windows to the left, you can see the whole herd of the school’s seventy cows. You are also able to smell them; it is a mixed scent of animals, manure and a sweet touch of silage and feed. The big hall below us is filled with animals, divided into different sections by steel gates, fences and pipes. There is a milk robot with a section around it where you can check how it is working and “assist” the robot if there’s trouble milking a certain cow. Big gates open sometimes in both ends of the hall; to let tractors drive in and out with a feed mixer attached. The wall behind Elisabeth’s power point is shaking when the large

machines enter or leave the building. When she is talking about symptoms of different diseases, she mentions the importance of having a “cow’s eye”, which means that you see when the cows need extra care by being observant; not only by sight but also with senses like smell and touch. If a cow does not eat to supply her body with enough energy, she may develop acetonaemia (Ketosis). It means that she starts to break down her own body fat and a typical sign of this disease is that both the milk and breath smells like acetone. The wellbeing of the animals needs to be understood by being among them; seeing, listening, smelling and sensing.

We tend to look at knowledge as if it is something gained and kept in our minds, while in most societies “knowledge is a matter of practical competence and sensory grasp rather than declaration (Jackson 1996:34 [see Devisch 1993]). The need to use your senses such as smell and touch to detect that a cow is suffering from Ketosis, and your sight and movements of hands and feet to maneuver a tractor reminds us that knowledge can be seen as residing not only in our brains but also in the rest of bodies. In some places that is more explicit than in western societies; in eastern Peru for example, the Cashinahua people say that knowledge you gain through skillful work is “in the hands” and social knowledge “in the ears”. Different kinds of knowledge is related to different parts of the body and “the whole body thinks and knows”. (Jackson 1996:34 [see Kensinger 1991:44]). Among the Kulong people in Papua New Guinea, to know is to have heard, come upon or to have seen something. Learning is something that happens through direct experience and personal action. (Goodale 1995).

Learning Something Meaningful

How many of us have not felt sometimes that what we learn in school can seem so “foreign to the situations of life outside the school, as to give us no power of control over the latter?” (Dewey 1938:27). Learning activities may seem meaningless if you do not grasp their purpose and it might be hard to understand why you should learn something. The students confirm this by giving examples of how they have written theses or practiced math, getting a grade, without experiencing it as meaningful. To study in an environment that can be related to what you are supposed to learn does seem to generate experiences of doing something that is meaningful; if you are going to learn to drive, it simply makes more sense to sit behind a steering wheel than a desk. What matters is what have practical efficiency in working out routines and techniques that will help a person accomplish goals in life (Jackson 1996).

Traditionally, education systems do not demand contact with local communities although they may be key to important experiences and knowledges (Dewey 1938). At Stiernhööksgymnasiet, the students come closer to the local community by their daily practices during school hours. They work with the staff in the barns and fields, they drive through the town in tractors, shape the local landscape by clearing fields, ploughing, sowing and harvesting. By caring for the fields and the animals they contribute with food deliveries to kitchens in elderly homes, preschools and their own school. This in turn, seems to evoke feelings of doing something that makes sense amongst the agricultural students in NBL17. To “do something that matters”, to “get to work”, “make some use” or simply help each other, exemplifies how learning in “real-life situations”, outside the classroom; on the road or in a field, in a barn or a stable brings meaning to the activities. In these situations, it become clear how the student’s actions affect others at the school; people as well as animals and things in their own community. They in turn, affect the students. These kind of processes permits people to experience themselves as competent beings in the world rather than separate and without any relation to others (Stolz 2012), which is something I will continue to explore in the next chapter.

Being with Non-humans

Breakfast in the Pig's House

We greet the sows, the boar and the many piglets and barrows divided into boxes a “good morning!” as we enter the barn. I pet one in the nearest box and tell him how dirty his nose is. It is the first time I spend the morning in the pigs’ house and it is time to clean the boxes and then feed the animals. The air is warm compared to the cow’s barn and you can sense dust and a sweet earthy smell combined with dung. I clean the floor with a scrape among the piglets while Amanda moves to the barrows. The first group of seven pink, small creatures is scared of me, they run around in a group and move to the other end of the box from where I am. When I move, they move – to keep a distance and a watching eye. We continue to talk to them and they reply with grunts. “I’m here to make it nice for you, you don’t need to be scared.” “Now you have to get in there”. “No stay there”. “Who did poop here? That’s not very neat”. The way I talk suggest that they could be four-year old children, I think of when Elsa (a student from third grade) asked “how come we talk to them like this?”, when we visit the pig’s house another day and everyone chats with them in bright voices. In the fourth box where I clean, there is group of mixed breed piglets. Their ears point forward and they have got brown spots on their pink bodies. The fact that they differ from the rest has resulted in them getting extra attention from both staff and students. You can sense that they are more used to attention and the presence of people; they gather around me, bite the overall, bite the boots, the scrape and even manages to bite my leg. As soon as I stand still they climb on my feet and on top of each other to examine my appearance. Amanda picks one of them up later and we laugh at his appearance in her arms and the curious noise he makes which I think sounds like the cry of a rooster.

It is time to clear the aisles from everything we have shoveled out of the boxes. I get the honor to try “putten” - a machine that you manage by a handle similar to the ones at bikes. You can press “slow”, “backwards” or “forward”. You don’t need a driving license but one could wonder if that would not be useful as I go along. “Press slow” Amanda says, “It goes pretty fast”. It moves on wheels and it has got a scrape that pushes all the dirt towards the culvert, like a plough. I turn the wrong direction and I get stuck, I go backwards and try again, get stuck, tries to move very slowly, a bit faster and then I am stuck again. I am struggling while Ola (a farmhand and part of the staff) and Amanda patiently waits. Until they yell, “Gasal!” (give gas!), and I finally get somewhere. When I reach the opening to the culverts I am terrified of driving to far so “putten” would end up in the underground tunnel of dung and dirt. “Yes rather stop there then move to far” Ola says, “it would be a bit difficult to get it up here again”. Then it is breakfast time, for the pigs that is. We strategically push the food carriage down the line between the boxes, like stewardesses on an airplane. Four kilos written on a sign above the box means four scoops of fed in the trough. The pigs in the end of the line is getting impatient and make lots of noises, almost screaming. I am relieved when it suddenly stops and the only thing you hear is soft chewing. One piglet is standing on the wrong side of a divider in the trough and I lure him, with some feed in my hand, to the other side where he can eat among his siblings. Then he is content, and I am too. After the pigs are fed, it is time to fill the boxes with new hay. Once again we push a large carriage which Ola says should be empty when we are done. I smile the whole way, down the hall and up again; both the barrows and the piglets wave their heads, makes jumps and starts to root in the piles of dried grass. The morning routines are done and we walk back to the staff’s room to have our own breakfast.

It is love - Driving a Massey Ferguson

A theme that we return to over and over again during my visit at Stiernhööksgymnasiet is the experience of being close, physically and mentally, to animals and things. The relations are described by how the cows behave when you are near; their looks and the way they point their ears when you get closer, or how it feels to drive a certain tractor. Bulten says that “no tractor is exactly like another” and Felicia explains why she thinks MF (Massey Ferguson) is the best tractor brand:

I mean as soon as we got a tractor it was an MF, and then Simon's parents have MF at home. And then I drove MF here in school and thought “aaa, love” (laughs). Because I also liked John Deere at first and then I drove an MF here at school and like “this is love”.

She adds that others seem to have trouble with MF, even the teachers, so she is usually asked to drive them: “Well, well, no problem with the gears, everything works out perfect. I think it's so fun that everyone has problem except for when I jump in, then it's just magic”. Amanda can relate to her own experience with Clara, the mountain cow calf: “But that's the way it is when I'm with Clara in the barn. Everyone is like “aa she's so annoying!” but with me she's an angel” (laughs from all). Maja adds that “Yes you get your favorites.” Hers is Benny, a black and white Holstein, and she explains it like this: “I mean it's like, of course it's cozy... to be among the cows, I mean all the cows. But then you find one, that you like, then you get even more happy, when you see them. It's like... you really become calm by them, you really do.” Ida confirms that being among the cows can be relaxing since “you don't need to think about that much else. You just think about taking care of them.”. When we talk about the future she says that it would be fun to work with animals since it is “almost funnier than with humans”. Malin agrees and says with a laugh that “Cows are better than humans”. Everyone does not enjoy being among the creatures though, Felicia feels angst when she comes near the barn after her favorite calf was sent to slaughter. Våfflan is indifferent, she did not enjoy practice in the barn and says “cow as a cow”. Amanda says she understands that the experiences of being among the cows is different from person to person but that it has a significant effect on her:

(...) they spread such calmness, and if you are stressed well then you go to the barn, because there it's always calm, they are laying chewing the cud, you can sit and cuddle with them and so. But you kind of feel... if you notice that any cow you like, if it's in pain, if it's sick or something, you feel for that cow then.

Just before our chat at the kitchen table we spent almost an hour in the barn. Since the afternoon class was cancelled, Amanda wondered if Maja would go with her to take Clara for a walk and I asked if I could join. We put rubber boots on, the girls have their working pants and warm jackets while I borrow a blue overall in the barrack. We pop our heads into the staff's room and let them know that we are there, then we enter the barn. Amanda has a yellow halter that she got for Christmas, which she has trained Clara to wear. She puts it on and we take her out a side door. Clara seems a bit surprised by all the snow that covers the ground, it is slippery and she makes small, uneasy jumps. We start to walk around the barn and continuously ask the calf questions, like “what was that?” when we pass a car, or “what are you doing?” when she shakes her head like she wants to get rid of the leash. It seems like enough adventure for one day to walk around the barn twice, and then we take her back inside. It goes without saying that we are going to greet Ada and Benny too. Amanda finds Ada resting in a sawdust bed and sits down by her head. Maja sees Benny in another part of the loose housing and walks over to embrace her. I feel like I shouldn't disturb and need to find my own friend so I sit down, on a pipe of iron dividing two beds of saw dust. I am as close to a resting cow that I can pet her on the forehead. I

recognize what several of the students have said; that you can feel calm in their presence. The cows are not in a hurry; their movements are slow and easy-going and they seem to accept your presence with ease. When we later discuss the feeling of being among the cows, Amanda says:

It's extra fun to see when the animals recognize you too; like when Benny and Ada stand eating at the feed table, and they see that someone walks there and then they see that it's me and Maja. Then their ears turn forward directly, you see how happy they get. Then your heart gets warm.

Becoming Friends with a Chain Saw

It is time for me to use a chain saw. That is not something that everyone in the class are required to do, but three of them have chosen to take a chain saw license during “student’s choice lessons”, which they have on Monday afternoons. Henrik explains that even if a chainsaw seems scary, you should not be afraid of it. You need to hold it close to your body and “you have to become friends with it”. There are around ten saws and I am told to pick one. I do not even know how to pick it up, afraid of touching something that will make it start. Bulten does it without hesitation so I pick one too and I am surprised by its heavy weight. I manage to carry it from one table to another. But where should I place it? On what side? Bulten shows me, and then you loosen two nuts, then a screw, you are able to take off the bar cover, get a chain, unravel it, and finally fit the chain around the blade, tighten it and put the cover back on. Are we ready to go then? Definitely not. You need security clothes; pants that are thick around the legs but for some reason don’t cover the butt, boots which I think I could fit at least five layers of socks inside although it is my usual size. Helmet, with ear covers and a transparent cover for the eyes. Everything comes in a screaming orange color. We check the fuel and the oil. *Now* we are ready to go. It is impossible to be gracious in the outfit which seems appropriate for a walk on the moon, plus a heavy chain saw in one hand. Some students have gone to do something else but Amanda and Ida are coming with me, Henrik and Bulten to document the event. Outside the machine halls there is an area with logs on which you can practice your sawing skills. It is time to get the tool going, there are security breaks on two places, a red button that needs to be pushed if you are about to make a “cold start”, pump three times for fuel, put the saw on the ground or between the legs and then pull the handle which is attached to a rope which is attached to the saw. I am nervous and excited, feel both silly and brave. I try several times without being able to pull the starter rope fast enough to make it start, and I am prepared to accept my defeat. Henrik advises me to put it on the ground, I pull the rope once more and I can hear the engine fire but only for a few seconds. I pull again and my boot slides off the saw. One more time and the sound from the engine continue for a bit longer. Then I try once again and it is finally running, the chain is moving ridiculously fast and I am relieved but focused. It is, after all, a tool capable of cutting down trees. Now is the time when I am supposed to “become friends” with it. I hold my friend with sharp teeth steady with both hands, close to my hip, like Henrik showed me earlier. Bulten has already sawn off a part of a timber piece on another log and I am encouraged to do the same. I fear the moment when the chain touches the wood since I do not know what to expect. But the saw cuts smoothly through the material, sometimes the wood resist and I realize it is important to be steady and use muscles in both legs, arms and abdomen. I have the ear cups on, the cover down fold in front of my eyes and feel cut off from the people around as I focus on the piece of wood and the saw blade for a moment. I feel glad that I can handle the powerful and possible dangerous tool, even if it has been with detailed guidance. “So how is it done if you’re really competent using a saw?” I ask. Henrik says he don’t think you can be really good or not, or, “if you create sculptures, then you are good I guess”, he adds after a while. A fresh smell of wood has come out of the pieces of timbre. We stand and watch the sawdust. Henrik asks Bulten to use the saw

vertically through a log to create longer pieces of sawdust. We agree that it is beautiful, like tiny corkscrews. They are not as long as expected though, which apparently means that the chain needs to be sharpened. When we are back inside we use a small template to be able to rest a hacksaw towards the chain, you move it backwards and forwards to sharpen the 'teeth'. You can also use this template to fit what are called "the knights" in it and see if they need to be scraped down. When we are done, I am not able to get the cover on. After a while we realize that it is the blade which must be moved a tiny bit. I am still confused around the procedure when you pick on or off the chain. Bulten on the other hand, does not have the same problem: "It's like that when you have done something a thousand times, then it just goes by itself".

Being Close to a Cow

So, what is it like to be close to a cow? Well, I am going to tell you now, because one early morning in January, I stepped in to the barn at Stiernhööksgymansiet, where the seventy cows are kept, for the first time. I borrowed a blue overall but my long underwear did not keep me as warm as I hoped and I got a bit chilled. What I probably will remember most from that morning is the warmth from the large, heavy creatures, walking around easy and slowly; each time any one of them was close enough, I could rest my hands and forearms on their necks and immediately feel warmer.

It is Thursday, day number four at the school and I finally manage to arrive early instead of late. Sixten, one of the school's cats, seem just as eager as me to get into the staff's room which is situated in the same building as the barn. The time is 06.45 and it is still dark outside. We step in from the dry, -15-degree air and I say good morning to Anders who is one of the farmhands, spending most of his time among the pigs when he is not teasing students by pretending he can't remember their names. Karin, the foreman, arrives after a while and help me find a suitable cotton overall and rubber boots in a barrack outside. Then we sit down around the table and wait while the students drop in one by one. Sixten seeks refuge and comfort in my lap since Karin's young Labrador is very excited to have a four-footed friend in the same room. When everyone has arrived, the group is divided to do daily routines in different parts of the farm area; the big cow barn, the pigs house, the cold stable and the sheep. I join Amanda, Malin and farmhand Anna on the "right side" in the big barn, where you tend to new born calves and dry cows about to give birth. Stepping through the door into the barn, from the staff room and hall where we put on our boots, is like stepping into another world. It is bright; strong lamps are shining from far up the roof. Machines and fans are making humming and growling noises. It is accompanied by clinging noises of iron that meet iron, when gates open or close and cows stick their heads through fences to reach feed. On top of this, birds are chirping in the open space in the roof. The smell of animals, manure and feed is strong, but the nose quickly get used to it. The others are off in a second and I need to ask Adam for which direction I should go. I find the girls doing a routine check among the dry cows who stand in boxes, separated from the herd. Amanda and I will tend to one of the them. We follow a detailed description (on a paper wrapped in plastic) through a process which Amanda points out that she has done for one and a half year but still can't remember each step in. The milking machine is cleaned and prepared to be used. At least she knows what buttons to press, where you reach the sponge that should be put in the pipe, how to cover and open the pipe a few times so the sponge does not reach the big tank too quickly. After this process the milking machine is ready to be used and you transfer it on something that looks like a rope way to the box where the cow is. Amanda enters first, the cow is busy enjoying some concentrate she was fed but I am cautious as I enter the box, without any idea of how the cow may react on my presence. Both she and Amanda seem calm so I relax too. It is time to clean the udder and imitate the puffing movements of a hungry calf to prepare for the milking. To confirm that there won't be any difficulties when you

put on the machine, you should first try to milk by hand. It looks easy when Amanda does it. Then it is my turn, and it seems completely impossible. I try many times without success, and then I try again, to squeeze the dug as Amanda explain and show how you are supposed to shape your hands and fingers movement. I try again, and again and am about to give up. Then one more time after Amanda has illustrated how to do it for the fourth time. I do my best to imitate her exact movement and finally, it results in a tiny stream of milk. I am relieved but cannot say that I am proud. I cannot even manage to do it twice, and realize that milking by hand is something that needs practice. Amanda check the other dugs, we put on the milking machine, and then we clean the floor, shovel large piles of litter into a hatch that leads down to a culvert. The milking machine makes regular clicking noises as the white fluid flows through transparent tubes, from the cow to the tank. "You see that cow over there? That's her". Amanda suddenly points toward the loose housing and I know what she is talking about. She has told me before about "the best cow in the world". Ada is special, beautiful and looks like a deer with light brown fur but dark circles around her eyes, she is a Jersey. "Why is she the best cow in the world?" I ask. "She has a nice temperament", Amanda say and I ask what she means by that. She says that Ada often is nice to cuddle with, but also has integrity and let people know when she wants to be left alone. "Do you recognize every cow?" I wonder. She says that she usually finds certain characteristics that make it possible to make distinctions between different cows.

After we have said hello to the calves, it is time for a break. In a carafe on the table in the staff's room there is milk coming straight from the barn. Lena, a member of the staff, is offering homemade brie cheese and butter, she has a few cows herself at home. The remaining hours before lunch we are going to accompany a woman from Växa Sverige (one of Sweden's largest association for people keeping livestock, they give advice and services to its members who are mostly meat- and dairy farmers), to give the cows points (she uses a program in her phone) depending on different criteria to determine a cow's "beauty"; everything from angle of the back to space between ribs. This will give a hint of which cows that should be sent to slaughter and which are suitable to use for breeding. To be in the large housing is busy compared to the boxes where the dry cows are. Everyone brings a rake which can be used to push away cows who are annoying, comes in our way or too close. The four-footed ladies wave their tails, I get dung on my overall, Ida get it on her checks and Maja on her shirt. There is urine and dirt on the floor, automatically swept away by a rake which is moving back and forth through the long aisles. We frequently talk to the cows like they would understand Swedish. "Where are you going?" "How are you today?" and "How grumpy you are!" We make our way through the barn, zigzagging between the animals looking for the next one to give points according to the standards. It is like we are pending between seeing them as objects in an industrial system, and fellow living beings.

So, what is it like to be close to a cow? Well, one second you might be curious about her reaction to your appearance, the other you realize the size of the animal and get nervous. One moment you may pet it on the rough and oily forehead, the other you may push the heavy body to make her move out of your way. The cow may seem annoyed so you need to be on guard to not get kicked or squeezed towards a wall. Or she may seem to be in a good mood; curious and looking for attention. She might also just notice that you are there by a short glance and then continue to eat, chew cud or slowly walk around. You may think that you are the one studying them, and suddenly your thoughts are interrupted by heavy sniffing right into your ear or down your neck. The bodily experience of being close to a cow is different in every moment.

Talking Things

Lars started one lesson in crop production by asking “can plants talk?”. Then he handed out papers with information about a recent study which shows how maize plants communicate by airborne chemical signals. Earlier studies have shown how touch can make the plants send signals through their root systems, which affect the growth of other nearby maize crops. The later study suggests that if the plants stand very close, it makes them activate a defense mechanism which send out signals through smell, that makes other maize plants in the surrounding do the same. (Markovic et al. 2019). Non-human things, like plants, animals, tools and machines may not communicate and perceive in the same ways as humans do; but if we pay attention, it is possible to understand that they do perceive and communicate, or talk, in their own ways, among themselves and in relation to humans (Despret 2016)

During my stay at Stiernhööksgymnasiet we frequently talk to animals like they would understand our spoken language, and we talk about tools and machines as if they are alive. It is not hard to understand that things may seem to be alive as we care for them and use them in different ways. They influence our abilities, sometimes like “extensions” of our bodies (Frykman & Gilje 2003). A tractor, chain saw or an adjustable spanner can for example make us faster and stronger. From cows and pigs, you get immediate reactions when you approach them, but we do get reactions from things too; the chain saw will or won't start when I pull the starting rope, the gas pedal in a tractor force my foot to move with a certain strength to set the vehicle in motion. This reflect how things, both animals and what we usually call objects, shape situations involving humans (Latour 2005). How things force us to act in certain ways is reflected in how some people have trouble managing a certain tractor while someone else describe it as “just magic”, and how you need pull the starting rope of a chain saw with a certain strength (or “den rätta knycken” as we can say in Swedish) to make it start, and hold it close to your body to be able to control it.

As I have said before, every student in NBL17 identifies with things; it can be a tractor brand, a certain cow or at least a cow breed, it reflects how identities are created and re-created with things in our surroundings. Encounters and relationships between humans and animals can produce affective experiences that shape identities and understandings (Gorman 2017). It is for example mirrored in the way Amanda describe how the cows react by looks and turning of ears when they go in to the barn and how it “warms your heart”. It is hard to tell if the cows are happy to see people or if they are happy to be fed, but that doesn't really matter - what matters is that they respond to your presence, that an animal realize you as a subject that they can communicate with (Harraway 2007 [see Smuts 1985]). In encounters between people and animals at the school, the students experience being calm or happy when for example a cow glance at you or a pig jump around as he get fresh hay in his box. Or they may experience worry if an animal is unwell. If we consider things to be “what they are experienced to be” (Jackson 1996:10 [see Dewey 1905:228]), a tractor may be the subject of your love affair, a cow may be the reason you get up six in the morning and a chainsaw cooperate if you treat it like a “friend”. These non-human things are not mere objects but become “matters of concern” as they change conditions and has influence in everyday life (Latour 2005).

Being *with* the World

I have illustrated how the social can be considered something which is not only shaped in interaction among humans, but also in encounters between people, animals, plants, machines and other things surrounding us in different moments. The situations I have described shows how we in other creatures, realize that there are multiple beings, not in separate worlds but within an associated world (Despret 2016); life becomes a matter of reciprocal relations with other things and beings. Animals and things

can be treated like objects in industrial systems, like matters of fact (Latour 2005); as when a cow's beauty is compared to standards of length, height etc. But beauty can also be that a cow's looks remind you of a deer (as Amanda describes Ada). And we realize in encounters with animals, that they are creatures which affect our experiences and have an influence on our daily lives. For example, when a cows make force you to hustle, move or makes you feel relaxed. Then they become subjects of the social, or matters of concern (ibid.).

New emotions emerge from human-animal relations, along with new knowledges, experiences, socialites, and ways of thinking about and understanding oneself and one's place in and with the world. (Gorman 2017:6).

A piglet could not find his food and as I showed him to where his siblings was eating I experienced feelings of responsibility and care. The mere silence, or soft chewing, which came after the pigs screams for feed gave a sense of satisfaction and understanding of myself as important for their well-being, as well as I experienced them as important to my wellbeing when some of them made me struggle as they bit me when I tried to clean, and made me enjoy the time among them since their ways and sounds made me laugh.

The students I met take care of themselves in their own shared apartments at the school during weekdays. The also take care of expensive machines, powerful tools and animals, as part of their education and daily practices. To care and contribute to animal's wellbeing can allow a person to be "a moral agent, capable of having an impact" (Gorman 2017:4). When you experience reactions from people, animals or things in your surroundings, you gain an understanding of your own capabilities. We reach out to the world around us and shape it, while the world at the same time shapes us (Seamon 2012). Time spent in farming environments, containing animal husbandry and gardening or crop production can strengthen feelings of responsibility and care among youth, it is highlighted in several studies done in different parts of the world (see Dillon et al. 2011 and Lundgren 2010). This happens in the local environment, which is where you get direct experiences of "bonds" (Tröhler 2000). That in turn, can result in understanding of larger social and environmental systems (see Lundgren 2010 for an overview of litterature). This seem to happen at Stiernhööksgymnasiet too, as the agricultural students get to experience processes of feeding, treating, and cleaning among animals, or plowing, fertilizing and harvesting in fields. They are part of processes taking place after a crop starts to grow or an animal is born, before a potato, some meat or cheese end up on their lunch plates.

This thesis illustrates how bodily experiences in learning processes have a significant role when it comes to how students perceive themselves, other persons, animals and non-human things in the world. It does also show how bodily experiences matter in creating an understanding of what has been learned and in creating knowledge which is considered as meaningful by the learner (Stolz 2015). As Våfflan said concerning the Agricultural program: "people think you become a farmer, yes but you also get an experience for life. That you should be able to take responsibility for things and others, for animals and machines and so. That you are to take much responsibility. And I think that is a great experience, to be able to do that".

Closeness to people, animals, machines and things in farming environments shape the students in NBL17's experiences through direct responses from surroundings. Learning through bodily experiences in farming environments thus gives understanding of what it means to coexist with the world among other people, things and creatures. These kinds of close associations in situations of learning, is what can create feelings of love and understanding (Tröhler 2000). Something that the

students themselves express when they explain their experiences of being close to each other, teachers, animals or simply a tractor.

Final Words

My stay at Stiernhööksgymnasiet came to an end. Back in Uppsala where I study, I suddenly saw tractors everywhere. Large piles of snow were moved from the streets with help from snow blades attached to John Deere's and a New Holland's. I was excited as I realized that I could recognize different brands by colors, and related each one of them to the students who had told me about their favorites. Today it is late April, the snow is gone but I count the number of tractors that drive past my kitchen window to clean the streets from dust and dirt, now with large brushes attached to their fronts. The machines travel through town as reminders of what happens outside Uppsala, just as when smells of manure sometimes reach the town from fields a few kilometers away.

I began this thesis with a reflection about life on a hill farm in Dalarna around 100 years ago. Both ways of farming and ways of learning have changed since. Experiences and knowledge of how food is produced have become rare among many young people. My point is not that we all should go back to a hill farming way of life, I suggest that we reflect on what we value with both our education- and food systems.

The purpose of this thesis has been to explore learning in farming environments from a perspective of bodily experience. I did that among eleven students at the Agricultural program in second year at Stiernhööksgymnasiet during three weeks in January 2019. One of the research questions was "how does physical and mental closeness to people, animals and things in farming environments shape the students' experiences of learning?" I have used their statements, stories, daily practices as well as my own experience of being among them, as a basis for descriptions and discussions of what learning through practice and bodily experience in farming environments at their school can be like. With help from the analytical tools of togetherness, embodied and situated learning and non-human agency, I have shown how closeness to people, animals and things in farming environments can generate experiences of belonging and a sense of togetherness in NBL17. I have also discussed how learning through bodily practice in farming environments can generate experiences of being capable and doing something useful; learning takes place in a surrounding that can be physically related to the knowledge you are supposed to gain. These kinds of situated and embodied experiences of learning are considered as meaningful by the students. Finally, I have shown how closeness to people, animals and things in farming environments can generate experiences of one's own role in relation to a local and practical context. It becomes clear how other people, living creatures like animals and things as machines and tools shape your own experience of being, for example by making you struggle, feel nervous or making you strong, proud, feel brave, important or simply happy. You experience with your own body and senses that you actively take part and shape the world in interaction with things in the local surroundings. The other purpose and research question of this thesis concerned what kind of understandings that bodily experience in mental and physical closeness to animals, things and people involved in farming environments can generate among the students. To study at the Agricultural program on Stiernhööksgymnasiet does of course give a lot of different kinds of knowledges and understandings, about everything from cow's diseases to business economics, mathematics and ergonomics of tractor driving. But with this thesis I have shed light on understandings which concern bodily practices and being; understandings of responsibility and care which become important in embodied being with others, humans and non-humans. The students understand themselves as active

participants in their local environment, in close relation to other people at the program, animals and things.

Farming is what most activities we carried out at Stiernhööksgymnasiet circled around, however the central part here is not food, but experiencing togetherness and that what you do makes sense and matters. Students and teachers at the Agricultural program at Stiernhööksgymnasiet show how embodied learning generate knowledge and understandings that are meaningful, even in a society where the academe is highly valued. They turn their school into a place where bodily experience in learning processes is allowed to play a vital part.

Farming may be an industrialized system in many ways and places, but does still contain work which depend on practical experiences and skills. Ethnographies can remind us of the fact that many forms of knowledge, which is meaningful in people's lives, is learned outside classrooms and through bodily experiences. We may get a sense of where we are by statistics and we may express where we want to go by creating policy documents. But before we turn any direction, we must first understand, from a close perspective, what it is like to be in the world, or rather what it is like to *be with the world*.

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