MASTER THESIS

Understanding the Climate for Transformational Change:
Turning Attitudes into Action

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Acknowledgements

Completing this master thesis marks the end of a journey consisting of blood, sweat and tears. Well, maybe not blood, except for that one papercut, but definitely sweat and tears. At the same time, it has been a process including a lot of laughter, joy and contentment. Indeed, to a certain degree, it resembles a roller-coaster ride of highs and lows. Nevertheless, to work this long and now to see the result, certainly represents a very proud moment for me. In other words, I can finally just sit back, throw my hands up, and enjoy the ride.

Although this may be true, I could not have finished this project by myself.

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Helene Wiken
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Abstract

This thesis contributes to understanding the underlying conditions shaping a possible transformation towards a low-emission society, by investigating the discrepancy between pro-environmental attitudes and action. The empirical findings were based on an at-home ethnographic field study, amongst students at Nord University. Through participant observation and in-depth interviews, I gained a deeper insight into how students and future citizens of Bodø

municipality perceive climate change and the concept of transformation, which pro-environmental practices they engage in, and the opportunities for and challenges to individual behavior change. Climate change represent the greatest long-term challenge facing the human race, and there is very little, if any, doubt regarding the connection between human behavior, carbon emissions and changes to the world´s climate. Consequently, the Norwegian Parliament decided in 2016, for Norway to become a carbon neutral country by 2030. We already know that such a process from a fossil-fuel economy towards a low-emission society will involve changes and adjustments on all levels, we just don't know exactly how and what all these changes will add up to. With this in mind, it is paramount to understand the local contextual meanings connected both to pro-environmental practices in people´s everyday lives and local decision-making. This thesis found that the majority of the students asked perceived climate change as a relevant and important issue, while also acknowledging human contributions as the main cause. Following this, all the students in the study seemed to agree for a transformation to be needed and numerous suggestions for what a transformation to a low-emission society could entail were offered. Still, further into the conversations I realized that the attitudes and positions of most students were supportive of climate change mitigation and adaptation, instead of transformation. By analyzing these findings through a Social Practice Theoretical framework, I realized that most of the students whilst displaying a positive attitude to change, expressed a desire to uphold current practices, both in private and public sphere, and that this could to a large degree be explained by social and cultural context, in addition to habits and routines. I therefore argue that pro-environmental practices should be seen as an integrated part of other everyday practices, and not as an obscure entity which people can choose to engage in or not. Environmental lifestyles, thus, need supporting structures and mechanisms which takes into consideration the full range of people´s everyday activities, needs and desires. Equally important, this thesis discovered possibilities for changing the current conditions. Becoming a student and moving away from family and friends can be seen as a moment of restructuring, where old habits can be replaced by new routines. Therefore, it is paramount for the municipality and university to have a close cooperation and open dialogue, considering how to best utilize this window of opportunity.

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List of abbreviations

IPCC – Intergovernmental Panel on Climate Change

SPT – Social Practice Theory

V-B-N – Value Belief Norm

O.C. – Observer Comments

NSD – Norwegian Center for Data research

FSS – Faculty of Social Sciences

BS – Business School

FBA – Faculty of Biosciences and Aquaculture

FEA – Faculty of Education and Arts

FNHS – Faculty of Nursing and Health Sciences

MDG – Miljøpartiet de Grønne

The fact that we are speaking of "lowering" instead of "stopping" emissions is perhaps the greatest force behind the continuing business as usual.

- Greta Thunberg, speech to MPs in House of Parliament, UK, 2019.

CHAPTER 1. INTRODUCTION

1.1 Background

Climate change represent the greatest long-term challenge facing the human race (Blair 2006, p. 4), and there is very little, if any, doubt regarding the connection between human behavior, carbon emissions and changes to the world´s climate (Page & Page 2014). Since the early 1990s, Norway has taken a central role in contributing to the international greenhouse gas mitigation efforts, in order to reduce the global challenges connected to climate change (Dale & Andersen 2018). More recently, the global community signed the first-ever universal climate agreement at the United Nations Climate Conference in Paris 2015. One of the key objectives of the agreement is to limit greenhouse gas emissions to such an extent that the global average temperature does not exceed 2 degrees Celsius above pre-industrial levels. The Intergovernmental Panel on Climate Change (IPCC), states that such a target will require emissions per individual to be reduced by 40-70 per cent by 2050 (Norwegian Environment Agency 2014). Consequently, ambitious targets to reduce greenhouse gas emissions are now being adopted by governments across the world. Climate change responses can, however, include both measures implemented to reduce greenhouse gas emissions in terms of mitigation, or measures to adapt to changes that are projected to occur in the next decades. Nevertheless, it is becoming clear that a future scenario built on business-as-usual will not be sufficient to meet the complex challenges posed by climate change. Hence, a new policy discourse of the "transformation towards a low-emission society" or "green shift" has emerged, not only across the political margins, but now also in the mainstream discourse (Steward 2012: O´ Brien and Sygna 2013).

With this in mind, the Norwegian Parliament decided in 2016 that Norway was to become a carbon neutral country by 2030. We already know that such a process from a fossil-fuel economy towards a low-emission society will involve changes and adjustments on all levels, we just don't know exactly how and what all these changes will add up to. As all emissions are local, and so too the consequences of climate change, local authorities in Norway have been given a formal role in reducing mitigation and adapting to climate change as a part of the Paris Agreement. At present, however, according to Amundsen et al. (2018), the local context is not sufficiently included in national and international policy development, and it is therefore important to understand how transformation is perceived in a local level context (p. 23-27). Although the concept of transformation is widely discussed, many argue for the transformation to include human behavior change and a reduction in the environmental impacts of everyday

life (Gifford 2011; Hedlund-de Witt 2012; Shove & Spurling 2013). This will involve formidable shifts not merely in individual´s behaviors and attitudes, but also in contexts, social norms and practices (Hargreaves 2011b). This further implies the need for common understandings of the causes and effects connected to climate change and a willingness and ability to transform. Given the focus on local challenges of mitigation and adaptation, it is paramount to understand the local contextual meanings connected to pro-environmental practices in people´s everyday life and decision-making, laying the basis for a transformation towards the low-emission society.

Current approaches aimed at reducing individual behavior and carbon emissions tend to focus on the transfer of knowledge and information, although much research claim that awareness of climate change and environmental degradation do not always translate into actual action (Halkier 1999; Whitmarsh & O´Neill 2010). This is also true in a Norwegian context. The majority of Norwegians profess to hold pro-environmental attitudes and intent to engage in environmentally friendly behavior. Yet their actions often tell a different story (Mørtvedt, Reed and Arnslett 2019). Thus, there is a clear inconsistency between one the one hand, the level of pro-environmental attitudes, awareness and intention and on the other hand, actual pro-environmental actions (Bethoü 2013, p. 54). Likewise, many governmental behavior change interventions focus on one point, namely, where an individual is about to engage in an activity. For instance, by developing taxation on car use. Nonetheless, creating such interventions, fails to consider the individual as a whole, and the way humans do not always act in a rational manner. In order to understand Norwegian citizen´s practices and reach the goal of becoming carbon neutral by 2030, there is thus a need to further examine this divergence as well as how pro-environmental practices are composed in people´s life. The local level, municipalities, together with its citizens, clearly have a key role to play in the potential transformation towards a low-emission society.

1.2 The TRANSFORM-Project
This thesis contributes to the TRANSFORM-project[1], which not only has the aim of gaining insight into the possible opportunities and barriers for municipalities to contribute to the overall

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[1] The TRANSFORM-project is a collaboration between CICERO - Centre for International Climate Research, Western Norway Research Institute, Nord University and UiT - The Arctic University of Norway. In addition, the project has international partners at Linköping University in Sweden and NHTV Breda University in the Netherlands. The project was made relevant by a study called "Short Travelled Quality. What does transformation to a low-emission society mean for the municipality sector?". The conclusion of this study and previous studies in the same field is that municipalities have a great potential to facilitate and act as leading agents in the transformation process as well as playing a key role in reaching the targets set by the Paris agreement.

Norwegian transformation into a low-emission society, but also to find solutions capable of being transferred to other Norwegian municipalities. For the purpose of this study, I have chosen to concentrate on Bodø municipality[2], located above the Arctic Circle in Northern Norway, and which has approximately 50.000 inhabitants. I argue for Bodø municipality to be a relevant case in light of their ambitions to become a zero-emission city as part of the ongoing New City–New Airport and Smart City Bodø Projects. Correspondingly, Bodø is a university city, with Nord University having its largest campus of around 8.000 students, located within the municipality. In contrast to the overall aim of the TRANSFORM-project, I have chosen to base my study on an analysis of empirical findings, received through an ethnographic field study amongst students at Nord. Accordingly, my aim is not to study how the municipality as an actor in itself, influences the students, but rather to study the student culture within the municipality. My choice is based on many reasons which will be better explained in the next paragraphs.

After all, students are an interesting group to study as many of them are already going through a transformational phase. Having recently left their parents´ home and its lifestyle, habits and meanings, they are faced with the challenge of developing their own routines and new perspectives, in a context of considerable budgetary constraints (Brons & Oosterveer 2017). By making up a substantial part of the citizen count in Bodø municipality, coupled with the probability that some of them will settle down in Bodø after graduating, their overall attitudes and behaviors can potentially have an effect on the culture within the whole municipality. Another important reason, seen in relation to Bodø municipality, is considering how one of the main objects and goals within the green campus project at Nord, is to build a network consisting of both local actors like the municipality, as well as other national and international partners. In 2018, Nord University and Bodø municipality entered into a two-year agreement on cooperation, including areas of strategic importance for the further development of the region, being innovation, welfare and transformation (Nord 2018).

1.2.1 New city - New airport and Smart City Bodø
Bodø municipality´s most recent official goal, is to be a driving force when it comes to reducing greenhouse gas emissions and to ensure a more environmentally friendly development. The

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[2] The TRANSFORM-project uses case studies from 12-16 municipalities which are selected based on two criteria. The first criterion is whether the municipalities are viewed as "engaged" or "not engaged". This criterion is based on whether the municipality has applied for funds through the national program "KLIMASATS". The second criterion was based on the size of the municipality; <u>Small</u> less than 5,000 inhabitants, <u>Medium</u> from 5000 to 25,0000 inhabitants, <u>Large</u> more than 25,000 residents.

transformation process within Bodø municipality is closely linked to the relocation of the military airport, which will liberate an area of almost 800 football fields of "blank space", for urban development. The relocation thus provides the municipality with a great opportunity to change a large part of the city´s infrastructure, and to further create an innovative and sustainable urban development. By combining the New City – New Airport project and the related project Smart City Bodø, the municipality has an ambition of making Bodø *"the smartest city in the world"* (Finne 2017). Moreover, the planning of the new, smart and green city, builds on three main focus areas: to put humans in the center, green transformation, and citizen participation. They plan to become a more human- and environmentally friendly city. This involves, according to the municipality, a city where the citizens enjoy living, while at the same time use new technology to solve societal challenges, including climate and environmental issues (Bodø municipality 2018). In this regard, human capital is of outmost importance in order to reach a low-emission society (Mohus 2018), and accordingly, another strategic goal for Bodø municipality, is to reach 70.000 inhabitants by 2030.

As stated by Amundsen, Hovelsrud, All, Karlsson and Westskog (2018), in addition to human capital, two other factors are seen to be overarchingly important for the success of a transformation. Firstly, it is key to build a common green identity and cultural understanding, of the community as a sustainable actor, working towards a common goal. Secondly, the extent to which the local governments are engaged in different networks working towards a transformation is paramount. These networks should not only include different parts of the municipal organization, but also the local businesses, civil society groups and other relevant actors (Amundsen et al. 2018, p. 25). With all of this in mind, I find it interesting to get a better understanding of a central institution, containing the future workforce and potential leading figures of the city - namely students - perspectives on climate change and a possible transformation, as well as opportunities and challenges connected to pro-environmental practices and behavioral change.

1.2.2 Nord University - Green campus
With Bodø as my study area I have chosen students at Nord University, campus Bodø, as my empirical focus for gaining a better understanding of the municipal citizens perspectives. Nord University provides study programs and relevant research focusing on blue and green growth, innovation and entrepreneurship, welfare, health and upbringing. The university has around 12.000 students and 1,2000 employees, spread across nine campuses. Even more important,

environmental issues have recently become an important part of Nord university´s identity, as evidenced, in part, by the 2020 strategic report, and further by the engagement of enthusiastic professors, researchers and students in a new *green campus* project. A green university campus generally focuses on climate friendly transportation, resource conservation, recycling and construction of green buildings. In addition, however, it is also important to focus on the non-technical initiatives of behavioral changes throughout the university (Alshuwaikhat & Abubakar 2008). More specifically, one has to create a campus culture for sustainability and see the various elements of the university as part of a dynamic system. One obvious and key part of this dynamic system is the student body (Levy & Marans 2012 referenced in Berry 2013). Following this, university campuses can be described as samples of broader complexities. Alshuwaikhat and Abubakar (2008), even argue for universities to be seen as "small cities", which experience much of the same environmental challenges and concerns as the larger cities.

Nevertheless, both cities and campuses have serious direct and indirect impact on the environment due to their various complex activities and large populations. As a result, a transformation both within a municipality and a university must be considered from multiple vantage points. From broader questions of physical infrastructure to specific behavior of the community members (Beery 2013). While previous research has mostly centered around the impact universities have on the natural environment. More recently, the focus has been moved to promoting green campuses as well as measuring how the student body can contribute to this transformation (See e.g. Müller-Christ et al. 2014; Whitley, Takahashi, Zwickle, Besley, & Lertpratchya 2018).

1.3 Research questions
This study aims to better understand the conditions shaping a possible transformation towards a low-emission society by investigating how citizens, here students at Nord University located in Bodø municipality, perceive the environmental impact of their actions in relation to climate change. Not only, whether they are willing and able to change their practices in a more climate- or environmentally friendly direction, but also what influences their positions, perceptions and actions. My main research question is therefore:

How are attitudes and actions concerning climate change amongst students at Nord University both reflective of and influencing conditions for a local level transformation towards a low-emission society?

In order to answer my main research question, I have further developed three sub-questions:
- *How do the students perceive climate change and a transformation towards a low-emission society?*
- *Which pro-environmental practices do they engage in?*
- *What are the opportunities for and the challenges to individual behavioral change?*

My empirical findings will be discussed and analyzed by a two-prone analysis. In the first part of chapter five, I will investigate my informant's awareness, knowledge, and attitude by examining how they perceive climate change and how they interpret a transformation towards a low-emission society. In the second part of chapter five, I want to further investigate my informant's intention and actual actions through a social practice lens. My aim is to not only understand what they say they feel they *should* do, but also what they (say they) actually do. This will be done by first looking into different pro-environmental and non-environmental practices, before discussing the possibility for and challenges connected to individual behavioral change, and local level transformation, seen through the three elements making up social practices; *material*, *competence* and *meaning*.

1.4 Contribution of the study
As a contribution to the TRANSFORM-project, this study seeks to create new knowledge and a better understanding of the current conditions, as well as the possibilities and challenges connected to a local level transformation. Additionally, this study applies the insights of social practice theory to the study of pro-environmental behavior change, through an exploratory "at-home ethnographic" field study, amongst university students. By applying a two-prone analysis my aim is to further contribute to address the knowledge gap connected to the divergence between on the one hand pro-environmental attitudes, and on the other hand actual pro-environmental actions. In contrast to previous research considering only one type of behavior (such as recycling or mobility), I aim for a broader understanding which recognizes pro-environmental behavior as a heterogeneous, multi-dimensional construct in an individual's lifestyle, and I therefore include both public and private sphere practices.

1.5 The structure of the thesis

This thesis is divided into six chapters including the introduction and conclusion. In the preceding parts of this thesis I have provided an introductory chapter consisting of a short background, description of the TRANSFORM-project, a further description of my choice concerning study area, research questions and contributions of the study. In the second chapter of the thesis I will provide a systematic literature review, before providing a more in-depth description of my theoretical perspective in chapter number three. Following this, chapter number four will contain a transparent account of my chosen methods both in terms of data collection and analysis. Thereafter, in chapter five I will present my empirical findings in two parts, which will be discussed and seen in relation to previous research, as well as social and cultural conditions. The first part will focus on the student´s awareness, knowledge and attitude, while the next part focuses on the intentions and actual actions. Subsequently in the same chapter, I will use my theoretical framework and provide an analysis of the current conditions - possibilities and challenges for individual behavior change and a transformation towards a low-emission society. Finally, in chapter six I will provide a summary and short conclusion.

CHAPTER 2. CLIMATE CHANGE AND BEHAVIOR CHANGE

Climate change, which arguably represent "…the greatest long-term challenge facing the human race" (Blair 2006, p. 4), has emerged as one of the main focus areas within the many different fields of social science. Different schools of thought have both faded and thrived, and many contrasting conceptual frameworks and schemes have evolved (Hui, Schatzki & Shove 2016). Regardless of current mitigation efforts, however, there is a fast-growing acknowledgement founded on the basis of the realization that some climate changes are inevitable, due to system lags and past emissions. As a result, there has been a significant increase in social science research on the combination of mitigation and adaptation (Hovelsrud, Dannevig, West, & Amundsen, 2011; Field, Barros, Stocker, & Dahe 2012; Dannevig, Hovelsrud, & Husabø 2013). Climate change *mitigation* can be explained as "… the act of reducing anthropogenic greenhouse gas emissions" (Gillard, Gouldson, Paavola, & Van Alstine, 2016, p. 252). Climate change *adaptation* can be defined as "… adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change" (Smit et al., 2001, p. 879, referenced in O´Brien 2012, p 669). However, as already mentioned, more recent

studies tend to focus on the concept of *transformation* as essential in dealing with climate change (Gillard et al. 2016; O´Brien 2016; Amundsen et al. 2018). Despite of the increased focus on societal transformation in response to climate change, the concept still has no singular agreed-upon definition (Feola 2015). Both adaptation and transformation refer to processes of change, but the actual approach and the underlying motivation is different. While climate change adaptation, on the one hand, generally involves a change *of* something *in response to* something else, a *transformation*, on the other hand, involves a change *from* something *into* something that is qualitatively or physically different (O´Brien 2014).

Additionally, whereas some overlaps exist, it is important to mention that transformative action differs from *resilience* (Sharpe, Hodgson, Leicester, Lyon, & Fazey 2016), which is the ability of places "to react, respond and cope with uncertain, volatile and rapid change" (Pike, Dawley & Tomaney 2010, p. 1). Nevertheless, in a resilient social-ecological system, shocks or disturbances have the potential to create opportunity for doing new things like innovation and development (Folke 2006, p 253). To clarify, adaptation to build resilience "seek only change that can allow existing functions and practices to persist" (Pelling 2010, p. 78). A transformative process towards a low-emission society, in contrast, puts more focus on creating significant systemic changes (Walker, Holling, Carpenter, & Kinzig 2004; Gallopin 2006). To further illustrate, with climate change as a driving factor, *environmental behavior* has received a renewed attention within the social science field studying transformation. As Grin, Rotmans, & Schot (2010) put it, profound transformations of the type required to tackle climate change "… involve, by definition, changes in established patterns of action as well as in structure (which includes dominant cultural assumptions and discourses, legislation, physical infrastructure, the rules prevailing in economic chains, knowledge infrastructure and so on)" (ibid: 2). In addition, a transformation involves a need to focus on accelerating the development of practices and processes for change (O´Brien 2012), thus emphasizing that a solution to the climate crisis will require drastic changes in human behaviors and lifestyles (Abrahamse and de Groot 2013; Schultz 2015; Steg and Vlek 2009).

While natural sciences are important for providing the factual basis of what is happening and developing technology to address the problems, social science has a paramount role to play. For example, social scientists are addressing important questions about how to facilitate *behavioral* change by investigating, amongst other things, how and why people use their cars, how governments develop policies and taxation on car use, and how manufacturers market cars

(Shove & Spurling 2013). According to Fazey et al. (2018), the social scientist's way of critiquing current societal patterns and open up for new thinking, will lead to a greater and more open dialogue concerning what is meant by transformation, possible futures and what it means to alter the way in which people live. In the following chapter, I will review differing theoretical approaches for studying environmental behavior and behavior change, with a special emphasis on the socio-psychological approaches, before giving a more in-depth description of my chosen theoretical framework; Social Practice Theory (SPT).

2.1 The cognitive approach to pro-environmental behavior

The cognitive approach to studying environmental behavior, can be found within the disciplines of environmental psychology and behavioral economics (Berthoû 2013, p. 54). Examples of theories belonging to the cognitive approach is the theory of planned behavior and theory of reasoned action (Ajzen 1991, Fishbein & Ajzen 1977). The theory of planned behavior is one of the most classical theoretical frameworks which explores the relationship between attitudes toward actual behaviors, subjective norms, and perceived behavioral control as predictors of behavioral intention. Another example of a more recent, influential socio-psychological theory is Paul Stern´s value-belief-norm theory (V-B-N). The theory proposes that individuals' values drive beliefs and, in turn, norms which directly motivate individuals´ pro-environmental behavior (Stern 2000; Stern, Dietz, Abel, Guagnano, & Kalof 1999). A study by Whitley, Takahashi, Zwickle, Besley, and Lertpratchya (2018), used the V-B-N theory to examine which socio-psychological factors influence sustainability behavior among university students. The researchers found that one´s values matter in environmental decision-making, and that different values were associated with different behaviors. Those who adhered to *biospheric* and *altruistic* values were more likely to engage in a range of sustainability behaviors, compared to those who proposedly adhered to *egoistic* values orientations, which were less likely to engage in most behaviors (Ibid). The students who reported *traditional* or *openness to change* values, however, showed a mixed result. Moreover, this theory has been applied to a Norwegian context of studying environmentally friendly travel modes (Lind, Nordfjærn, Jørgensen, & Rundmo 2015). The study concluded that sustainable behavior could be increased by focusing on *biospheric* values, increasing sustainable beliefs and general awareness of the responsibility for environmental problems caused by the use of private motorized travel modes in urban areas, and strengthening personal norms for the choice of environmentally friendly travel modes (Ibid).

Following this, it can be argued that the cognitive approach has had some success when it comes to spreading pro-environmental values, beliefs and attitudes. However, there is a difference between on the one hand, spreading pro-environmental values, beliefs and attitudes and on the other hand, whether they result in actual action or not. Henceforth, the value-action gap, which was pinpointed by Blake (1999) 20 years ago, is still paradox within this approach (Aschemann-Witzel & Niebuhr Asgaard 2014; Hidalgo-Baz, Martos-Partal & González-Benito 2017). The value-action or attitude-action gap is a widely observed phenomenon indicating that environmental concern often does not translate into pro-environmental behavior, and thus making the lack of pro-environmental behavior change theoretically problematic (Hargreaves 2008, p. 35).

According to Gardenne, Sharma, Kerr, & Smith (2011), as an example, people regularly act on issues which are seen as relevant to them and/or perceived as personally important, indicating that the focus on changes in attitudes and values as a prerequisite for action, alone, cannot be seen as sufficient to induce pro-environmental behavior in a predictable way (Arbuthnott 2009; Zsóka, Szerényi, Széchy, & Kocsis 2013). Another reason for the attitude-action gap, can according to Hards (2012), be explained by neglecting to understand the context in which actions are embedded. Consequently, Shove (2010), suggest that we need to use a more holistic approach, which takes into consideration the pro-environmental practices as submerged in context, shaped by social interactions, and intertwined with other life-domains. Furthermore, it has been argued that the cognitive theoretical approaches do not pay enough attention to the dynamic nature of behavior. In general, the process of behavior change is still largely disregarded, as the majority of the approaches do not incorporate the notion that most behaviors are repeated over and over again (Verplanken 2012, p. 21-22). Instead, social practice theory suggests a focus attending to peoples "careers of practice" (Shove and Pantzar 2007).

Equally important, many environmental policy measures are inspired by behavioral economics and the belief that pro-environmental behavior is the outcome of a linear process of decision making, undertaken by the rational self-interested *homo economicus* (Harrison and Davies 1998, p. 2). Correspondingly, the ideas stemming from the cognitive approach, are in practice aimed at increasing people´s awareness and knowledge about climate change and other environmental issues (Bezjak 2017, p. 172). These ideas are confirmed by several studies, contending that people with profound environmental knowledge are more likely to take actions towards the protection of environments and are more likely to exhibit pro-environmental

behavior (Kennedy, Beckley, McFarlane, & Nadeau 2009; Vicente-Molina, Fernández-Sáinz, & Izagirre-Olaizola 2013). Other studies such as Bartiaux (2008) and Oguz & Kavas (2010), in contrast, have tended to reject this stance, arguing instead that there is not a significant correlation between the level of environmental knowledge/education and pro-environmental behavior. Accordingly, one can assume that these factors alone, do not necessarily cause individuals to change their behavior (Zsóka et al., 2013; Bamberg & Möser 2007). As further noted by Barr and Gilg (2006), these approaches understand environmental action through policy goals, in contrast to individuals, who arguably understand it better through everyday *practices*. Accordingly, if "… the source of changed behavior lies in the development of practices" (Warde 2005, p. 140), it seems vital to understand how they emerge, persist and disappear. (Shove, Pantzar, & Watson, 2012, p. 2). For practice-based policy to become more integrated, one starting point is to realize that solutions are not only derived from a top-down, or outside user's everyday life perspective, but rather derived from everyday experiences in local contexts (Rinkinen 2015).

2.2 The contextual approach to pro-environmental behavior

In contrast to the conventional approach, the contextual approach choses a different point of departure and critiques the cognitive approach for being both too asocial, acontextual and apolitical (Hargreaves 2008, p. 39). The theorists within the contextual approach, emphasize that individuals are active social agents, and therefore seek to explore how knowledge and values connected to the environment are employed in context. They further turn the attention away from individual decision-making, and towards the organization and possible reorganization of different social contexts (Hargreaves 2008, p. 53). Examples of theoretical frameworks within this approach, are those which focus on the role of different discourses, as well as those studying the role of nonhuman agency (technology) in structuring behavioral opportunities. Jelsma (2003), as an example of a study informed by contextual theories, uses the concept of *scripting* to describe how users become configured by particular objects into performing anti- rather than pro-environmental behaviors. Scripts are described as "the structural features of artefacts encouraging certain actions while counteracting others" (Jelsma 2003, p. 126). By arguing for morality of being just as much in the things we use as in the minds of people, Jelsma (2003), proclaim that sustainable societies can only be established if we redesign the material landscape around us. Such as, how modern televisions are designed to be

left on standby. Jelsma further proposes an experimental approach for the design of "moralizing" technology which stimulates users towards more pro-environmental behavior.

 Myers and Macnaghten (1998) is another example, where the researchers compare the different environmental discourses and rhetoric's of institutions and members of the public. As most sustainability programs on both international, national and local level require public engagement to reach their goals, Myers & Macnaghten (1998) advocate for organizational communication with the public to be central. By analyzing leaflets from different organizations in the UK, and the responses to these in focus groups, they found that rhetoric's of environmental crisis was perceived as too distant from the public´s own talk about and experiences of the environment. As a result, this type of communication did little to encourage participation and pro-environmental action. Myers and Macnaghten (1998), therefore, concluded that unless communication strategies changed to align more closely with public discourses – little would change apart from a growing sense of public distrust. This study thus emphasizes that while environmental information does have an impact, it is not necessarily in line with the impact the communicators had intended (Hargreaves 2008, p 42). Even though the study is quite old it is not outdated.

More recent studies also demonstrate the need for a better consideration connected to the rhetorical situation and the means of communication, not only by governments and organization, but also public media channels (Ockwell, Whitmars and O´Neill 2009; Bell 2016). Nevertheless, while criticizing the cognitive approach for placing too much faith in individual agency to bring about pro-environmental behaviors, the contextual approach has been criticized for placing too much focus on the contextual factors, to such an extent that the individuals are almost erased from the practice (Hargreaves 2008, p. 53).

This literature review indicates that although climate change mitigation and adaptation are important, the next step being put forward by many is a transformation towards a low-emission society. Such a transformation cannot be reduced to solely depending on individual attitudinal factors, nor only contextual factors. Nevertheless, a transformation can only be successful if enough people do things differently (Watson 2013). The review has thus further revealed an urgent need to understand what actually happens in real world situations to either oppose or support pro-environmental behavior (Hargreaves 2008). Against this backdrop, a growing number of social scientists are calling for more integrated theories focusing on a multidimensional view (Jackson 2005; Strengers & Maller 2014). For this reason, and by taking

into consideration the challenges and critiques centering around some of the theories within the cognitive and contextual approaches, this thesis aims to provide a more balanced theoretical approach. An approach which recognizes pro-environmental practices as being socially embedded in people´s everyday life context, and which at the same time takes into consideration the individual practitioners' incentives and decision-making strategies (O´Brien & Snyga 2013).

CHAPTER 3. FINDING THE MIDDLE GROUND

My theoretical framework is inspired by the practice turn which has emerged in the social sciences through recent years (Schatzki, Knorr-Cetina and E. von Savigny 2001). Social practice theory cannot, however, be defined as one single theory, but rather an umbrella approach for studying different practices (Hargreaves 2011a). Recent studies of environmental behavior within this approach have focused on sustainable consumption (Halkier and Jensen 2011; Røpke 2009), cycling (Spotswood, Chatterton, Tapp, & Williams 2015), Nordic walking (Shove & Pantzar 2005), residential heat (Gram-Hanssen 2010) and food consumption (Halkier 2009; Brons & Oostervar 2017). By considering how most of these studies have focused on single practices, and which consequently have been argued to lack a broader understanding of connections, alliances and conflicts between practices (Hargreaves 2008, 2011a), my thesis will adapt a lifestyle-based approach. Lifestyle can be defined as a set of social practices and a combination of different elements which together contributes to the net environmental impact (Spaargaren 2003). In other words, I want to study both relevant private-sphere and public-sphere practices, how they become routines and how they are interrelated. Like Burgess, Bedford, Hobson, Davies and Harrison (2003) put it: "Whilst some forms of environmentally friendly practices are now fairly well established and workable – recycling, greener transport options, buying organic… – to attempt to live a green lifestyle across different spaces and social contexts is almost an impossibility." (2003, p. 284).

Following this, to reach the goal of becoming carbon neutral by 2030, both social structures and individual action must change (Boldere & Binder 2013). For this reason, social practice theorists from Bourdieu (1977) and Giddens (1984) to more recent work such as Schatzki (1996, 2002), Reckwitz (2002a,b), and Warde (2005), have tried to formulate a middle theoretical ground, by including both contextual conditions and the role of human agency. According to Warde (2005), pro-environmental behaviors are therefore not seen as merely the result of personal values, beliefs and attitudes constrained by different contextual factors, but

rather as integrated components of social practices embodied within individuals. In this case, it becomes increasingly important to deliberate over practices and discuss local knowledge (Evans & Abrahamse 2009; Nye & Hargreaves 2009), and as a result, I expect to gain a better understanding of the social, political and cultural institutional orders that foster some behaviors and make others less common. The following chapter will involve a systematic overview of social practice theory, the general ideas, and the more specific concepts which are considered relevant for developing a practice-oriented approach.

3.1 Pro-environmental behavior as social practice

Kollmuss and Agyeman (2002, p. 240) state that pro-environmental behavior is evident when one "… consciously seeks to minimize the negative impact of one's actions on the natural and built world". Although prominent sociologists like Elisabeth Shove, insist on seeing behavioral and practice perspectives as "chalk and cheese" (2010, 2011), I agree with Wilson and Chatterton (2011), stating that studying behavior is not inconsistent with practice theory. That is to say, I understand behaviors as physical manifestations of practices through *practices-as-performance.* As an illustration, Shove (2010, 2011), is right when she highlights the fact that environmental policy tends to emphasize individual responsibility for social change. However, I believe that individuals do have and should have some self-direction of their own behavior. At the same time, I acknowledge that individual decision making is both shaped and constrained by culture, social factors, and that behavior is often the outcome of habits and not conscious deliberation.

According to Bourdieu (1990), habits and routines are part of *habitus*, which can be described as "a domain of dispositions for action, created and perpetuated through performance of a practice in a given social-cultural space" (Wilhite 2014, p. 24). Moreover, habitus bridges the gap between social structures (social space) and social practices. Social space is understood as "the objective structures which are independent of the consciousness and desires of agent capable of guiding or constraining their practices and their representations" (Bourdieu 1990, p. 123). Certainly, by investigating the student´s habits as routine practices, I can begin to explore why potentially so many of them share the same habit. Extensive social practices are not the result of many individuals independently deciding to act in a certain way (Chatterton 2011).

Another common aspect within practice theory is that both habits, behaviors and preferences of the individual practitioners, are developed in a social context. Thus, in order to understand

shared social behavior, it is not enough to study an individual but also the cultural context. Nevertheless, the "social" is composed of behaviors of different individuals and her/his decision-making strategies and incentives cannot be completely ignored (Holtz 2014). As further explained by Reckwitz (2002a), "to say that practices are ´social practices´ is indeed a tautology: A practice is social as it is a ´type´ of behaving and understanding that appears at different locales and at different points of time and is carried out by different body/minds" (p. 250). In addition, practices are by definition social in the sense that they are shared and recognized by others (Hitchings 2013, p. 105). The importance of the social context is therefore also evident in what Bourdieu (1977) termed ´Mimesis´ - the desire to fit in and be accepted by one´s peers, which is often seen as a powerful influence for activating pro-environmental behavior (Kinzig et al. 2013; Hargreaves 2011b; Shove et al. 2012). From a sociological point of view, pro-environmental behavior and practices are therefore more likely to occur in social settings, within a culture which promote sustainable lifestyles, and where the necessary infrastructure is available (Kollmuss and Agyeman 2002). Beyond these points of agreements in the social practice literature, there exists, no collective social practice approach or even a shared definition of what constitutes a practice (Schatzki 2001, p. 2).

3.2 What constitutes a practice

A practice, in the widely cited definition of Reckwitz is: "a routinized type of behavior which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" (Reckwitz 2002a, p. 249). Schatzki´s (2001) more philosophical approach to the studies of social practices, suggests that a practice is build up by doings and saying and that they can be categorized into *practice-as-entity* and *practice-as-performance*. With practice-as-entity being a temporally unfolding and spatially dispersed nexus of doings and sayings, in contrast, practices-as-performance, is seen through "moments of integration between elements that occur when practices are enacted in particular local situations (Higginson, McKenna, Hargreaves, Chilvers and Thomson 2015, p. 963). As I pointed out in the beginning of this chapter, some argue for practices-as-entities to be the most fruitful intervention point, in order to avoid placing too much focus on individual agency. Nevertheless, for the purpose of this study, the adaptability and specificity of local context, and variety of practices as performances, are seen as important to understand the conditions underlining the possibility for transformative practices.

By using Andreas Reckwitz´s definition as a starting point, Shove, Watson and Pantzar (2005; 2012) adds further detail by applying an element-based approach arguing that practices consist of three elements. I find this three-element model very useful for understanding why and how people act in certain ways, as well as offering an opportunity to understand the conditions which shapes the possibility for transformative practices. It incorporates both the duality of human activities and the system which shapes it. To put differently, the model combines the *material* or physical elements allowing the practice to exist within the social systems, which again exist through individual and shared elements of *competence*s, *meanings* and perceptions. This conceptual framework lay the foundation for my analysis, by implying that practices can be seen to "embody the tacit understandings that motivate human activities, the practical understanding that enables human activities, and the meanings that are attached to these activities" (Corsini, Laurenti, Meinherz, Appio, & Mora 2019, p. 3).

3.3 Integrating the elements of material, competence and meaning.

As I already discussed, while the focus on societal transformation in response to climate change has increased, the concept still has no singular agreed-upon definition (Amundsen et al. 2018; Feola 2015). By applying a practice theoretical lens to my discussion, I therefore, argue that everyday life can lay the basis for a transformation towards a low emission society, by closely examining the specific activities people do, the different meanings they associate with it and the interwoven material elements. Consequently, I see transformation as a reconfiguration of practices: the elements (i.e., materials, competences, and meanings), that define practices, practices themselves, and practice complexes (Shove et al. 2012).

- **Material**

Material or things as such, are barely mentioned in the works of Bourdieu (1984) or Giddens (1984), as their writings emphasize the "social" (Shove & Spurling 2013, p. 23). Nevertheless, the importance of *material* is put forward in the works of Schatzki and Reckwitz, who write that "practices are intrinsically connected to and interwoven with object" (Schatzki 2002, p. 106). However, the degree of agency to which objects and things possess within practices still remain unsettled (Schatzki 2001). According to Shove et al. (2012) the element of *material*, encompasses infrastructure, technology, objects, tools and the body itself. Furthermore, the material element is being influenced of, and has the possibility to influence practices.

- **Competence**

Correspondingly, the element of *competence,* is a combination of background and practical knowledge that leads to the accomplishment of a practice (i.e. taste, competence and

understanding) and is learned through sociality or performance (Scott, Bakker and Quist 2012). This element has previously been put forward in the form of what Giddens (1984) describe as practical consciousness. However, it is important to remember the distinction between having the right competence or skills required to engage in a practice and knowing in the sense of being able to evaluate a performance (Warde 2005).

- **Meaning**

The last of the elements, *meaning,* is a combination of what Reckwitz describe as mental activities, emotions and motivational knowledge. This element represents the conventional meanings and ideas, which can be either personal or social, elicited or achieved through practices (i.e. symbolic and cultural meanings, values, ideologies, ideas, aspirations and social significance of participation (Shove 2012, p. 14).
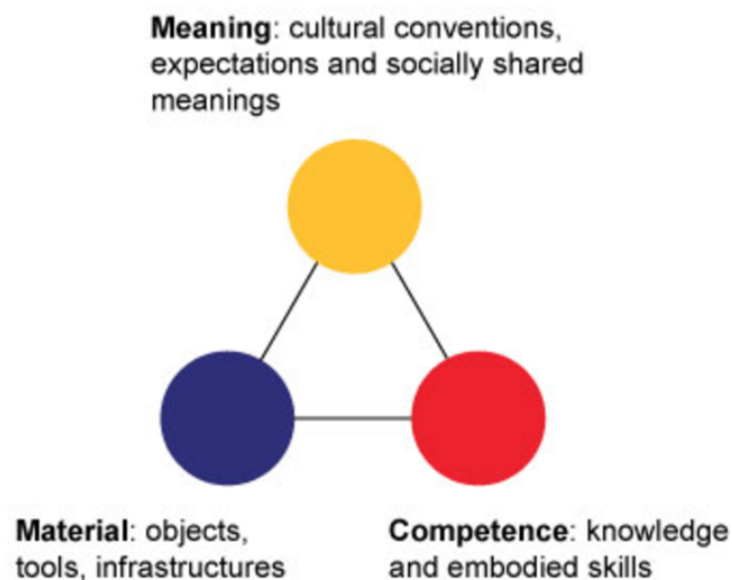
Figure 1. Shove et al.'s (2012) three-element Social Practice Framework (p. 14).

3.4 Life of elements

Seen in figure 1, the conceptual framework consists of elements that are integrated when practices are enacted. As a result, practices emerge, stabilize, change, and possibly die out as links between elements are made and broken (Shove et al. 2012, p. 21). To illustrate, Shove (2003 referenced in Tyers, Berchoux, Xiang, & Yao 2018, p. 5), describe how disruption in the links can be because of 'natural' technological evolutions (e.g. the increased affordability of washing machines), which further leads to consequences for cultural norms (we adhere to stricter norms of cleanliness), which often have environmental impacts (we use more domestic energy and water). Practices are continuously involved in a dynamic process of being formatted,

de-formatted and re-formatted. This stands in contrast to the three elements, which are relatively stable, capable of enduring over time and moving between places (Shove et al. 2012, p. 44).

Yet, it is important to remember that it is only through a continuous integration of the elements in practice, by practitioners, that they are reproduced and carried on to other populations or settings. Whereas the element of material can easily be physically transported, meanings and competences are transported through processes of codification and de-codification. Consequently, acquiring new forms of competence is time enduring, and the adoption of both meanings and competence depend largely on local capacities, histories, relations and conditions (Shove et al. 2012, p. 57). In reality, people are not free to take on any practice they like. The required elements of the practice need, at the least, to be available to them. Moreover, since practices-as-performance are historically and culturally situated, elements are unlikely to be integrated in identical fashion every time (Shove et al. 2012, p. 123). Understanding how local variations of performance and enactment accumulate and persist is therefore, an essential part of understanding the dynamics of practice and the possibility for transforming practices (Shove et al. 2012, p 126). It should, however, be noted that even though the framework seems straightforward, it offers only a loose grouping of elements. Seen as the elements of material, competence and meanings tend to overlap and mutually influence each other. Typically, the links between the elements are just as important for understanding practices as the elements themselves (Kuijer 2014, p. 27). In the following chapter I will provide an overview of my chosen methodology, both my data collection method, data analysis, strengths/limitations and ethical issues.

CHAPTER 4. METHODOLOGY

Strauss and Corbin (1990), state that the selection of a suitable research design and data collection method, highly depend upon the purpose of the research, the questions being asked and the researcher's preferences. Considering how the aim of my thesis involve attaining an understanding of a phenomenon connected to everyday life, the methodological counterpart deemed most applicable is qualitative methods (Sztompka 2008). Firstly, qualitative research uses a naturalistic approach to understand phenomena in context-specific settings, where the researcher does not attempt to manipulate the phenomenon of interest (Patton 2001, p. 39). Secondly, applying qualitative methods according to Creswell (2014), is a way of "exploring and understanding the meaning individuals or groups ascribe to a social or human problem" (p. 32). Considering how social practices are often performed unreflexively, applying qualitative

methods might allow the researcher to provoke responses from the participants on topics they may not have considered before. This differs from a quantitative approach where the focus is on generating and testing hypotheses related to the facts and causes of behavior (Silverman 2015). The information in quantitative research is in the form of numbers that can be summarized and quantified, and the final results are expressed in statistical terminologies (Golafshani 2003, p. 598). Nevertheless, as a qualitative approach has been considered suitable for this thesis, the following chapter will seek to account for how the chosen qualitative methods were implemented for data collection and analysis.

4.1 Research design

As explained in the theoretical chapter, social practice theory is assumed to find a middle way by combining a strong focus on context and social structures, while still emphasizing human subjectivity as it is "[...] at the heart of processes of structuration, reproduction, and (also environmental) change" (Spaargaren 2011, p. 815). With this in mind, the subjective accounts of individuals can after all be considered essential for the ability to understand practices. Moreover, as this thesis aims to increase the knowledgebase of why people do what they do by uncovering the intentions and rules, shared perspectives and symbolic meanings, which provide the orientation for their actions, an abductive approach was deemed as suitable (Blaikie 2010, p. 89). By continually moving back and forth between my theoretical framework, empirical data and analysis, the direction of my thesis is influenced both by the literature review, the theory and an exploratory ethnographic case study. This could not be done by purely deductive or inductive approaches (Alrajeh, Fearfull & Monk 2012). The suitability of such an approach to knowledge generation, has also been confirmed by Ong (2012), who suggested an abductive approach for studies aiming to give attention to meanings, interpretation and intentions present in everyday life. Following this, the social scientist´s task becomes according to Blaikie (2010) "to discover and describe the "insider" view, not to impose and "outsider" view on it "(p. 89). In the following part of the thesis, I will therefore describe how and why, an ethnographic approach was chosen as the most suitable data collection method.

4.2 At-home ethnography

Previous studies within the conventional theoretical approaches on pro-environmental behavior, have for the most part relied on data collected through quantitative surveys. Methodologically, it has however, been proven difficult to study practices as performances unless one is conducting some form of qualitative ethnographic fieldwork (Evans 2012;

Hargreaves 2008, 2011a). Considering this, I have adopted an ethnographic study approach as my preferred data collection method. The empirical findings presented in this thesis are therefore based on both ethnographic field notes of participant observations and conversations, as well as in-depth interviews. I am able to discuss both the participants performances and their understandings of performances and practices.

In the more classical ethnographic approaches, the researchers often travel to "foreign lands" to study a culture, before they leave the field, return home, and write up their experiences for an audience (Järventie-Thesleff, Logemann, Piekkari, & Tienari 2016, p. 237). Nevertheless, in recent times, with the emergence of autobiographical and reflexive anthropology, it has become more acceptable to study one´s own backyard rather than "foreign lands" (Anteby, 2013, p. 1281). According to Alvesson & Einola (2018), it is however, still quite uncommon for researchers to study the lived realities of their own organizations or other phenomena they have good natural access to (p. 212). Regardless, these types of studies do occur, and my data collection method therefore resembles that of *at-home ethnography*: "a study and a text in which the researcher-author describes a cultural setting to which s/he has a "natural access" and in which s/he is an active participant, more or less on equal terms with other participants" (Alvesson 2009, p. 159). Moreover, the researcher lives and/or works in the setting and is thus not an ethnographer in the sense of being a "professional stranger" (Agar, 1986).

As a Norwegian graduate student at Nord University, living in Bodø municipality, I enjoy natural access to the study area, and operate as an active participant in the cultural setting being studied. Hence, I am able to use the already lived experience of the field, as well as accessing new empirical data for research purposes. According to Alvesson & Einola (2018), an "observing participant" is a preferable way to describe the role of the researcher as; "participation comes first and is only occasionally complemented with observation in a research-focused sense" (p. 212). At-home ethnography opens up for new ways of studying practices and the practitioners (Järventie-Thesleff et al. 2016, p. 235). Regardless, it is important to mention that at-home ethnographic studies do not always lead to revealing findings or creative work, as a key concern is becoming too personally involved, or failing to consideration any pre-conceived notions. This might lead to interesting phenomena slipping under the radar. Following this, one of the main challenges connected to at-home ethnography is becoming an outsider by creating "the space and character for their research role to emerge" (Adler and Adler, 1987, p. 70). This can be both stressful to carry out and time-consuming. Having said

that, personal involvement, if taken into account and used right, can be a valuable sensitizing device (Alvesson & Einola 2018).

4.2.1 Ethnographic account

The ethnographic account which laid the basis for the empirical findings of this thesis, provided accounts of at least three categories of observable experiences (Goodall 2000 referenced in Berg & Lune 2012, p. 229): First, *verbal exchanges* either between others or between the researcher and others. These notes included interviews (which will later be described in detail), dialogues, and overheard conversations. Second, the ethnographic account included field notes concerning *practices*; the interactions, actions and activities which participants was regularly involved or engaged in. Lastly, the field notes included the *connections* among and between the observed practices and exchanges, operating along the dimensions of understandings and meanings as recognized by both the participants and the researcher (Berg & Lune 2012, p. 230).

Relevant conversations I engaged in or overheard, were replicated as near to verbatim as memory would permit. However, to secure the involved persons confidentiality, they were given unrecognizable names or codes. Analytic notes, also sometimes referred to as observer comments (as seen below), were ideas which emerged while writing up the full field notes. As explained by Berg & Lune (2012), it is important to keep these comments separated from the actual narrative and therefore they are seen in brackets labeled O.C. (p. 232).

Date: 14.06.19

Time: approximately 10.30 am.

I observed and to a lesser degree participated in a conversation concerning individual pro-environmental practices. Two females from the Faculty of Social Science were discussing online shopping and its impact on the environment. They have been given synonyms to not reveal their identity.

Nina: «I am against a culture which bases itself on quantity and unnecessary items… I want one that is based more on quality… I´m hoping we will have fewer stores like Nille and Europris in the future."
Sarah: «… in order to continue my Ebay shopping I will have to do something…»
Nina: «but you eat a lot less meat compared to other people though»
(OC – the difficulty of prioritizing)
The students seemed to agree that some pro-environmental practices were easier to engage in, compared to others:
Nina: «I feel like I need a car to uphold the quality of life that I have now … I don't want the bus to decide how I use my time.
(OC – the meaning of freedom connected to mobility and having a car)
Continues talking about how her boyfriend would have to use 1,5 hours to get to work, if he wanted to take the bus and be at work before 07.
(OC – the lack of material infrastructure)

Figure 1. Example taken from field notes.

4.2.2. Semi-structured interviews

An interview can be described as a simple conversation with a purpose. Specifically, the purpose is to gather information (Berg & Lune 2012, p. 105). It has thus been stated that interviews can be used when seeking to understand the sense-making and actions by individuals within their social worlds (May 2011, p. 157). During an interview the researcher is, however, removed from the natural setting, meaning that social interactions and individual behavior will be reported instead of being observed. Nevertheless, by employing a combination of participant observation and more in-depth interviews, I got a closer connection to the informants´ attitudes and actions (Blaikie 2010, p. 207).

For the purpose of this thesis, the semi-structured interview method was chosen. A semi-structured interview is meant to make the researcher ask questions related to the study's literature review, themes, and research questions, but with the flexibility to be adaptable to each case study's context, as new observations can lead to the asking of different questions and new revelations (Pretty et al. 1995). As put into words by Robson & McCartan (2016), "semi-structured interviews provide for "rich and highly illuminating material" (p. 286) and "unexpected and unanticipated answers" (p. 289). Contrastingly, choosing a more structured type of interview would involve "sticking to the script", and possibly ignoring a topic central to the informant´s understanding of the subject being discussed (Berg & Lune 2012, p. 114). A final advantage associated with semi-structured interview, is that it leads to both comparable and reliable qualitative data, by allowing the informants to express their views in their own terms (Cohen & Crabtree 2006).

4.2.3 Interview guide

Eight semi-structured interviews were conducted during a period of two weeks, and these served as my main source of data. During the interviews I used an interview guide containing specific questions (Appendix 1). The purpose of the interview guide was to ensure that no field of interest was overlooked, as well as to ease the following coding process. My first draft of an interview-guide, however, resembled more of a structured interview containing too many themes and questions. Consequently, after conducting a test interview with one of my colleagues, the interview guide was revised. In the updated version, the main questions connected to the themes of interest remained and was instead completed with potential follow-up questions. The more semi-structured interview guide allowed me to arrange the questions in

an open-ended character, leading the informants to set some of the direction, and for new patterns and categories to emerge.

The interview started off with a few easy, nonthreatening background questions before moving on to the more important questions regarding the study topic. I asked the informants to describe their initial thought when hearing the phrase "climate change". I found this a good way to ease into the more serious topics, and a good opportunity to get a sense of the informant's meaning of climate change as well as being able to ask good follow-up questions. Thereafter, considering how the informants answered the first question, the conversation moved into questions regarding the causes and effect of climate change, and who is responsible for making a transformation towards a low-emission society. Considering the formulation of my research questions, there was an interest in understanding how the informants interpret climate change and a transformation towards a low-emission society in a broader sense, and what aspects they tend to include in their descriptions. Furthermore, by asking these questions the purpose was to attain an overall image of the informant´s perception, attitude and background knowledge.

According to Giddens (1976, 1979), the mutual knowledge social actors use to negotiate their encounters with others, and to make sense of social activity, is the fundamental subject matter of the social sciences. Describing the informant's intentions and actual engagements with pro-environmental practices, cannot be done without first knowing what they know, either what they tacitly assume or what they can report, while engaging in social activity (Blaikie 2010, p. 89). The background knowledge was, in turn, assumed to be a good basis for the further study and questions connected to the relationship between on the one hand, knowledge, intention and attitudes and on the other hand, actual actions. Moving from questions regarding general knowledge and perceptions, the next part of the interview guide, concerned the informant's personal behavior within both private and public sphere pro-environmental practices. In general, I would say that my informants responded well to my questions and as I got more experienced with asking probe-questions, the interviews led to interesting and wide-ranging conversations.

4.2.4 Sample
Within ethnography, it has been stated that decisions concerning who will be involved, when and where, need to be developed over time (Hammersley & Atkinson 2007, p. 4). This is also true for my field work, as I began by attending meetings and talking to representatives from the

municipality, before realizing that the student's views and opinions, were in general very little taken into consideration in the municipal projects and transformation towards a low-emission society. Realizing this, I turned my focus towards the students at Nord University, campus Bodø. The data collection process was initiated with a purposive sampling method, which involves choosing informants based on known characteristics (Silverman 2013, p. 148; May 2011, p. 100). It was first and foremost considered necessary for the informants to be Norwegian students at Nord University, living in Bodø municipality. Apart from this, the informants were also purposively asked to participate based on their gender and field of study, for the purpose of having a diverse sample. However, with the exception of these considerations, no other specific criteria for participation were specified.

Once the data collection process had proceeded, the informants were asked to suggest names for other students possessing the same attributes relevant for the study. As a result, my purposely chosen informants began to lead the way to other informants, and thereby, the sampling method could partially be considered as snowball sampling (Berg & Lune 2012, p. 52). Both my initial informants and the ones I received through the snowball sampling where contacted and recruited through Facebook. Most of the students I contacted agreed to participate in the study. This can potentially be explained by the availability of personal information seen on my Facebook profile, leading to an increase in people´s confidence level (Baltar & Burnet 2012, p. 57). Nevertheless, none of the chosen sampling methods are suitable for generalizations (May 2011, p. 101), as for this thesis, a sample offering variation and at the same time fitting the purpose was considered more valuable.

4.3 Data analysis method

Even though the analysis without a doubt can be seen as the most difficult aspect of any qualitative research project, it is also the most creative. As put forward by Berg & Lune (2012), the analysis should neither be undertaken lightly or quickly, nor should it be viewed as a limitation or liability, as these characteristics are the greatest strengths of any qualitative analysis (p. 154). The data analysis following a qualitative ethnographic approach, starts from the first moment in a fieldwork, and includes all levels of processing and interpreting the material (Fangen 2004, p. 170). The most suitable way to analyze the empirical findings for this thesis was seen to be content analysis.

Content analysis involves a detailed and systematic examination and interpretation of the written text (transcripts and field notes), in an effort to identify themes, patterns, biases and meanings (Berg & Lune 2012, p. 349). As mentioned, I used observer comments (O.C.) during my field work to trace my initial thoughts and temporary attempts at analysis. As a result, themes and categories presented themselves and also patterns, or discrepancies as they either reoccurred or not. Based on the analytical categories, I then manually read through the interview transcript and highlighted words and sentences which appeared to be connected to the categories. Consequently, different units and codes emerged from the transcripts, which later were put into sub-categories of the analytical categories.

Main categories	Sub categories
1. Climate change	Understanding the causes and effects, local and personal perceived risk.
2. Transformation towards a low-emission society	The perceived importance of a transformation, local mitigation efforts, views on who is responsible and whether individual action makes a difference.
3. Pro-environmental practices (private-sphere)	Food consumption, transportation, energy consumption, recycling.
4. pro-environmental practices (public-sphere)	Democratic voting, economic support, signing of petitions, environmental activism.
5. Material	The availability of climate friendly infrastructure and goods, the lack of necessary resources, residential relocation.
6. Competence	The prior personal experiences connected to climate change, the availability of information concerning climate mitigation efforts, procedural knowledge related to the practices.
7. Meaning	The collective understanding of being a good citizen and using common sense, practical consequences related to life quality, other cultural and social norms

Table 1. Example from coding scheme.

Thereby, the coding process was carried out in a similar vein as the coding process exemplified by Berg & Lune (2012, p. 373-75). In addition, I attempted to find a balance between emic and etic analysis, meaning an analysis where I combine the concepts received from the data itself and already existing theoretical concepts (Fangen 2004, p. 194). The process of coding and analyzing the first main categories and subcategories, was relatively straight forward. When moving into the three elements of pro-environmental practices, however, challenges occurred. Separating these categories became difficult as they in practice are assumed to be interrelated

(Shove, Pantzar & Watson 2012). Therefore, in the analysis they are separated by headings, but nevertheless to a certain degree they overlap.

4.4 Strengths and limitations

Both the chosen research design and data collection method worked well, as it gave me a comprehensive insight into the connection between knowledge, attitudes and intention on the one side and challenges, contradictions and actual actions on the other. However, within the ethnographic methodology it is not a possibility, nor an aim to offer universal conclusions. The findings highlighted in this thesis are in other words not offered as definitive, representative answers in a statistical sense (Hards 2012). Instead, my chosen methodology offers a detailed, in-depth description of everyday life and practices amongst young Norwegian students at Nord University, living in Bodø municipality. As a result, the methodology leads to richer and more detailed accounts of actions, sentiments and attitudes, which favor validity instead of reliability and generalizability[3] (Flyvbjerg 2001; LeCompte & Schensul 2010).

A general challenge connected to ethnographic research is the failure of not taking into consideration the researchers' prejudices, set of biases and conceptions which potentially can influence the research (Miller & Deutsch 2009, p. 148). As a novice researcher, it was especially important for me to take these into consideration. When constructing the interview guide, I had to make a critical reflection regarding how my own views and experiences might influence the positions of my informants. I was not looking for my informants to agree or disagree with my own perspectives, I rather wanted them to reflect and come up with their own individual answers. As Marshall and Rossman (2006) argue, "The participant's perspective on the phenomenon of interest should unfold as the participant views it [. . .], not as the researcher views it" (p. 101). To avoid this problem, I spent a lot of time considering how to best formulate the questions and removed those which could seem too leading. I also told all my informant before the interview that I was not looking for a specific type of opinion, and that all and no

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[3] Validity refers to the integrity and application of the methods undertaken and the precision in which the findings accurately reflect the data. Reliability, in contrast, describes consistency within the employed analytical procedures. Moreover, considering how most qualitative research studies, are meant to study a specific phenomenon or issue in a particular context, generalizability is not usually an expected attribute (Long & Johnson 2000).
Long, T., & Johnson, M. (2000). Rigour, reliability and validity in qualitative research. *Clinical effectiveness in nursing*, *4*(1), 30-37. http://dx.doi.org/10.1054/cein.2000.0106

answers were acceptable. All in all, my informants provided me with rich empirical data consisting of a broad specter of perceptions, meanings and attitudes.

A more specific challenge connected to at-home ethnography is "breaking out" and creating a certain distance, instead of the challenge connected to "breaking in", as seen in the more conventional ethnographic approaches. However, "breaking out" became a natural part of my field work as I started the process of data analysis after most students had finished their final exam and gone home for summer vacation. In addition, this approach offers a possibility to gain better and richer empirical observations than what we could expect after spending a few months at a foreign site, or by doing 20 one-hour interviews (Alvesson & Einola 2018, p. 212-13).

4.5 Ethical issues

As noted by Berg & Lune (2012), social scientists, perhaps to an even greater extent than the average citizen, have to take into consideration the ethical obligation which follows the entanglement into the lives of other human beings (p. 61). Accordingly, all research involving other people demand a consideration of ethical issues (Ali & Kelly 2004). Most ethical issues in research fall into one of four categories; protection from harm, voluntary and informed participation, right to privacy, and honesty with professional colleagues (Leedy & Ormrod 2014, p. 106). Preparatory to my empirical data gathering, I made and abstract describing the overall aim of the project and applied for approval from NSD. NSD is the Norwegian center for data research, assisting researchers or students with ethical issues connected to data gathering and analysis. An approval from NSD is therefore a sign of quality, which is beneficial when recruiting informants (Appendix 2).

Equally important, in advance of conducting the interviews my informants were presented with and asked to sign an informed consent (Appendix 3). The consent contained a brief explanation of the nature of the research, as well as an assurance of confidentiality and protection of the informant´s anonymity. The signed consent was maintained at a secure location, and all the informants were given codes instead of using their real names. I used a number form 1-8 indicating the order of interviews, the capital letter F (female) or M (male), indicating the gender, as well as a shortened code indicating which faculty the student belonged to. Examples are 8MBS and 2FFSS, where the former is a male student at the Business School and the latter is a female at the Faculty of Social Science. Each of the interviews were recorded with a

smartphone after receiving consent from the informants to have the interviews recorded. In order to protect the privacy of my informants the voice recordings were then transferred to a password protected computer and deleted from my phone.

In the following chapter, the empirical findings based on interviews and field notes, will be presented, and seen in relation to previous research and social practice concepts. Thereon, the findings will be further analyzed through the three elements making up a practice; *material, competence and meaning*, indicating the conditions shaping the possibilities for a local level transformation towards a low-emission society.

CHAPTER 5. EMPIRICAL FINDINGS AND ANALYSIS

In this part of the thesis I seek to answer my main research question of how attitudes and actions concerning climate change amongst students at Nord University, both reflect and influence conditions for a local level transformation towards a low-emission society. The first part of this chapter will involve an investigation of the student's awareness, knowledge and attitude, by examining how they perceive climate change and the transformation towards a low-emission society. In the second part I want to further investigate the student's intention and actual behavior. Following this, I will use my conceptual framework to analyze the preceding findings and discuss the current conditions for a local level transformation, seen through the challenges and possibilities connected to pro-environmental behavior change.

5.1 Awareness, knowledge and attitudes

The interview questions informing the first part, explored the informant´s knowledge and perception about climate change and a transformation towards a low-emission society. Their views on what should be done about the problem, whether they felt affected by climate change in any way, and who they felt had the responsibility to act.

5.1.1 Understanding the causes and the effects

When asked to describe the first thing that comes to mind when they hear the words "climate change", the students provided a broad range of descriptions and comments ranging from the environmental activist Greta Thunberg to endless political debate, extreme weather, environmental degradation and corruption. In general, my informants had a lot to say and showed a high degree of awareness as well as finding the topic relevant, but also serious, complex and difficult to grasp. In common for all my informants were also the belief in anthropogenic climate change. Despite being aware of climate change stemming from natural

causes like volcanic eruptions, they all saw that the rapid changes experienced today, as a result of human contribution. The informants mentioned the use of coal, oil and gas, destruction of natural habitats, unsustainable production, transportation and individual consumption as the main human causes.

Nevertheless, all my informants emphasized that Norway might not be the country most seriously affected by climate change. The countries south of equator specifically, and poor countries in general were instead frequently mentioned. As one of my informants explained: "they do not have the infrastructure politically or physically needed to solve the problems… we can do that in Norway, we can transform, but we would have to look to other places than the West for who is mostly affected, sadly…" (5MFSS). In addition, as exemplified by a student from the Faculty of Education and Arts, many of the students emphasized how they saw the animals and the ecosystem in general as being mostly affected by the climatic changes: "I believe it is the animals… and that is a shame because they don´t do anything either… they pay the price for our emissions… take for example the polar bears which starve to death because they have no place to get food… and other animals which are affected by the plastic in the ocean that kills the animals there…" (4FFEA). This quote is interesting for several reasons. First of all, it is an example of how visualizations and popularization of complex issues has an effect on young people´s impression of climate change (Wang, Corner, Chapman, & Markowitz 2018). Furthermore, this comment is interesting not only because it clearly indicates a more *biospheric* value-set, which by many within the socio-psychological approach has been thought to provide the most stable basis for pro-environmental behavior (Stern 2000; De Groot & Steg 2008), but it also represents a common misconception about the relative contribution of activities to climate change. Litter and single-use plastic took a considerable part of the comments I received from the students, despite their relatively small contribution to climate change.

According to Hoolohan, Berners-Lee, McKinstry-West, & Hewitt (2013), removing plastic packaging would accounts for a 12% reduction in greenhouse gas emission, and food waste from the production about 3%. In comparison, a meat free diet would account for a 35% reduction in greenhouse gas emissions. When asked about how plastic littering is related to climate change, the majority focused on how plastic can stick around for hundreds of years, end up in our oceans, turn into microplastic, kill the animals and end up on in our food, and thereby relating it more to environmental degradation. Nonetheless, it must be mentioned that my

follow-up questions did make some of the students reflect around the link between plastic and climate change, by mentioning that plastic is made out of oil, and realizing the difference between what is good for the environment and the most effective climate change mitigation measures. This tendency has also been found elsewhere (Ockwell, Whitmarsh, & O'Neill 2009; Tyers et al. 2018) but should nevertheless be seen in relation to the recent media coverage, both internationally and nationally. As explained by a student at the Faculty of Social Science it is also something which is quite visible on a local level: "In the oceans we see that it (plastic) has huge consequences… it is so unnecessary… it is only because plastic is cheap, but it has so many negative consequences… it becomes quite apparent when you walk down to the shore and see plastic everywhere… it is there 60 years before it… not everything is dissolved, some of it is, but you have microplastic for example in your food and you see whales with half their stomach full of plastic bags" (5MFSS).

5.1.2 Local level effects and personal perceived risk
Even though plastic littering seemed to be a general concern because of the large and visible environmental degradation, local and personal climate change effects seemed to be more complex and less easy to grasp. In this regard, an interesting finding is related to how the difference between weather and climate is constantly being mixed up in popularization of climate change debates. As we cannot experience climate change with our own senses, making sense of such an abstract phenomenon often leads to people talking about the weather instead. Weather is both observable, sensible and talk-able. However, while weather can be defined as "the current and local state of the atmosphere, including the day-to-day temperature and precipitation activity", climate change, in contrast, refers to "complex correlations average atmospheric conditions stretching over space and time" (Kueffer 2015, p. 28). Consequently, the meaning of average climate and climate change can at best be experienced by individuals in everyday life as "the weather phenomena at large at their place of residence" (Stehr and von Storch 1999, p. 17).

As explained by a student at the Business School:" it's mostly the talk and focus in the media that one notices... my physical observations of climate change is not like that... I don't have a basis for comparison of how the weather is now compared to 10 years ago... its trough the media and so on that I know... I don't know how the weather was in the 60´s for example, so I can't compare if there are two summers in a row that are good, if that is unusual or not... I don't think young people notice that, but maybe the old ones… they might notice that there used to be more

snow during wintertime, that might be...” (8MBS). As a continuation, the student also mentioned: “yes, and I read a report about aircraft turbulence… it is going to be more and more because of the climate changes… I don’t want that…! “(8MBS). The aircraft turbulence was also mentioned by another student when asked whether he had personally experienced climate change: “…I think so… in North-Norway we experience more varying weather… we don’t have extre… or maybe we do have extreme weather but there is more wind and when there is a storm it can get really bad… some talk about there being more aircraft turbulence than there was ten years ago… but apart from that I have not personally felt it… it has not injured me or I have not had any losses because of it… so I do want to say no because there are other people in the world who actually feel it.. but yes, I have noticed it…” (3MBS).

The above comments suggest that even though the informants have a lot of knowledge about how climate change will affect other parts of the world, less is known about how it is and will be affecting Norway nationally, and especially locally. Consequently, many students who hold a high degree of knowledge and awareness of general climate change issues, seemed to be a bit confused about the temperature changes on a national and local level, and whether they would live to see the effects or not: “I certainly believe that if we continue as we do, I don’t know how long it will take, but the sea-level will probably rise… it can get colder or warmer… it depends on how things change... and it can be like in China, or I don’t hope it will be like in China, that you will get a pulmonary disease when you walk around in the largest cities” (7MFEA), “Some summers are better than others and some are worse than others and so on... I hear talk about it being some degrees colder every year but it’s not something that I notice...” (8MBS), “I think it is a bit warmer in Norway in general than it was before, but it is not so much… it is not certain we will feel it, but I think the future generations will feel it more than us… “(4FFEA). “I don’t know how much it will be during my lifetime… the north pole is slowly disappearing and when that happens we will be… it is a bit exciting to think about really… because it is getting warmer in Norway now but with sea level rise it will most likely get really cold because then we will lose the golf stream… (2FFSS). Even though the students, in general, reflected a strong knowledgebase, I realized that they did so in a sort of haphazard way, by putting different types of knowledge together, even though they were not always connected.

In accordance with previous research concluding that climate change is being perceived as a relatively distant threat in most parts of the western world (Leiserowitz, Maibach, Roser-Renouf, Feinberg & Howe 2013), one of the students explained how it is easy to acknowledge

the urgent risk connected to climate change, but not so much on a personal level: "I believe one of the largest challenges with the climate challenge is the fact that it seems so abstract… you are one part of so many, so it is very difficult to make it feel personal I think… and I think many people share that feeling…" (5MFSS). The minimal local and personal experienced effect and knowledge of climate change, with the exception of more extreme weather, is also reflected in other student´s personal perception of risk and concern: "You think about I but… it is a bit about knowledge, I think… I don't know what is going to happen if, what if and so on… I don't know that… one day somebody says that will happen, and the other day somebody says this will happen… so in the end it's like, what should you believe? So of course, the thought crosses my mind, but it's not like I walk around feeling worried… that I'm not…" (8MBS).

Other students chose a more middle way: "One could argue that other challenges become irrelevant if we don't take the climate challenge seriously and that I recognize to a certain degree…but I also think that there are other challenges that not necessarily are less important… like poverty, hunger and war…" (3MBS), "There are of course other competing areas which need and deserve attention… but I absolutely believe climate change to be one of the most difficult challenges one have to consider… we have had some time where we could have but now it is starting to get so urgent that we don't really have a choice…(5MFSS). A minority of the students, however, saw it as a main priority and concern: "The environment is my main focus area… then I guess education and welfare comes second… I believe it is something we should prioritize over other issues… I understand that it is a long-term problem and it will be very costly to work hard on it now without seeing any clear effect… but if you look at the predictions put forward by researchers… it will be a lot costlier to not do anything straight away…even though Norway is pretty safe considering our geographical position, we all have a responsibility in the west for the places that are being hit hardest… because we pollute the most… we cannot disclaim that responsibility… or obviously we can.. but we should not!" (2FFSS), "I believe that is should be prioritized… which future should be fight for is there is no future?" (4FFEA).

The literature suggests that motivation for acting to prevent a risk usually depends on how urgent and close the risk is perceived to be, indicating that the majority of the student I interviewed, would be less likely to engage in pro-environmental practices (Oppenheimer and Todorov 2006; Weber 2006). In contrast, a study conducted by Withmarsh (2008), compared the behavior of UK citizens who had experienced flooding to those who had not. 65% of the

citizens who had not experienced flooding reported that something could be done to tackle climate change, compared to 62,4% of those who had experienced flooding. When asked about willingness to personally act in order to reduce the effect of climate change, a bit surprisingly, the citizens without flooding recorded a higher percentage of 84,1% and 80,9% for the people who had flooding. Their findings were again confirmed by a study from 2011, where Spence et al. also documented UK citizens reactions to flooding, presumably caused by climate change. Their findings indicated neither a strong connection between having experienced flooding and willingness to adopt pro-environmental behavior, nor actual actions to lower emissions. Previous research therefore leads me to believe that there might be other factors influencing the link between attitudes and behavior, and other approaches needed to illuminate clearly the conditions shaping behavior change.

To illustrate which factors this can be, a qualitative study conducted in a flood risk area of England, suggested that the desire to feel secure, distracted people from taking action that would reduce the physical damage. This desire to feel secure mentally, more so than physically, can be described as what Giddens (1991), put forward as *ontological security*. An ontologically secure person is someone who is "free from existential doubts and who is able to believe that life will continue in much the same way as it always has, without threat to the familiar representations of time, space and identity" (Harries 2008, p. 482). As further explained by Dale, Veland and Hansen (2018), "the ontological security concept broadens the limitations of traditional security from its focus on material, physical security threats to include, indeed take as a starting point the human need for an identity, a sense of place, for order and knowledge about the world" (p. 368). Similarly, a study conducted in a Norwegian small-town context, found that people, on a general basis, avoided thinking about climate change, in parts because doing so raised fears of ontological security and the feeling of guilt and helplessness. These feelings further on posed a threat to the individual and collective senses of identity. Such studies can help explain how the discrepancy between attitudes and pro-environmental behavior, is not necessarily caused by lack of information, but instead, the active strategy of keeping information at a distance, in order to uphold individual emotional management (Norgaard 2006b, p. 372).

5.1.3 Transformation towards a low-emission society

According to Capstick, Lorenzoni, Corner & Whitmarsh (2014), lifestyle and behavior changes need to be a more central component in the transformation towards a low-emission society.

However, in practice, with the exception of recycling, it has so far been very difficult to achieve meaningful changes in personal greenhouse gas emissions on the societal or individual level. A survey conducted by Green dot Norway (2019), reported that 84% of the respondents claimed to recycle as a means for tackling climate change, while only 27% claimed to eat less meat, and 22% claimed to limit the amount of flight.

At first sight, all of the students seemed to agree, that a transformation was needed and numerous suggestions for what a transformation to a low-emission society could entail were offered. These offers, however, ranged from transformational reconfigurations of practices involving more centralization, larger smart cities and less availability of out-of-season goods, to the more mundane substitution of existing elements of practices with pro-environmental alternatives, such as better technology, bike lanes and electric cars. In reality, much of the student´s insight and comments, therefore, centered around how material objects and competences influence non-environmental practices, and how they might be replaced with more pro-environmental alternatives: "I think we have to find different solutions... and I think the main part of making changes is that you have a good plan… like, for example if the government proposed a plan in which you could live the same life but use alternatives…" (6MFBA). However, the meanings of existing practices were also invoked and challenged in various ways. In general, they did however, dismiss the deep green environmental meanings, instead, they appealed to already well-established meanings preferring to emphasize the convenience and cost-saving of pro-environmental alternatives (Hargreaves 2011a).

To put differently, many of the students agreed to the importance of transformation, but the comments they gave were not really related to transformational changes of practices: "I absolutely agree that we will need a transformation but if it means we have to change the way we live… that I don't know… I am a technological optimist, I believe in both the blue and green growth… that we can… not necessarily uphold the capitalistic system which we have, but I think a transformation does not have to be by the expense of our current standard of living… of course to a certain degree but nothing that will affect our values, that we have to change by not getting the food that we want.. I don't think we will stop having vegetables in the grocery stores throughout the whole year… I believe in ecological modernization in particular, but of course that might be since we live in Norway… might be a bit narrow to only see it from a Norwegian perspective, but I think we should be a bit careful claiming that we have to change the way we live…" (5MFSS). This comment highlights a very typical non-transformational

attitude, which was common for most of the students. In contrast, one of the students put forward a transformational position: "A transformation when it comes to being used to be able to pick and choose everything all the time... we need to get used to the fact that sometimes we cannot have that and then just wait until the season is right… more short-travelled… of everything… In Norway that means we won't have certain things at certain times because it has a negative effect on the environment to have greenhouses which can grow things that are tropic… I don't picture a low-emission society where we cannot get hold of tropical fruits at all but maybe we have to be a bit more realistic and maybe eat more canned tropical fruits…" (2FFSS).

5.1.4 Global problems, local solutions

Following this, the minimum knowledge about local level climate change effects, was also common amongst the students when it came to local level transformation and mitigation efforts, seen through the projects initiated by both the municipality and the university. Even though many shared insightful comments about how the local level could contribute: "In order for people to make better choices, politicians have to facilitate through different social structures... if it is electric cars or parking spaces for bicycles, if it is though competitions… yes… those type of thing, measures that motivate, while at the same time offering public education as to why one should do it…and in a way that people understand that they can do this in their everyday life… I have a lot of faith in the local solutions which we dependent on the reach the large goals…" (1FFNHS), "It is extremely important to have the local level as part of the team because they see which solutions are needed locally… The state makes decisions, but they are not done in a vacuum, there are often input from municipalities… this works for us… I see the local level as mostly an information gatherer which can provide knowledge to the decision makers because the decisions have to be made at a higher level… they can also give information to their inhabitants which have a closer tie to Bodø than to Brussels if it is the EU that are going to take a climate action" (5MFSS). The majority of the students, nevertheless, had very little to no knowledge about the local projects in Bodø municipality: "I´ve heard nothing about it… I don't feel like I have a personal relation to that city… it is difficult and expensive to get there…" (7MFEA), "I would rather like to brag a bit about Fredrikstad now that I have the possibility… I don't know enough about the projects in Bodø to say something about them…. Its maybe because we (the university) are placed too far from the city… it is actually a problem that we are not more connected… of course they have some diffuse connections, but they seem like two different cities…" (5MFSS).

This was also the general impression I got through my fieldwork, where I attended several open meetings regarding the project's New Airport, New City and Smart City Bodø. The meetings were organized by the municipality, and open to all citizens, but I quickly noticed that I was the only student present. This suspicion was also later confirmed by officials from the municipality, whom admitted that they had done a poor job in recruiting and giving information to the students in Bodø. I even discovered that a meeting concerning Mørkved, the part of the city where the university is located, was placed on the same day and time as a well-known Norwegian artist had a concert at the university campus. These are interesting findings, suggesting that a closer cooperation and dialogue is needed between Bodø municipality and Nord University.

Comparatively, when I asked the students about mitigation efforts at Nord University, some had heard about the green campus project, but did not seem very impressed of the current state, except from the recycling stations. The following quote illustrate this element which ran across all of the interviews: "When it comes to the environment, I don't think we are doing very well… especially not at this university… so far as I'm concerned… I think many students have positive attitudes but maybe they don't always have enough information and knowledge to act on those attitudes… most people want to recycle when it is easy, they don't like to throw things into nature… and we talk about the environment, plastic in the ocean and those type of things…" (2FFSS). The relationship between sustainability knowledge and pro-environmental behaviors have also previously been studied by Heeren et al. (2016). Their study indicated that even though knowledge serve as an important factor, the general attitude towards the behavior, the ability to engage in the behavior, and the perception of what other think about the behavior were even more important. Another student emphasized that there seems to be a larger amount of people who are climate aware and interested at the universities, versus what you might find amongst the general public. This could indicate at least a good starting point for pro-environmental behavior change.

Another interesting point came from a student at the Faculty of Education and Art: "They have recycling stations… but other than that… I have not noticed anything from the teachers or any other areas… at the student council meetings they print out large amounts of paper, which I see as very unnecessary as everything is available online… the faculties could also have a greater responsibility for their own daily operations…" (4FFEA), soon to become a teacher, the student

also commented: "In the end I think everything is about education… everything comes back to what you learn at school… the attitude fronted by your teacher… so maybe we should implement the sustainable development goals a bit better in the teacher education… we are supposed to implement them in our work when we finish…but I have not noticed any focus on that…" (4FFEA). These are insightful comments expressing a need and want amongst the students for a greater focus on climate change and sustainability issues, while at the same time indicating the need for more and better local and context specific climate communication.

5.1.5 Responsibility and individual action

As previously mentioned, a substantial part of the literature regarding transformation towards a low-emission society, proclaims it to likely require painful sacrifices and drastic lifestyle changes. Consequently, I already discovered that most of the students put forward positions emphasizing climate change adaptation, rather than transformation. With this in mind, it could be very easy for them to give away some of the responsibility for action, towards impersonal entities such as the business sector, the government and other countries, with which few personally identify (Pongiglione 2014, p. 312). When asking my informants about who they believe should have the main responsibility for climate change transformation, they, however, revealed a hybrid position blaming both the facilitator/provider and the consumer: "Why should the politicians care if we don't? The politicians cannot see through a political decision if the people are not on board… so it goes both ways… I don't think we can only blame the politicians and say that they have to fix this... because it is also our responsibility…" (1FFNHS), "the consumers control the market… we can see that quite clearly now both because there is a lot less plastic and easier access to meat free and dairy free products… we don't want to use plastic, we want to eat less meat, we want to be more environmentally friendly, we want more short-travelled products and the businesses adapts to that…The individual level is the absolute most important, everything has to start there" (2FFSS). Additionally, many argued that they don´t think individuals can solve such a major issue by themselves: "It is the ones with most power… USA, Russia, China and India… and when you mention those four countries you see why nothing has been done… it is… everybody can do something, there is not more responsibility other places, but a better opportunity to make a difference. The same student also followed up with: "I read an article saying that five businesses had 80% of the emissions or something like that... right… so… I feel like it is difficult for one individual to do something when the rich and powerful don't want to do anything… because it is basically money and power it all comes down to… in the end, to be moral and ideological doesn't work…(7MFEA).

5.2 Actions and contradictions.

The students in general showed a high level of awareness and knowledge about climate change issues, although mostly international and to a lesser degree local. Furthermore, most students also inhabited a favorable attitude towards climate change mitigation and adaptational practices, but to a much lesser degree, climate change transformation. Following this, and as becomes evident in the following discussion, the majority of the students simultaneously carried out practices which contradict a green lifestyle. As previously described, a majority of climate change transformation initiatives both academic and applied, focus on individual capacities to enforce change. Although not representative for all the students, these following quotes indicate a need to further investigate how we can transform awareness and concern into actual action: "I am quite concerned about it… but I don´t spend much energy on working with it or doing local measures… so there are probably people who are a lot more honestly concerned about it than me" (3MBS), "I don´t think climate change influence me to the point where I want to change my behavior… everybody wants to uphold the same standard of living" (6MFBA). Moreover, in terms of behavior change, it becomes important to further investigate the logic of individual decision-making through the study of everyday pro-environmental practices, both in the private and public sphere (Bertü 2013, p. 64).

5.2.1 Private sphere pro-environmental practices

As seen throughout the presentation so far, a key early finding in my fieldwork, was the fact that people do not distinguish their actions on lowering emissions related to climate change, from other pro-environmental actions, like waste minimization and environmental campaigning. I have included many types of pro-environmental practices starting with food and energy consumption, transportation, and recycling practices in the private sphere, to a more public sphere discussion focusing on the democratic right to vote, and environmental activism. Although acknowledging that recycling is neither directly connected to climate change, nor a transformative practice in itself, I find it interesting to discuss and look further into. This is especially related to plastic being a general focus amongst the students, as well as how they see it in relation to climate change, without always considering the actual connection. Nevertheless, the general focus of the next chapter will be on the social, cultural, historical, infrastructural, political and institutional orders that foster some behaviors and make others much more difficult to perform (Kennedy & Krogman in Kennedy et al. 2015, p. 50). As an example, previous research by Shove (2003), used historical analysis to present how water consumption remains

(often unsustainably) high due to social norms for cleanliness and housing infrastructure like indoor plumbing and high-flow showers.

5.2.1.1 Food consumption

Food consumption is recognized as an important part of pro-environmental practices, considering how both the production, transportation and consumption contribute to environmental problems like climate change (Austgulen, Skuland, Schjøll & Alfnes 2018). Accordingly, a more environmentally sustainable diet would include a reduction in the consumption of red meat. The current trend however, points in the opposite direction. Numbers from Animalia (2017), reveals how meat consumption in Norway has increased from 45,7 kg per capita in 1989 to 70,5 kg in 2016. The increase in meat consumption can to a certain degree be explained by the Norwegian authorities currently showing little interest in committing to agricultural policy changes in order to reduce the production of meat (Vittersø, Kjærnes & Austgulen 2015). On the contrary, the national strategy is to increase Norwegian meat production (Norwegian Ministry of Agriculture and Food, 2009). As pointed out by Austgulen (2014), there is also no agreement among the different policymakers when it comes to defining what environmentally friendly meat consumption actually entails. One solution to a more sustainable consumption, being put forward by the majority of my informants, and which is evident in current policy reports, is to provide enough information for the consumers. However, the result of the study by Austgulen et al. (2018), showed that being informed about the climate benefits of a diet based on less meat was necessary, but not sufficient by its own. This notion has also been supported by other researchers (Whitley, Gunderson, & Charters, 2018). Rather, to explain why the majority of Norwegians eat meat, and continue to eat more, we need to look into conventional eating practices, that carry a shared understanding of the components of a 'proper meal', containing meat, vegetables and carbohydrates, and the historical and social underpinnings of that cultural convention (Spurling, McMeekin, Southerton, Shove & Welch 2013).

While most of the students on the one hand, show a positive attitude towards eating less meat, on the other hand, the willingness and support for upholding their current meat consumption is to a large degree explained by the social and cultural context, in addition to habits and routines (as also described by for ex. Sabaté and Soret 2014). Several comments made by my informants were grounded in the fact that agriculture and meat production represent an important part of the Norwegian culture. As a result, wanting to support Norwegian agriculture was seen as

important: "For me to stop eating meat something drastic would need to happen… poison in every bite or something, that you died… I am pro-Norwegian agriculture… you know the hard work the farmers put into their jobs… so you want to support it…(8MBS), "I don´t think we should cut it out but cut down… and look for alternative products like Norwegian meat instead of Eastern European for example…(6MFBA). Even so, towards the end of my fieldwork a new documentary was broadcasted on Norwegian television: "The secrets of the pork industry", which portrayed a up until now, hidden side of the Norwegian meat production, and included horrifying footage of animal misconduct. The following days I observed and participated in conversations amongst the students, where some proclaimed that they would never eat pork again. Accordingly, this could potentially be defined as a transformative moment in the pro-environmental practice: "An experience occurring during a short time-period which results in a significant change in pro-environmental practice" (Hards 2011, p. 763). However, many students chose to instead focus on higher prices on meat, and better surveillance of the suppliers, in trade for a more ethical meat production. Moreover, in consistence with not wanting any radical changes, coupled with the actuality of happening in the middle of the socially grounded Norwegian barbeque season, grocery stores have so far not noticed any effect on their sale of pork chops (Fjeld, 2019).

Following this, meat consumption in a Norwegian context is to a large degree caused by a habit, stemming from the cultural context and upheld by the social influences. Again, pointing to the fact that knowledge and intention don't always translate into actual actions. Furthermore, comments received from the interviews show how some of the students experienced meat consumption as part of what is considered a proper, and traditional Norwegian meal, as well as an important component of the good life:" …It is also important to enjoy oneself… I like to make food and enjoy it…" (8MBS). Alternatively, other students put forward a strong health belief, emphasizing that eating less meat would result in a lack of essential nutrients: "I eat meat when I feel like it… it is not so often, but when I eat meat I do it with a good conscious… I don't eat more than necessary, but I treat myself to a steak every now and then… I believe it is important to have a balanced diet and I believe some of that diet should be meat… Vegans who give birth… - 50% of the children being born have a chronical B12 shortage and that is a direct consequence of the mother not eating meat… because B12 supplement is not transferred in a similar way to the child…" (5MFSS).

Conversely, a study conducted on less-meat initiatives among Belgian students showed that concern for environmental problems had a positive connection to the support of the initiatives (De Groeve and Bleys, 2017). However, as also indicated by previous research, there seems to be a reluctance amongst consumers to eat less meat only for climatic and environmental reasons (Tobler, Visschers & Siegrist 2011; Vanhonacker, Van Loo, Gellynck & Verbeke 2013). Correspondingly, studying consumer readiness to reduce meat consumption for the purpose of environmental sustainability in Norway, Austgulen et al. (2018) found that while almost 50% of the respondents support the idea of having one meat-free day per week, only 14% of the respondents actually tried to reduce their meat consumption based on environmental reasons. This was also evident for the majority of the students I interviewed: "I guess we have the possibility to improve when it comes to meat consumption… I eat meat maybe 5-6 times a week… and then fish the rest of the days… so... I could eat less… when my mother and brother suggest having one meat free day a week, I just laugh at them… I´m not up for doing that… because… what can I say… I don't want it to be like "yes, every Monday we are not going to eat meat" … I don't want that… but if we could decide to have a more flexible meat free day a week… that I think we could do… it becomes like a routine… that every Monday has to be a meat free day… it's like when I´m at work and every Tuesday is the cleaning day… then you know every Tuesday you have to clean a lot… it's not like you look forward to that day…" (8MBS), "I don't think I can stop eating meat… I don't have all the money in the world, but I do at least try to buy ecological eggs… Maybe one could start having a vegetarian Monday or something like that, many people do that… meat free at least once a week, many probably have 4-5…" (4FFEA), "I don't want to completely stop eating meat, but I guess I could eat less… Nevertheless, when asked if he had thought about trying or actually tried to eat less meat the answer was – "no…" (3MBS). This far it becomes evident that meat consumption involves a constant orientation toward social others either indirectly or directly, while at the same time considering societal ideas of right and wrong.

Throughout the interviews the words I *"should",* or I *"could",* were frequently used. This identifies what the students wish they were doing or are in principle willing to do versus what they actually do (Martinsson, Lundqvist & Sundström, 2011). The actual behavior might therefore to a certain degree be influenced from the 'Hawthorne effect', describing how individuals declare a different behavior from the behavior they actually adopt (Whitehead 2005). Moreover, as explained by Boyle (2011), becoming a vegetarian does not only involve a shift in behavior, but also the adoption of a new identity, and, commonly, participation in a

collective movement wherein a "career" in the new practice becomes a possibility. However, as Warde (2016, p. 145) notes, such "careers...usually take the forms that are indicated and afforded by the organization of the practice", rather than simply self-determination. Similar to the findings from a study conducted amongst Finnish consumers by Vainio, Niva, Jallinoja & Latvala (2016), many students emphasized the factors of convenience and price functioning as possible barriers to choosing plant-based food. Nevertheless, two out of eight student whom I interviewed were vegan, they were both female and environmental reasons were if not the main reason for it, a very important one. In accordance with previous research, I discovered that on a general basis, my female informants were more likely to be willing to eat less meat and to actually believe it had an impact on the environment (Tobler et al. 2011; de Boer, Schösler & Aiking 2014).

Awareness and commitment to pro-environmental concerns unrelated to gender did however, not necessarily, makes it easier for my informants to engage in pro-environmental practices. Similarly, to a study by Berthoü (2013) on the everyday challenges of pro-environmental practices within households in Copenhagen, I discovered that my informants had multiple variables related to consumption practices, which they had to take into consideration when acting in accordance with both the climate and the environment. These included amongst others; reduction of greenhouse gas emissions, animal welfare, reduced packaging, fair-trade and the prioritizing of national and local produce. As a result, this challenge represented situations in which the students had to make priorities. "Vegetables and so on are just as expensive as meat… or if I buy fruit from for example brazil its maybe not a lot more environmentally friendly… so it is almost like buying meat" (6MFBA), "you don't only think about the environment… but also fair trade… will someone get a salary of 1nok per hour if I buy this paprika or will it actually benefit someone? … (4FFEA). And when the already discussed resources available to a student was put into the equation, the prioritization became even tougher: "I wish I could only buy Norwegian meat or eat the meat that I hunted myself, but as a student I cannot afford it and often we would drive to Sweden and buy the cheapest meat we could find… that meat was not good for me nor the environment… (1FFNHS). Moreover, as another student made me aware of during a conversation, acting to save the environment can come into conflict with a focus on animal welfare: "…from a climate perspective it would be better to eat fish, however, from a perspective of animal welfare the right thing would be to eat cow´s meat, because of how many people one cow can feed compared to only one fish".

5.2.1.2 Transportation

The energy sector in general, and the transportation sector in particular, not only in Norway but all over the globe, accounts for an extensive amount of all greenhouse gas emissions. This is especially due to fossil fuels. Norway first discovered its oil reserves offshore in 1969. The following decades, the Norwegian government developed the oil and gas sector into a thriving industry and created the national oil company Statoil. As a result, Norway today has one of the world´s largest sovereign wealth funds of USD 960 billion (Mckinnon, Muttitt and Trout 2017). Furthermore, the Norwegian oil industry has in many ways led to an "oil culture", or mental structure amongst many Norwegians (Dale and Andersen 2018). Consequently, driving a car is by many seen as a necessity for living a normal life in the 21th century. This is not solely based on the fact that we have become dependent on the motor car itself, but it is also part of the living arrangement starting in the beginning of 1920s, which emphasizes the use of petroleum driven vehicles to fulfill social, cultural and economic goals (Barr, 2015). Nevertheless, in Norway as in other countries, a reduction in emissions stemming from transportation is a vital step towards the low-emission society (Hui, 2013). Furthermore, any municipality and university being part of the transformation towards a low emission society, must confront the issue of mobility. The daily movement of people back and forth to campus in automobiles burning fossil fuels, is one of the largest impacts a typical educational institution imposes on the life support system of the planet. In addition, the travel patterns that students learn while in college are likely to influence their future travel choices. For many students, their college experience may be their first real experience with pedestrian- and bicycle-friendly designs, or with accessible transit, this experience will influence their future choices as individual commuters, voters and leaders (Toor and Havlick 2004, p. 10). The first challenge for promoting environmentally friendly transportation practices, must therefore start with both the physical landscape, as current infrastructure is largely designed around car use both nationally and locally, and the ontological construct connected to mobility.

While one of the students reported that he usually cycled to university instead of going by car, it was mostly related to the fact that he emphasized the health benefits. Contrastingly, the distance to the city center by bike in all types of North-Norwegian weather became such a hazard that he sometimes took the bus, but more often asked somebody to drive him. The same person also proclaimed that whether he used the collective transportation system or went by car, largely depended on where in the country he was: "It depends on where I am in Norway…

in Oslo for example there is very good collective transport… compared to Bodø where it is a bit mixed… it is easier to ask a guy to drive you somewhere instead of taking the bus" (7MFEA) The rest of the students presented a mixed picture of the collective transport and the availability in Bodø: "95% of the time I´m happy using the collective transport... and sometimes I feel like it would be nice to have a car… and then I hope maybe in the future there will be something within circular economy which makes it possible to pay a small amount of money to have a car for one day for example…" (3MBS). It however, became apparent that the majority of those who reported that they were happy taking the bus, using a bike or walking, did so for other reasons than the environmental ones: "I got rid of my car because I don't need it, to be honest… the collective traffic works fine, and I live right next to the university… I know that if I had a car, I would use it actively… and again, it is expensive of course… but yes… I didn't need it… so it is not 100% me getting rid of the car because of the climate, but it is of course a result of the good collective offer, that it is…" (5MFSS), "It's very nice to be able to say to people that I do it for the environment reasons, but it was because I´ve been too lazy to study for the theory… but in retrospect I also realized having a car is very expensive…" (3MBS).

The word of the year in Norway's neighboring country Sweden "Flyskam", which means experiencing a feeling of guilt when flying, has not yet reached the majority of the students I talked to, even though the employees at Nord university have been criticized for flying too much (Svarstad 2019). One of the students, who also works for the University, and therefore flies a lot commented: "we are one of the countries which fly most in the whole world and that is guaranteed to have a relation to long distances, and quite poor infrastructure… a lot of fjords and mountains and few trains in the right direction… few highways north of Trondheim or north of Hedmark I guess… very few high-speed roads…I have 20/25 flights on an average per year… I have taken the train a couple of times and for the most part it is ok… but to fly takes one hour and 11 hours by train… I don't have many personal air travels… mainly twice a year... Easter and Christmas… tomorrow I´m taking the train but that was mostly due to economic reasons… so I guess I could sacrifice something; I could do that… (3MBS). After the Norwegian prime minister recently fronted that she flew without any form of guilt, there has been a renewed debate (Helljesen 2019): "I absolutely fly a lot… but up here we don't have much choice… luckily, we have flights going to the districts through Widerøe… they rarely have empty flights… so we have adapted to the need really good… I think the aircraft seat fee is very unfair… we don't have a choice because the alternative is to drive a car for 7 hours or take a flight for 15 minutes… I do not feel personally offended when people say we should fly

less… I don't…" (1FFNHS). These comments indicate that engaging in pro-environmental practices is not always solely an individual's free choice. As Jackson explains: 'Individual behaviors are deeply embedded in social and institutional contexts. We are guided as much by what others around us say and do, and by the 'rules of the game' as we are by personal choice' (Jackson 2005, p. iii). This will be further discussed in the chapter concerning the conditions shaping the possibility for individual behavior change and, consequently, the transformation towards a low-emission society.

Nevertheless, those students who reported feeling guilty and bad about flying, also reported trying to compensate by committing to other pro-environmental practices: "I think it is about doing what you can… I´m probably not the best example since I have flown so much that I probably have used up the quota for 20 years through my extracurricular activities… but you do feel it… do you always need that plastic bag? or buy things that are wrapped in plastic? (4FFEA), "I should maybe fly less… I fly a couple of times per year, I like to travel… I travel both international and south to go back home… but I'm not sure if I want to let go of the international flights, I have given up on so many other things… I am vegan because of the environment… I always bring a shopping bag to the store, not that it is a lot… but I got rid of my car… so I bike or take the bus..." (2FFSS). These comments also point to stronger awareness and more knowledge in itself maybe not leading to pro-environmental decisions, as well as pointing to the ontological construct and the notion of freedom it represents. For this reason, Warde (2005) argue: "the sources of changed behavior lie in the development of practices themselves" (p. 140), meaning that it becomes a challenge of transforming the practices of transportation to make them more sustainable (Hargreaves 2011a; Southerton, Warde and Hand 2004).

5.2.1.3 Energy consumption
Norway in general, and North-Norway where Bodø is located in particular, has a cold climate and annual energy use in the household and commercial sector it therefore approximately 80TWh (Rosenberg 2013, p. 420). However, hydropower has been the main national energy source since the start of utilizing the energy in rives and waterfalls to produce energy in the late 1800s. The electricity consumption has in general increased in accordance with the economic growth and modernization in Norway, but still 98% of all electricity production stem from renewable resources with hydropower remaining the main source, as well as contribution from wind and thermal energy (Ministry of Petroleum and Energy 2016). Furthermore, Norway´s

access to energy has been vital for the country´s economic wealth, in addition to representing the foundation for many jobs and an increased standard of living.

While energy consumption has slowly decreased the last years due to higher expenses, residential energy consumption such as campus resident halls, have experienced a steady increase. This is partly due to the complexity in student´s energy use practices, as well as having electricity included in the monthly rent, resulting in no real time feedback on their daily consumptions. As emphasized by one of the students: "I don't know how much electricity I use because I have never paid for electricity… in the student housing it is included and also where we live now…" (4FFEA). As a result, the students are neither able to easily identify how much electricity their appliances consume, nor able to compare how their consumption level is in relation to a typical peer neighbor of similar room type, size (Emeakaroha, Ang, Yan, & Hopthrow 2014, p. 357-358).

Similar to the findings in the other pro-environmental practices, and again pointing to the value-action and attitude-behavior gap, engaging in energy conservation is for the most part not described by my informants as being motivated by primarily environmental factors. It is however, recognized as a positive side effect: "I always make sure to turn off the stove before the food is completely done because I know it stays warm for a while after… primarily because we get a cheaper electricity bill but also because it is an important contributor when it comes to not using more electricity than needed (5MFSS). Research by Whitmarsh (2009), for example, found that turning off unused lights and buying energy-efficient bulbs are most often motivated by a desire to save money. Nevertheless, for other students, and in accordance with social practice theory, engaging in energy conservation was neither based on economic, nor environmental reasons. Some saw it as merely a habit caused by conventional routines and as put forward by one of the students: "I always turn off the light when I leave, that I do… it is common decency which I learned from my father" (7MFEA). Furthermore, this comment indicate that these types of practices are learned by social others, which further on in life leads to be a habit. Research within the habits and unconscious processes field shows very strongly that energy-use behaviors can, and often do, move quickly from considered deliberations over perceived personal costs and benefits to the more habitual sphere (Bamberg and Schmidt, 2003).

5.2.1.4 Reuse, reduce, recycle

In the beginning of the twentieth century, recycling and reuse were common practices in the everyday life of Norwegians. While mostly driven by scarcity and the need to reuse expensive and rare goods, the link between consumption and recycling was immediate (Jørgensen 2013, p. 500). The recycling practices we engage in today are similar at first glance, but if we take a closer look, we realize that both the mechanisms and the motivations has changed considerably. Owing much to the discovery of oil outside of the Norwegian coast, the nation has transformed into a wealthy country in which the value of reuse and recycling is more of an abstract thing. Instead of being a result of individual scarcity, it has become a way to create connections between everyday habits and the global environment. Similar to the energy conservation practices, many students also emphasized that reuse and recycling practices were learned from an early stage. As pointed out by Bourdieu (1984), practices are class-based, and values and norms are learned unconsciously from childhood to adulthood. I argue that this perspective within social practice theory, can help explain habitual actions, which are learned from an early age and performed unconsciously. The routines and habits can thus result in a kind of path dependency, causing the students to do in the future what they did in the past. In this way, habits and routines can work as both a hindrance and a possibility for pro-environmental (Bertü 2013).

As exemplified earlier, the students on several accounts mentioned recycling and a reduction in the use of plastic as in direct relation to climate change, and something they could realistically do. These are interesting findings, as it could be argued that they "overshadow", the importance of transforming other practices which are in direct connection with climate change; "It's about it being so unnecessary… it's not something I must have… and I fell really bad every time I take one… (Talking about plastic bags), at work we for example get parcels containing polar bears… and then you get a huge plastic bag and then one small plastic bag covering every small item… it's so unnecessary… couldn't we just put them in one large parcel… it also quite ironically… polar bears wrapped in a lot of plastic… "(4FFEA). Another student explained that he had become more aware of it lately as he had been working on a student start-up project, where he learned from the others about the challenges related to plastic bags and single-use plastic. However, he also mentioned that using less plastic and recycling is easy when you put your mind to it, but not so easy that many people do it automatically without any influence (3MBS). It can thus, further be explained by a wish to follow social norms and expectations, while at the same time doing something good for the environment. This is interesting as previous research suggest that norms of conformity and what I described in the theoretical

chapter as ´Mimesis´ (Bourdieu (1977), can act as a powerful activator of pro-environmental behavior (Kinzig et al. 2013; Hargreaves 2011b; Shove et al. 2012).

Correspondingly, there seems to be a "student culture" of conformity inspired by American culture in which the use of large plastic cups, often red, have become an important part of many student parties and social gathering: "We had a birthday celebration the other day and then we bought a lot of plastic stuff…(the student further asked himself:) is that necessary? No… but we wanted to fulfill some self-realization need…" (5MFSS), "…soda and bags and cups if we have a pre-party, we could just use paper cups, or we could clean our own glasses... so yes... I could use less plastic" (1FFNHS). Plastic is mentioned by most of the students and it could be seen in relation to the media coverage, the local student start-up business focusing on reducing plastic use, or the fact that it is an easier practice for most Norwegian citizens to engage in as good alternatives are already available on the market: "I could drink less soda… I can buy canned soda… it is at least realistic for me to do that… and I can use less plastic… like bring a box of food instead of just a bag…" (1FFNHS). However, the overall Norwegian cultural context might also play an important part of it. As citizens of Norway are being motivated by slogans like: "Pant for Pudder" and "5 for Hvalen", pointing to the indirect benefits of recycling in order to uphold the Norwegian winter skiing conditions, and the direct link between recycling five plastic bags to save the whales. These slogans indicate how Norwegians now see recycling as a way of trying to be sustainable citizens in a modern society, even as the actual recycling is relegated to a large industrial and technical infrastructure system. One of the key contributions of the Norwegian recycling systems are therefore that the waste management infrastructures extend into both the everyday lives and cultural values of the consumers and the technological, industrial processes of producers (Jørgensen 2013, p. 514).

5.2.2 Public sphere pro-environmental practices
The link between private-sphere and public-sphere practices and policy measures, is to this date an under researched component of pro-environmental behavior change. Previous research generally focuses on energy, water and food consumption practices, and comparatively little research has applied social practice theories to environmentally significant political mobilization, involvement in local protest or campaigning (Kennedy & Krogman 2015, p. 48). In Norway, evidence suggests that group-centered political engagement is not an integral part of daily life for most people (Statistics Norway 2017).

As explained earlier, Norway´s environmental policy has traditionally placed the state as a provider of information campaigns, while pushing for voluntary behavior change by individuals. This method, however, fails to take into consideration that public engagement can take many forms which sometimes influence each other. Engagement can for example take place in the private sphere which has already been discussed, and in the form of socio-political participation in the public-sphere. The latter form of engagement, while only yielding more indirect effects (Stern 2000; Gaventa 2006), is seen as a vital component in every democracy, and can foster belief in people that they can make a difference (Höpner and Whitmarsh in Whitmarsh et al. 2011, p. 48).

Previously conducted research in the UK, found that almost one third of the citizens who reported any action taken out of concern for climate change, did so by exclusively engaging in private sphere pro-environmental practices (Whitmarsh et al. 2009) As also evident in my findings, most of the respondents reported recycling practices and less use of plastic items, while a lot less had changed or were willing to change their travel and/or eating practices. Following this, the majority of those who did, reported it not being based on primarily environmental reasons (Ibid). The study also found that public sphere engagement was even less common as fewer than 10% reported to have taken part in a protest for environmental issues, while comparatively, 99% reported that they recycled at least occasionally. Furthermore, being environmentally friendly in one domain does not automatically lead to pro-environmental behavior in another domain. For example, people who show a positive attitude towards recycling are more likely to recycle, but this does not necessarily mean that they also are vegetarians or environmental activist (Gatersleben, Murtagh & Abrahamse 2014).

These conclusions are also visible in my findings. When asked about public-sphere pro-environmental practices all of the students emphasized the democratic importance of voting, and many were even politically active. Nevertheless, environmental issues were not perceived by most students as their main decisional voting factor or field of interest. And accordingly, only one of them had voted for or considered voting for the largest Norwegian environmental party "Miljøpartiet de Grønne" (MDG). This must be seen in relation to the findings previously discussed in the private-sphere practices, as most of the students do not believe in any radical transformation towards a low-emission society and considerable behavioral changes: "I don't see them as capable of being in charge of this country… they are very incoherent in their politics and have a too radical approach towards the environmental challenges…" (3MBS), "The only

environmental party we have if we can say that… it is a bit too radical… of course, I understand their thinking… but I think it is a bit too extreme and they tend to forget the societal context…" (5MFSS), "You firstly think about your own comfort… it's not like I vote for the progress party who want more diesel cars and shit like that… because I know that affects the climate a bit too… so a small part of it is related to the climate no matter what, but it's not like I vote for the party with the most environmentally friendly policy just because of that… that I don't…" (8MBS).

As previously discussed, my informants showed a hybrid position when facing the question of who should take charge in the "fight" against climate change and to push or a low-emission society. While many of them recognize that the government should take lead, many also reported a lack of confidence in the government´s abilities to take on this responsibility: "I might be a bit strange in the way that I have no trust in the people who are in the government right now… so I voted blank… I used to be on the right side but then I realized when they formed a government they were just as much idiots as the labor party… they don't care about the people… they only care about being reelected and I´m not ok with that…" (7MFEA), "Norway is currently above their greenhouse gas emission goal… and I guess it has been like that for some years… so, it doesn't seem to be a high priority…" (4FFEA). These findings have also previously been reported by Arnold et al. (2016), who added that Norwegians tend to perceive climate change as less serious than what has been put forward by scientific reports, because they do not detect the urgent political action (p.44).

Maybe a bit surprising when seen in relation to previous findings, but trough my fieldwork I discovered that some of the students who would not consider voting for an environmental party in the national election, said they would be able to consider it on the local level. During my fieldwork I also participated in a conversation between students who were active members of the Norwegian Labor party and whom the night before had taken an online "test" regarding who they should vote for in the upcoming local election. Surprisingly, the test results did not indicate that they should vote for the Labor party, but instead that they shared most similar interests with MDG. The discussion thereon centered around the fact that MDG has many good ideas and suggestions for the municipality on a local level, but nationally, they were considered a bit too extreme. Another student, who also perceived herself as politically active, commented on the fact that she believed people in general lacked the knowledge about how to engage in the local level:"…you don't even have to be elected to get a case to the municipal council for

example… there are not many signatures you need... and when I have proposed cases in the municipal council it has led to a decision which again has committed the municipality to a transformation… to a change… and it is not a lot of work… so I absolutely believe everyone has the possibility to change… but one needs to have knowledge about how to do it…" (1FFNHS). Nevertheless, what has already become clear from this example and which will also be discussed later, is the importance of procedural knowledge and proper communication and media channels for engaging people at the local level.

Correspondingly, many of the same results appeared when asking about whether the students belonged to an environmentally friendly organization: "If we talk about Greenpeace and others like that… I feel like it is too much… their engagement is very… very extreme… I feel like it is over my head… I don't want to be a part of it…(8MBS), "I feel like some people in those organizations become too extreme and loose… sense of reality… and I have to emphasize it is only individuals, not everybody, but some of them might push themselves too far away from the general public and that I see as unhealthy" (5MFSS). Contrastingly, when talking about whether the students had signed a petition or ever given economic contributions to an environmental cause, several students reported to have engaged in those type of public-sphere practices, however, not those directly connected to climate change: "I have given economic support to many birthday collections on Facebook mostly ocean and plastic related, but I think a lot about online activity and therefore I don't sign anything unless it is something I agree with 100%... (3MBS), "We have economically supported the animal shelter and we also help out with foster care for animals… I guess that can be defined as being environmentally aware but maybe mostly towards the welfare of the animals…" (4FFEA).

In the next part I will connect all of the practices and include a more in-depth analysis surrounding the challenges connected to pro-environmental practices, and the possibilities for pro-environmental behavior change, laying the conditions for a transformation towards a low-emission society. The analysis will center around previous research, and the elements of material, competence and meaning making up a practice.

5.3 Current conditions - challenges and possibilities

First and foremost, my presentation of empirical findings so far, suggests that the conventional and contextual approaches' exclusive focus on either individuals' attitudes and values or contextual factors, is too narrow to capture all that is involved. The practice-based approach,

therefore, broadens the perspective by considering the elements of practice, the "doings", and as previously pointed out in relation to behavior change, it is only through repeated performance that practices sustain (Shove and Pantazar 2005; Warde 2005). In addition, however, I agree with Tyers et al. (2018), arguing that cultural values are likely to underpin elements of practices on national and local levels. Different countries will have different levels of environmental awareness and concern, different infrastructural provisions like public transport and recycling, and last but not least, different social and cultural norms (Hofstede 2001; Inglehart 1971). These differences result in different outcomes for how environmentally impactful practices are performed in different places (Tyers et al. 2018).

My discoveries so far can, therefore, be compared to the findings of the ethnographic fieldwork conducted by Kari Marie Norgaard (2006a). By studying a Norwegian rural community, which she named "Bygdaby", Norgaard discovered that despite the high general understanding and awareness of climate change as problem, and high level of concern, most people made almost no mitigation efforts. Instead, it became clear that people associated climate change with the feeling of helplessness. These findings were also made clear by some of the students: "I feel a bit powerless when the collective spirit is missing… like if us living in Norway are extremely good at recycling and then we have our neighbor Russia or Poland… right… if Norway make up 0,5% of the total pollution on earth and that is a lot since we have such a small country, but if we have zero emissions… in the end it doesn't count as much… everybody has to contribute…so you feel a bit helpless… or I do at least…" (5MFSS). Norgaard (2006a), also came up with a new concept of a "social organization of denial", after realizing how social structure was in fact an obstacle to pro-environmental behavior as people felt like they were acting alone instead of being part of a social group (Burgess and Nye 2008).

Again, even though this study was conducted more than a decade ago, I still find similarities with what has been put forward by some of the students: "I wouldn't call it selfish, but one becomes too self-centered… because they want to transform but it becomes a bit halfway if not everybody contributes… it's like in a housing cooperative… if you make a great contribution by raking leaves, and the next time somebody says they can't contribute because they are going on vacation… then you don't feel motivated to do it again.. right… so I think it has a lot to do with that…" (5MFSS). Such findings can of course also be explained by the Norwegian cultural context, where working together, and collective action towards a common cause through the Norwegian word "dugnad", is seen as a social norm. Previous research further suggests that

changed behavior is not a result of believing in anthropogenic climate change, but instead how the effectiveness and visibility of possible preventive actions is perceived (Weber 2011). These conclusions are also confirmed by my empirical findings: "If I eat meat one day less every year it is only a drop in the ocean… so I would have to be certain that this was a common boost for the whole country or for the whole world to do it…" (3MBS), "Firstly, I would have to know that it had an effect in the end so that it is not like I just do it to do it… you have to know that is has an effect… a visible effect… its sort of the same as... with everything you do, you want to see an effect… if you are going to build a house for example, it is not very motivating if only the foundation stands no matter what you do…"(8MBS). Following this, and in accordance with social practice theory, one has to consider the social context as people often make decisions based on the need to imitate what other people around them are doing (McNamara and Grubb 2011). In like manner, Zsóka et al. (2013) argue that social context and social relations explain about four-fifths of individuals' environmental awareness and are therefore seen as critical to changing environmental behavior.

One empirical example portraying the importance of small social contexts, is the study by Goldstein, Cialdini and Griskevicius (2008), using social norms to motivate environmental conservations in hotels. The results of the study indicate that hotel guests were more likely to reuse their towel if given information about the people who had previously stayed in the same room as them, instead of the hotel as a whole. Following this, it becomes apparent that local contextualized information, and social structure are more effective than a standard normative message (Ponglione 2014, p. 319). Moreover, as proposed by social practice theory, our actions are collective and part of a greater social phenomenon, rather than being based solely on individual behaviors. This further indicates that actions are not completely determined by social structures, nor that individuals are completely free to act (Bücks, Smith and Ewards 2011). A similar finding is presented by Hargreaves (2011b), who conducted a study of a conventional workplace behavior change program, from a social practice perspective. This was an attitudinal change program intended to promote pro-environmental behaviors. Even though the program was seen as relatively successful, Hargreaves analysis found that the 'environmental attitudes' of participants were largely unchanged while habitual behaviors, such as turning off lights, had been successfully shifted. Rather than being driven by pro-environmental attitudes, as the portfolio model would presume, these changes in working practices had become invested with meanings of loyalty to company culture.

5.3.1 Material

Based on the empirical findings from the interviews and the conversations I had with students, it becomes evident that there is a discrepancy between the intention to participate in pro-environmental practices and the actual action, connected to the element of *material.* This is especially true when it comes to the availability of public transportation, thus minimizing the possibilities for behavioral changes: "I guess I could take the bus but there is a huge difference when it comes to how much time I must invest… In the ideal everyday life, one could do it, but as a student to get the ends to meet up it is very difficult to make that prioritization" (4FFEA), "If I work the late shift and then early the next day I loose almost two hours of sleep because of the bus as it leaves so late and then very early… so that is unacceptable…" (1FFNHS), "My general attitude today if I´m going to be completely honest is that if I´m going as far south as to Trondheim or Oslo it is perceived as such a great burden that I usually fly instead of taking the train… also because I have a very hectic life in general…" (3MBS). These comments also relate to the difficulty of prioritizing climate change mitigation as an "engagement" of practice, in Warde´s (2005) terms, over competing normative orientations. A study cited by Kollmus and Agyeman (2002, p. 258), actually found a correlation between expressing concern for the environment and driving more. The same study also indicated a correlation between awareness and affluent lifestyles, while concluding that for affluent people it is far easier to engage in recycling and consumption practices, instead of mobility as it is seen in conflict with the normalized expectations and conventions within an affluent life.

Nonetheless, being a student is not always described as a life in affluence as it is very difficult for Norwegian fulltime students to pay their expenses without support from relatives or taking on an extra job (Giæver 2018). Therefore, the factor of being a student and living in an expensive country like Norway, often represented an additional challenge in combination with the availability of material. This was evident, even for those wanting to engage in pro-environmental practices; "I have for a long time considered that I should take the train when I´m going South… but it is more expensive to take the train… and it takes 22 hours and then with a student budget it is difficult to choose what cost more when you can get home in two hours by flying… but I should, and I know it…" (2FFSS), "I am a poor student… so, if I'm going to buy beans and lentils and cover the need for protein that I have, it will cost more than I can afford…" (7MFEA). These comments indicate the need for a more systemic transformation, which not only bases itself on individuals' moral compass to change practices.

Nevertheless, as I explained in the theoretical chapter a practice is only sustained through frequent repetition (Warde 2005). In this regard, the material infrastructure or conditions of existence are seen as part of the habitus (Rosenlund 2000, p. 49). There are, however, studies showing that moments of restructuring in people´s lifespan can represent the possibility of creating new routines (Verplanken 2011; Reckwitz 2002a). For example, becoming a student and moving away from family and friends can be seen as such a moment (Brons and Oosterveer 2017): "I had always wanted to try to become vegan and when I went on exchange to the US it was an option in the diet plan… so I figured it was a perfect opportunity…" (1FFNHS). As such, material infrastructures and availability become potent components mediating the student´s everyday life practice (Reckwitz 2002b). When the student came back however, the vegan alternatives both at Nord University in particular, and Bodø municipality in general, were not sufficient, especially for eating out, which resulted in the student becoming a flexitarian, meaning that she sometimes consumed fish and dairy products.

Alternatively, another student commented on how his habits and practices had changed after moving to Bodø: "In Bodø I usually walk to the grocery store while at home I use my car… it takes 5 minutes to drive back and forth and of course I will do that instead of walking for one hour… it is also easy to take a bus in Bodø, the busses depart every 10 minutes during the weekdays and once and hour every weekend, while we almost don't have buses where I'm from… I guess there is not really a foundation for it either as there are not enough people…" (8MBS). However, to scale up this trend and significantly shift commuters from travelling by car to travelling by bicycle or public transport ("substituting practices") would require significant infrastructural changes (Spurling et al. 2013). This was echoed by Beenackers et al. (2012), who found that whether a person started cycling after a relocation depended far more on the presence of bicycle infrastructure than it did on attitudes to cycling". Similar conclusions were also made by Bamberg (2006), evaluating the effectiveness of an intervention that combined a free public transportation ticket and personal schedule information being received shortly after residential relocation. The intervention group showed a strong increase in public transportation use, and the study therefor concluded that residential relocation is a good opportunity to change people´s travel practices.

However, according to Strenger (2010), the introduction of material infrastructure or new knowledge in itself, it not enough to be reproduced and adopted as actual practices (Strenger 2010, p. 15). A practice consists of all three overlapping elements which all need to be in place

or need to be altered to change a practice. Both in relation to private and public sphere practices is has therefore become evident that what other people do is highly important. Take for example environmental activism. Even though the element of material was in place, the other elements seem to be missing, to a certain degree competence or know/how for engaging in the practice especially on a local level, and to an even larger degree the meanings associated. When discussing meanings ascribed to public sphere pro-environmental practices, or what Reckwitz call the historically-culturally specific understandings of the world (2002a, p. 251), it thus became clear that even though the right material was at place, the meaning of being an environmental activist was by many of the students perceived in a negative way, being placed outside of the mainstream majority and difficult to identify with.

5.3.2 Competence

In social practice theory, a shared understanding of practices between practitioners is essential. Shared competence and understandings do not only signify that the practice has to be understandable to the person carrying it, but also understandable to social others (Reckwitz 2002a, p. 250). This is also explained by Barnes: "Human beings can ride in formation, not because they are independent individuals who possess the same habits, but because they are social agents, linked by a profound mutual susceptibility, who constantly modify their habituated individual responses as they interact with others, in order to sustain a shared practice" (Barnes 2001, p. 23). Common for my informants were the belief that pro-environmental practices were relevant for them to engage in. In contrast, the unclear aspect became why and how to do so, especially in a local context. Reckwitz (2002a) explains that lack of knowledge and know-how is a significant barrier to changing practices.

The information about pro-environmental practices is termed by some of my informants as overwhelming to the degree that it is difficult to differentiate between what is serious, what is correct and what is in fact ineffective: "I read the case about the German report about electric cars… or I didn´t read the report but I read about it in the news… somebody in Germany had pointed out electric cars as being much worse than fossil driven cars… but then there were other researchers, SINTEF or what they are called in Norway… they were very much against that because they had not included something and then the EU had used a new standard and something like that… there are new research reports all the time which try to influence us in one or the other direction… so it is difficult for one individual, at least for me.. I can only talk for myself, but to know what to believe… even though you in a way know that electric might

be the best, somebody else tells you that the lithium batteries are very difficult to produce and so on… then it's like… who do you believe in? I feel like nothing is 100% sure…" (8MBS). "I hear talks about what we eat making a difference… without me knowing a lot about It how it is connected, but they talk about how less meat consumption can influence (3MBS)", "Most of the energy we use comes from hydropower, so it doesn't create a big climate footprint… again this is only what I think is right, I don't know 100% certain…" (3MBS).

Another student mentioned that a lot of big companies are "green washing", indicating that their products are green when in fact they might not be any better. This becomes especially apparent in practices concerning food consumption and transportation, like for example one of the students mentioning how SAS gives you a good consciousness by making up for the carbon emissions caused by your flight by giving money to renewable energy sources. These challenges are connected to the knowledge regarding which practices one should engage in and why. Nevertheless, it becomes very important to have a common understanding of climate change, and when navigating amongst different information sources is often a process of relating to social others as well as societal channels of information (Bertü 2013).

Contrastingly, the competence element of how to engage in the different pro-environmental practices, seemed to be within place amongst the majority of the students. One exception is however, related to the practice of recycling: "I don't know so much about hard plastic... it is not so easy to recycle such types of plastic, is it? I don't know…" (2FFSS). This student emphasizes the point that within some practices merely consciousness, knowing why we ought to behave in a pro-environmental way, is inadequate without having the knowledge and skills to do so (Shove et al. 2012). This also became apparent through my fieldwork as in the case of recycling, most students commented that this practice has almost become unremarkable and that pro-recycling norms (meanings) have been in place for quite some time. Others mentioned however, that material infrastructure depends on where in Norway you live, as for example a student from a municipality on the west coast of Norway explained that they did not have any arrangements for recycling plastic and that food was included in the general waste. As recycling practices in Norway is for the most part in the hands of the respective municipalities, the element of material changes as to where you are.

5.3.3 Meanings

In general, the students whom I interviewed and other students I came in contact with during my fieldwork, expressed concern regarding the consequences of climate change, and saw climate mitigation and the transformation towards a low-emission society as a highly relevant issue. Furthermore, many expressed a general positive attitude and aspiration towards mitigation and adaptation efforts, even though on a personal level some of the intention had not yet turned into actual action. Many of the students, nevertheless, conveyed the fact that they had carried out sensible behavior long before climate change was a general focus in the public debate, and saw recycling, energy saving and unnecessary consumption in general, as something they learned growing up and was for many seen as a habitual practice, related to the simple principle of being a good citizen and acting in common sense. According to sociologist Bente Halkier "Practices are as often, if not more frequently, characterized by habits and routine as by intentional reflection and choice" (Halkier 2001, p. 26). This is also exemplified through a comment given by one of the students: "…you have your car and it is easy to drive it to the store and… habits… you have made it a habit and it is not easy to change… it's like you are used to there being a type of meat or fish in the meal... and vegetables…" (8MBS). Accordingly, daily routines are very difficult to change and to create new ones require great effort (Ilmonen 2001, p. 17).

Further into the fieldwork and conversations with students, I also realized that many reflected a constant navigation in relation to the practical consequences related to pro-environmental behavior and the conflict between principles, needs and wishes for what could be seen as components of the good life. Following this, the consideration of the good life often legitimized actions which were not in line with the informant´s own definition of an environmentally friendly person (Berthü 2013). Comments like "you have to live as well", "I know I should, but not sure if I could", "I´m not sure if I want to sacrifice my current quality of life", "I should also maybe drop oversea trips, but I love to travel…". By acting in contrast to previously given comments, some of my informants entered into a communicative norm negotiation in order to legitimize a given choice – "I have sacrificed so much already", "At least I always try to buy ecological eggs". This also became apparent from my informants as the meanings they attached to their less environmentally friendly practices such as meat consumption (Norwegian culture/tradition, quality of life), was more important than the meanings which they attached to the pro-environmental practice (common sense, ecological citizenship).

Another interesting finding related to this, was that there seemed to be a confusion in terms of the meaning related to practices which were often seen in conflict to one another. For example, the practice of driving a car was seen in relation to meanings of convenience and freedom both personal and economic, while at the same time recognized by the carbon emissions and economic cost. "I do have a car as well… but… I could of course sacrifice the car and take the bus, but it's hard because I connect the feeling of freedom to having a car…" (4FFEA), "I used to have a car, I don't have it anymore…not because I decided based only on the environmental impact but rather the increased economic freedom meant more to me than the personal freedom of driving around with car…" (6MFBA). This can further be related to the so-called path-dependency; that future states, choices, or actions depend on the decisions and actions of current or previous states (Liebowitz and Margolis 1995; Page 2006). Accordingly, this represent one of the factors challenging a transformation. For example, when it comes to infrastructure or the use of fossil fuels through practices of transportation, carbon reduction goals often come into conflict with the prioritization political goals and economic development (Driscoll 2014). Furthermore, as illustrated, path-dependency can lead to the creation of socially shared *meanings* for example in relation to mobility, of how we define a good life (Dale & Andersen 2018). As a result, people do not necessarily reflect on the meaning of driving on a conscious level, still the element of meaning is culturally submerged, and consequently help sustain the practice. In this way, we must see the element of *material* and *meaning* in relation to each other and realize that it may be difficult to reach the goal of becoming carbon neutral, without developing a new cultural meaning alongside the material intervention.

Following this, these quotes indicate a certain dissonance also found in the study by Tyres et al. (2018), between western post-material values and its high measure on Hofstede´s indulgence scale. Indulgence refers to the extent to which people try to control their desire for immediate gratification. According to Hofstede (2011), many people living in high-indulgence societies, most often found in North America and Western Europe, are less willing to make pro-environmental sacrifices which may interfere with their usual consumption (Tyers er al. 2018). My informants were for the most part highly aware of the negative contributions caused by their behaviors, but often they could not live up to their own standards. Of the three elements, meanings – the cultural and social norms ascribed to pro-environmental behavior, therefore appear as a crucial component of behavioral change. Accordingly, if we accept that all three elements of practices need to be in place to achieve behavioral change, then we might assume that the changes will not persist without a shared meaning: "I can easily recycle, I can start

being more conscious by buying less plastic and like I have already done, I have a reusable shopping bag… right… those type of things I can do… but when it comes to different needs like especially in the western world… we have car and those type of things… they have to solve the problem by finding new variations which can cover the same need (6MFBA). This example is particularly insightful because it reveals that whilst the competence and material elements of practices appeared relatively easy to question, their meanings and individual practitioner´s experiences of them were however, more resistant to challenge and change. In addition, such statements clearly refute the core assumptions of conventional approaches to behavior change that pro-environmental action must be preceded by pro-environmental attitudes, values or intentions. For example, driving a car might not be the best individual economic strategy. However, the practice is by many upheld by shared meanings of freedom, independence and sometimes even identity. In addition, it appears that so far that car driving is facilitated by a strong societal emphasis on mobility, and the extensive development of road systems.

CHAPTER 6. CONCLUSION

This thesis contributes to understanding the underlying conditions shaping a possible transformation towards a low-emission society, by investigating the discrepancy between pro-environmental attitudes and action. amongst students at Nord University, Norway. Through participant observation and in-depth interviews, I gained insight into how students and future citizens of Bodø municipality perceive climate change and the concept of transformation. In addition, I looked into which pro-environmental practices they engage in and the opportunities for and challenges connected to individual behavior change, thus covering both attitudes and behavior.

When talking about climate change, the majority of the students displayed a high degree of awareness as well as finding the topic relevant. In common for all my informants were also the belief in anthropogenic climate change. Nevertheless, the majority further emphasized that Norway might not be the country most seriously affected and consequently, local and personal climate change effects seemed to be more complex and less easy to grasp. An interesting finding in this regard was how the differences between weather and climate were constantly mixed together. Consequently, many students who held a high degree of knowledge and awareness of general climate change issues, seemed to be a bit confused about the temperature changes on a national and local level.

Many questioned whether they would live to see the effects of climate change or not. Accordingly, many acknowledged the urgent risk connected to climate change on a general level, but less so on a personal level. Following this, all of the students seemed at first to agree that a transformation was needed and numerous suggestions for what a transformation to a low-emission society could entail were offered. Still, further into the conversations I realized that the attitudes and positions of most students were most supportive of climate change *mitigation* and *adaptation* measures, and less transformative initiatives, that is, broad, sweeping changes that structurally changes the way societies function, as well as their personal lives. In this regard, one could argue that the discrepancy between attitudes and pro-environmental behavior is not necessarily caused by a lack of information and awareness. Rather, one possible explanation could be related to ontological security, the need to feel safe in the world (Giddens 1991). This concern has also elsewhere been found to explain the active strategy of keeping information at a distance, in order to uphold individual emotional management (Norgaard 2006b, p. 372). When asking my informants about who they believe should have the main responsibility for climate change transformation, however, they did not disclaim all personal responsibility for action. Instead they revealed a hybrid position blaming both the facilitator/provider and the individual consumer, including themselves. Following this, many of the students put forward a positive attitude for local level contributions, but also revealed a lack of no knowledge about the local level transformation projects in Bodø municipality, such as the New city – New Airport and Smart City Bodø. This indicates a need for more and better local, context specific climate communication.

When asked about public-sphere pro-environmental practices all of the students emphasized the democratic importance of voting, and many were even politically active. Nevertheless, while some of them recognized that the government should take lead, many also reported a lack of confidence in the government´s abilities to take on this responsibility. Another interesting finding was how the majority did neither want to identify with environmental activist groups, nor political parties like Greenpeace and MDG, based on them being too radical and extreme. Maybe a bit surprising when seen in relation to these findings, but I discovered that some of the students who would not consider voting for an environmental party in the national election, said they would be able to consider it on the local level. With this in mind it becomes imperative to understand the specific context of any practice to understand its causality. In other words, studying behavior change requires a local and context-specific focus in order to acknowledge the diversity of knowledges and heterogonous publics in society (Whitmarsh et al. 201, p.8).

When moving into the discussions on private-sphere pro-environmental practices, it again became evident that the positive attitudes and sometimes transformative ideas did not always lead to actual action. The students carried out pro-environmental practices and neglecting practices alternatingly. A possible explanation was given by those who had pro-environmental concerns, but that nevertheless considered multiple variables related to consumption practices when making their choices in practice. These variables were connected to greenhouse gas mitigation, animal welfare, fair trade and the desire to buy Norwegian produce. Similarly, the students did not seem to distinguish their actions on lowering emissions related to climate change from other pro-environmental actions such as waste minimization. This was especially related to plastic, which seemed to be a general focus and concern among the majority of the students. At the same time, many of them saw plastic use and litter in direct relation to climate change, without really reflecting on the actual connection. These are interesting findings, as it could be argued that these multiple concerns "overshadow" the importance of transforming practices that directly influence climate change. Future research should maybe look further into this peculiar connection and ask why people to such a large degree stand behind the claim of diminishing plastic litter, why they connect it to climate change and whether some of it can be used to improve climate communication.

When discussing other private sphere pro-environmental practices like meat and energy consumption, most of the students whilst displaying a positive attitude to change, expressed a desire to uphold current practices, and this could to a large degree be explained by social and cultural context, in addition to habits and routines. To further illustrate, "Flyskam", which means experiencing a feeling of guilt when flying, had not yet reached the majority of the students. Many saw the limited available infrastructure in Northern-Norway, coupled with the limited amount of resources available to students, as substantial barriers. These comments further indicated that engaging in pro-environmental practices is not always an individual's free choice. I therefore argue that pro-environmental practices should be seen as an integrated part of other everyday practice, and not as an obscure entity which people can choose to engage in or not. Equally important, however, are possibilities for changing the current conditions and challenges connected to the element of *material*. For example, becoming a student and moving away from family and friends can be seen as a moment of restructuring, where old habits can be replaced by new routines. Therefore, it is paramount for the municipality and university to have a close cooperation and open dialogue, considering how to best utilize this window of opportunity. At the same time, it is important to acknowledge also the practical knowledge

connected to the element of c*ompetence,* and the cultural and ontological notions connected to the element of *meaning*, as they are essential for transforming practices.

In conclusion, I have not offered any instant solutions, but I contend that by applying a social practice lens to my analysis, I was able to emphasize the complexities of the current conditions shaping a possible local level transformation. Although this study is too limited to draw decisive conclusions, it does illustrate that within many practices, the students are not motivated or ready to make decisions solely based on what is best for the climate, instead, practices and choices are connected to core concerns of everyday life. Environmental lifestyles, thus, need supporting structures and mechanisms which takes into consideration the full range of people´s everyday activities, desires and needs. Bearing in mind, the factors of practical knowledge, local and socio-cultural context, habits, routines, and material environment, should be further studied and seen in relation to a possible transformation towards the low-emission society.

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Change   .pdf&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-
Credential=AKIAIWOWYYGZ2Y53UL3A%2F20190821%2Fus-east-
1%2Fs3%2Faws4_request&X-Amz-Date=20190821T123057Z&X-Amz-
Expires=3600&X-Amz-SignedHeaders=host&X-Amz-
Signature=20036f06411773c13d53510c79549b5239477e9fea746d0f08a742ed
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Appendix 1 - Interview guide

<u>Bakgrunnsinformasjon</u>

Tenker vi kan starte litt lett med noe bakgrunnsinformasjon (først om meg selv?). Fortelle litt om deg selv for eksempel alder, hvor du er fra og hva du studerer?

<u>Klimaforandringer</u>

- **Generelle tanker**

1. Hva er ditt forhold til klimaforandringer? (Hva er det første du tenker på?)

Oppfølgingsspørsmål – Hvorfor? Hvordan?

2. Hvor er det du i hovedsak henter eller mottar informasjon om klimaforandringer?

Oppfølgingsspørsmål; Sosiale medier? Nettaviser?

3. Personlig erfaring med klimaforandringer?

Oppfølgingsspørsmål – Bodø vs. Hjemsted?

- **Hva forårsaker klimaforandringer og mulige løsninger**

4. Hva tror du det er som forårsaker klimaforandringer?

Oppfølgingsspørsmål – På hvilken måte?

5. Hvem eller hva føler du blir mest påvirket av klimaforandringer?

Oppfølgingsspørsmål – Hvorfor? På hvilken måte?

6. Hva tenker du er mulige løsninger?

Oppfølgingsspørsmål – Hvorfor akkurat disse? Finnes disse nå?

Omstilling til lavutslippssamfunnet

7. Hvordan ser du for deg et lavutslippssamfunn?

Oppfølgingsspørsmål – Annerledes i forhold til slik vi har det i dag?

8. Hva tenker du at vi på individnivå kan gjøre for å bli et lavutslippssamfunn?

Oppfølgingsspørsmål – Hvorfor tror du ikke flere gjør dette?

Oppfølgingsspørsmål - Eksempler på tiltak/insentiver som kan få med flere?

Oppfølgingsspørsmål - lokalt/nasjonalt/internasjonalt nivå?

- **Personlig adferd i privat-rom**

9. Hva kunne du personlig være villig til å ofre for å redusere dine klimagassutslipp? Hva burde?

Oppfølgingsspørsmål – Transport (Bil, fly), kjøttforbruk, Strømforbruk osv.

Oppfølgingsspørsmål – Hvorfor akkurat disse områdene? Noen enklere/mer tilrettelagt for enn andre? Hva motiverer deg?

10. Hva er det strengeste tiltaket for å kutte i klimagassutslipp du kan se for deg?

Oppfølgingsspørsmål – Er dette noe du kunne akseptert?

- **Personlig adferd i offentlig-rom**

11. Er du medlem av en miljøvernsorganisasjon? (Green Peace, Natur og Ungdom)

Oppfølgingsspørsmål: Hvorfor/hvorfor ikke?

12. Har du noen gang gitt økonomisk støtte til en miljøvernsorganisasjon eller signert et opprop relatert til miljøvern?

Oppfølgingsspørsmål: Hvorfor/hvorfor ikke?

13. Brukte du stemmeretten din ved det forrige stortingsvalget? Kommunevalg?

14. Har du noen spesielle interesseområder eller politiske saker som du tar med i betraktning før du stemmer?

15. Kunne du vurdert å stemme Miljøpartiet de grønne eller et annet parti med hovedfokus på miljø?

Oppfølgingsspørsmål – Hvorfor/Hvorfor ikke?

Oppfølgingsspørsmål – Forskjell på lokalt/nasjonalt?

Appendix 2 – Approval from NSD

NSD sin vurdering

Prosjekttittel
Local transformation towards a low-emission society

Referansenummer
183628

Registrert
05.04.2019 av Helene Wiken - helene.wiken@student.nord.no

Behandlingsansvarlig institusjon
Nord universitet / Fakultet for samfunnsvitenskap / Internasjonale relasjoner, nordområder og miljø

Prosjektansvarlig (vitenskapelig ansatt/veileder eller stipendiat)
Brigt Dale, bda@nforsk.no, tlf: 99030836

Type prosjekt
Studentprosjekt, masterstudium

Kontaktinformasjon, student
Helene Wiken, helene.wiken@hotmail.com, tlf: 41558025

Prosjektperiode
08.04.2019 - 01.08.2019

Status
08.04.2019 - Vurdert

Vurdering (1)

08.04.2019 - Vurdert
Det er vår vurdering at behandlingen vil være i samsvar med personvernlovgivningen, så fremt den gjennomføres i tråd med det som er dokumentert i meldeskjemaet den 08.04.2019 med vedlegg, samt i meldingsdialogen mellom innmelder og NSD. Behandlingen kan starte.

MELD VESENTLIGE ENDRINGER

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til NSD ved å oppdatere meldeskjemaet. Før du

melder inn en endring, oppfordrer vi deg til å lese om hvilke type endringer det er nødvendig å melde:
https://nsd.no/personvernombud/meld_prosjekt/meld_endringer.html Du må vente på svar fra NSD før endringen gjennomføres.

TYPE OPPLYSNINGER OG VARIGHET

Prosjektet vil behandle særlige kategorier av personopplysninger om politisk oppfatning og alminnelige personopplysninger frem til 01.08.2019.

LOVLIG GRUNNLAG

Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 nr. 11 og art. 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse, som kan dokumenteres, og som den registrerte kan trekke tilbake. Lovlig grunnlag for behandlingen vil dermed være den registrertes uttrykkelige samtykke, jf. personvernforordningen art. 6 nr. 1 a), jf. art. 9 nr. 2 bokstav a, jf. personopplysningsloven § 10, jf. § 9 (2).

PERSONVERNPRINSIPPER

NSD vurderer at den planlagte behandlingen av personopplysninger vil følge prinsippene i personvernforordningen om: - lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at de registrerte får tilfredsstillende informasjon om og samtykker til behandlingen - formålsbegrensning (art. 5.1 b), ved at personopplysninger samles inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke viderebehandles til nye uforenlige formål - dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet - lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lengre enn nødvendig for å oppfylle formålet

DE REGISTRERTES RETTIGHETER

Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: åpenhet (art. 12), informasjon (art. 13), innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18), underretning (art. 19), dataportabilitet (art. 20). NSD vurderer at informasjonen som de registrerte vil motta oppfyller lovens krav til form og innhold, jf. art. 12.1 og art. 13. Vi minner om at hvis en registrert tar kontakt om sine rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned. FØLG DIN

INSTITUSJONS RETNINGSLINJER NSD

legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1. f) og sikkerhet (art. 32). For å forsikre dere om at kravene oppfylles, må dere følge interne retningslinjer og eventuelt rådføre dere med behandlingsansvarlig institusjon.

OPPFØLGING AV PROSJEKTET NSD

vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

Lykke til med prosjektet! Kontaktperson hos NSD: Karin Lillevold Tlf. Personverntjenester: 55 58 21 17 (tast 1)

Appendix 3 – Informed consent

Vil du delta i forskningsprosjektet
Lokal omstilling til lavutslippssamunnet?

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å lære mer om lokal omstilling til lavutslippssamfunnet ved å undersøke studenters holdninger og adferd knyttet til miljømessige spørsmål. I dette skrivet gir jeg deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

Formål
Formålet med prosjektet er å bedre forstå hvilke faktorer som påvirker forholdet mellom studenters holdninger og adferd knyttet til klimaforandringer og omstilling til lavutslippsamfunnet. Et annet formål med prosjektet er å undersøke hvordan vi kan skape tiltak som er akseptable, og som samtidig bidrar til utslippskutt.

Mitt navn er Helene Wiken, jeg er student ved Nord universitet og denne studien er en del av min masteroppgave og er i tillegg en del av et større forskningsprosjekt. TRANSFORM-prosjektet skal undersøke hvordan kommunene kan omstille seg til lavutslippssamfunnet og er et samarbeid mellom CICERO – Senter for klimaforskning, Vestlandsforskning, Nord universitet, UiT – Norges Arktiske universitet, og med internasjonale partnere ved Linköping universitet og NHTV universitetet i Breda.

På bakgrunn av formålet med studien vil det være interessant for meg å snakke med ulike studenter ved Nord universitet både når det gjelder alder, kjønn, nasjonalitet og studieretning.

Jeg ønsker derfor å invitere deg til å ta del i forskningsprosjektet. Dette vil innebære et personlig intervju, samt observasjon da ikke av deg som privat person, men mer som en samlet observasjon av studenter ved Nord universitet. Dine tilbakemeldinger vil ikke kunne bli sporet tilbake til deg. Alle personopplysninger vil bli behandlet konfidensielt. Opplysningene vil bli registrert på lydopptak og i papirform, men vil bli kodet(anonymisert) og også destruert etter bruk. Dine tilbakemeldinger vil også bli anonymisert i det ferdige materialitet.

Dine rettigheter
Så lenge du kan identifiseres i datamaterialet, har du rett til:
- innsyn i hvilke personopplysninger som er registrert om deg,
- å få rettet personopplysninger om deg,
- få slettet personopplysninger om deg,
- få utlevert en kopi av dine personopplysninger (dataportabilitet), og

- å sende klage til personvernombudet eller Datatilsynet om behandlingen av dine personopplysninger.

Hva gir oss rett til å behandle personopplysninger om deg?
Vi behandler opplysninger om deg basert på ditt samtykke.

Nord universitet har et personvernombud som skal ivareta personverninteressene til alle som universitetet har registrert opplysninger om.

personvernombud@nord.no

Telefon 74 02 27 50

Masteroppgaven skal etter planen avsluttes i begynnelsen på august 2019.
Det er frivillig å delta i studien, og du kan når som helst trekke ditt samtykke uten å oppgi noen grunn.

Dersom du ønsker å delta eller har spørsmål til studien, ta kontakt med Helene Wiken/ wiken.helene@gmail.com, tlf 41558025 eller veileder og forsker ved Nordlandsforskning Brigt Dale, bda@nforsk.no, telefonnummer: 99030836

På oppdrag fra *Nord universitet* har NSD – Norsk senter for forskningsdata AS vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

Samtykkeerklæring

Jeg har mottatt og forstått informasjon om prosjektet *Lokal omstilling til lavutslippssamfunnet*, og har fått anledning til å stille spørsmål. Jeg samtykker til:

☐ å delta i *intervju*
☐ å delta i *observasjon*

Jeg samtykker til at mine opplysninger behandles frem til prosjektet er avsluttet, ca. *[oppgi tidspunkt]*

(Signert av prosjektdeltaker, dato)