The Cow in the Room: Addressing Meat and Animal-Derived Food Consumption in the Age of Climate Change

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“The most dangerous ideas are not those that challenge the status quo. The most dangerous ideas are those so embedded in the status quo, so wrapped in a cloud of inevitability, that we forget they are ideas at all.”

–Jacob M. Appel

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Abstract

This thesis problematizes the consumption of meat and animal-derived foods in the age of climate change. Despite vast empirical data showing the detrimental effects related to animal agriculture, there is a general reluctance to stop consuming animal-based foods. In order to investigate the reasons for this reluctance, qualitative interviews were chosen as a research method. Using Norway as a case study, 10 qualitative interviews were conducted exploring individuals' rationale for eating meat and animal-derived foods. The findings illustrate how through material institutions and optical socialization, both structural and internalized aspects of carnist ideology are able to normalize the consumption of animal-based foods and facilitate socially organized denial. The findings suggest that carnism is naturalized in society enabling nonhuman animals to be perceived as a logical food source for humans. Simultaneously, denying the moral and environmental considerations of consuming nonhuman animals hinders dietary change to be perceived as a viable option for climate change mitigation. Based on the findings it is clear that if dietary change is to be taken seriously as a mitigation option, policies and recommendations cannot target individual consumer behaviour. The study emphasizes that dietary change must be systematically supported throughout all sectors of society to make plant-based foods the default, and meat and animal-derived foods the undesired alternative.

Keywords: Climate change, dietary change, socially organized denial, carnism, optical socialization, nonhuman animals, meat, animal-derived foods, plant-based foods, Human Ecology.

List of Terms

Meat: Flesh of animals. In this thesis meat refers to all meat (including fish and chicken).

Animal-derived foods: All products derived from animals such as milk, butter, cream, yogurt, cheese, eggs etc.

Animal-based foods: Refers to both meat and animal-derived foods collectively.

Vegan diet: A diet in which meat and animal-derived foods are not consumed.

Vegetarian diet: A diet which contains animal-derived foods but no meat.

Plant-based diet: A diet consisting of mainly vegetables, fruits, grains and nuts, and a minimal amount of meat and animal-derived foods.

Nonhuman animals: Refers to animals who possess some, but not enough human characteristics to be considered human. In line with critical animal studies, this thesis uses the term nonhuman animals in order to explicitly recognize that human beings are also animals. In acknowledging the *othering* which occurs by distinguishing humans as superior to nonhuman animals, and hence justifying their exploitation, the term "animal others" is used. The terms "nonhuman animals" and "animal others" are used interchangeably throughout this thesis.

Animal others: Refers to animals that are other than human, see description of "nonhuman animals".

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1.0 Introduction

The past decades of continued growth, development, and constant pursuit of progress, has simultaneously distanced human beings from the natural world, and created many of the crises we are currently experiencing. With crises looming, modern industrialized societies are increasingly preoccupied with debating, preventing and managing the risks that they themselves have created (Beck, 1992). What is new about the current risks is their invisibility to the naked eye. Brought about by modernity's triumphs, these new risks are not contained by geographic location, they are potentially irreversible, and can only be identified using scientific equipment and expertise (Beck, 1992).

Climate change is one example of this new type of risk emerging from the triumphs of modernity and its accomplice capitalism. Capitalism's hunger for the ceaseless creation of surplus value at all costs is behind virtually all examples of environmental degradation (Stoll, 2014). Stoll (2014) expresses that because the system views the environment as a commodity it does not value non-economic aspects such as ecological services, and gives no thought to the potentially devastating environmental effects of its thirst for profit.

With the impending threat of climate change, national and international efforts are being made to mitigate climate change and its adverse consequences. Given that it is a large and time-sensitive threat, action is warranted from all sectors of society. It is clear that what is needed are actions that break the status quo and business as usual; actions on both the structural and interpersonal level which utilize a different logic to that of the system which got us in this mess. Although a complete radical change of the social and economic system does not appear to be on the horizon, areas of the system can be challenged in hopes of transforming them into being more climate-friendly and socially just.

Dietary change, especially among wealthy nations who consume large quantities of meat and animal-derived foods (Stoll-Kleeman and Schmidt, 2017) proves to be an effective and under explored option for mitigating climate change (Willet et al. 2019; Poore and Nemecek, 2018; de Boer et al., 2013). Moving away from animal-based foods towards plant-based foods eliminates the largest polluter of greenhouse gas (GHG) emissions within agriculture (livestock), which is responsible for 18% of anthropogenic GHG emissions (FAO, 2006, p.112). It further frees up huge amounts of land, which in turn redirects food crops to feed people rather than livestock

(Poore and Nemecek, 2018), and drastically decreases fresh water (Hoekstra and Mekonnen, 2012), and energy use (Mason and Lang, 2018). In addition to the environmental rationale, shifting towards plant-based diets also shows potential for decreasing the prevalence of diet-related non-communicable diseases within humans (Willet et al., 2019).

Despite the many reasons to pursue this avenue for climate change mitigation, there is a general reluctance to give up eating meat and animal-derived food products (Lea and Worsley, 2006a; Lea and Worsley, 2006b). It is puzzling that given the vast environmental impacts of animal agriculture, the consumption of meat and animal-derived foods is either overlooked, or incorporated into visions of a sustainable future (Arcari, 2017). Even with empirical data showing that the consumption of animal-based foods is not necessary, that its production has a very heavy environmental footprint (Willet et al., 2019), and that its consumption can lead to various diseases threatening human health (Campbell and Campbell II, 2016), many people still see giving up meat and animal-derived foods as extreme.

It is apparent that food is so much more than calories, nutrients and vitamins. It is "imbued with social, emotional and cultural meaning" (Mason and Lang, 2018, p.167). Food is culture, consisting of specific habits, rituals, and symbolisms which vary among different people and communities, geographic locations, and historical timeframes. As humans, the consumption of meat played a critical role in our history and culture (Leroy and Praet, 2015), and remains a central element within many cultures, shaping individual and societal identities (Spannring and Grušovnik, 2018). Thus the consumption of meat is a difficult topic to address given our apparent attachment to it, and emotional response when our consumption of meat is questioned.

Despite our emotional attachment to meat, addressing our consumption of it is critical. We can no longer pretend that eating meat is a personal a-political, a-moral, choice. By consuming meat in the globalized world we live in today we contribute to a multibillion dollar industry which exploits the environment, vulnerable workers within the industry, nonhuman animals (who are raised and killed under horrific conditions), our health (which is negatively impacted by the highly processed and manipulated meat products we consume), and future generations. We can no longer turn a blind eye to what lies beyond our plate and be complicit in denial.

Because the consumption of meat is so culturally and institutionally ingrained, when looking at the potentials for dietary change it is essential to not solely focus on individual consumers, but individuals as carriers and reproducers of social systems. Moving away from an anthropocentric position, it is also paramount that we acknowledge our complicity in "speciesism"; in the exploitation and consumption of animal *others* as food.

This thesis challenges the cultural hegemony of anthropocentric ideologies and institutions which legitimize the consumption of nonhuman animals, hindering the possibility for a dietary shift to be seen as a viable climate change mitigation option. In order to identify possible pathways for such a shift to occur it is first necessary to expose the reasons for our compliance with the system. In doing so this thesis uses the theory of socially organized denial as defined by Kari Marie Norgaard (2011) and the theory of carnism presented by Melanie Joy (2010). Using these two theories, this thesis aims to expose how the ideology of carnism establishes ideal conditions for socially organized denial to take place, perpetuating a violent system of exploitation while simultaneously denying an effective measure for climate change mitigation.

Unlike much research which addresses the environmental costs of meat consumption, this thesis includes animal-derived foods in the discussion. It does so for three reasons; firstly because the production of animal-derived foods receives far less attention when it comes to environmental considerations despite the vast amounts of natural resources necessary to raise and maintain nonhuman animals. Secondly, newly emerging evidence suggests that animal-derived foods are not as healthy as they are perceived to be (Zhong et al., 2019; Aune et al., 2015), thus eliminating the health justification for consuming them. Thirdly, this thesis aims to move beyond the environmental problematization of meat, and considers the human-animal relationship, and how (certain) animal others are perceived as means to an end for humans.

Using a political ecology framework, this thesis aims to problematize the normalized notion of eating meat and animal-derived foods and show how this in turn is making it difficult to accept a dietary change from resource intensive animal-based foods to plant-based foods as a climate change mitigation option. Since attitudes and consumption patterns vary depending on context, focusing on one geographic and cultural population may reveal nuanced insights. In the Nordics, half of the GHG emissions related to food are located within the Nordic countries, where the majority of emissions are found to derive from cattle and milk production (Wood et al., 2019,

p.26). Given that Norway has one of the most highly educated and environmentally conscious populations (Norgaard, 2011, p.13), it is assumed that most people are aware of the environmental costs related to animal-based foods. However, meat and animal-derived foods continue to be an important part of Norwegian diets. Thus Norway makes for a unique case to explore the dynamics beneath the reluctance to stop eating nonhuman animals and the products derived from them.

1.1. Research Aim and Purpose

The objective of this research project is to expose through qualitative methods, how the invisible ideology of carnism contributes to the socially organized denial responsible for the normalization of meat and animal-derived food consumption. It further aims to show how this is hindering dietary change to be perceived as an effective climate change mitigation option in the Norwegian context. By exploring the rationale behind people's choice of eating meat and animal-derived foods, and resistance for change, this research further aims to explore potential pathways for reduced consumption of meat and animal-derived foods. Recognizing that total elimination of animal-based foods appears unrealistic for most people, a shift towards a "plant-based diet" is explored within this research.

1.2 Research Question

Q. In which ways is the ideology of carnism impeding a shift towards a plant-based diet among environmentally conscious Norwegian university students?

1.3 Positionality and Reflexivity

It is important to acknowledge that social science is rarely neutral. The identities, perceptions and lived experiences of researchers inevitably influence the research process (Bourke, 2014, p.1). Recognizing this, I find it important to reflect on my positionality as researcher, and the values and biases I may carry. In order to be transparent in my work I aim to be thorough, forefront and reflexive. With the purpose of maintaining research integrity I aim to be rigorous; "meticulous, precise, careful, and convincing—theoretically, methodologically, and empirically" (Borras, 2016, p.33) throughout this thesis.

I have been vegetarian for roughly twenty years, and vegan for the past seven years. Growing up I ate meat and all sorts of animal-derived products. Animal-based foods were handed to me

everywhere I went as a child. It was normal, I did not know otherwise, so I did not question it. It was not until my parents decided to become vegetarian that I was given the opportunity to reflect upon what I was eating, and eating dead animals did not sit well with my six-year-old self. It took several years for me to move beyond vegetarianism and become aware of the external costs associated with my consumption of milk, yogurt, cheese and eggs. Once I realized that I did not need these products to survive, I decided I did not want to contribute to an industry which profits from the exploitation of nonhuman animals and the environment.

Recognizing that we are in a precarious situation with climate change, and that it is still rather controversial to question eating meat and animal-derived foods, I openly acknowledge that I wish to problematize the consumption of these products. In line with the central elements of activist research and critical animal studies, with this thesis I wish to move beyond academia and support the cause of social and environmental justice. As this field of inquiry is still fairly new, addressing carnism through academia can be seen as both theory and praxis as it challenges the status quo and contributes to the field of study.

Coming from Canada, I recognize that I am in a privileged position enabling me to think critically about the moral dimensions of what twenty-first century humans consume, and the further implications of certain eating habits. I am aware that not everyone has the capacity to critically question their consumption in everyday life, especially when food itself is a scarcity. Thus I do not intend to target small scale subsistence farmers in impoverished countries in this thesis; I wish to bring the discussion to western affluent countries who consume large quantities of meat and animal-derived foods. In doing so I recognize that the foods we humans consume are embedded with culture, cooking traditions, identity, memories, and emotions, and hence throughout the collection of data I have actively let go of any biases I may have, and tapped into my researcher identity with genuine interest to explore the phenomenon at hand.

1.4 Thesis Outline

This thesis is organized into eight main chapters. Chapter two, following the introduction, contains background information necessary for understanding the rationale behind the argumentation of this thesis. The chapter covers climate change, animal agriculture, and a literature review of previous studies conducted which look at dietary change in relation to climate change mitigation. Chapter three establishes the theoretical framework of this thesis

which guides the analysis. The chapter gives an overview of the core elements of socially organized denial and explains the theory of carnism. Chapter four introduces the geographic and cultural context of this study – Norway. Chapter five describes the research methodology and the methods used in the study. Chapter six presents the thematic findings of the study. Using the theoretical framework, chapter seven consists of a discussion and interpretation of the findings. To conclude, the final chapter returns to the thesis question and summarizes the key point of the thesis.

2.0 Background

This chapter provides the backdrop for the thesis. To support the reasoning and argumentation of this research it is critical to explicitly address climate change and animal agriculture. In order to illustrate the importance of the topic at hand, and reveal a gap in current research, a literature review of previous studies is presented.

2.1 Climate Change

Climate change is one of the greatest environmental and social challenges of the 21st century, threatening the existence of life as we know it (Mason and Lang, 2018; Foster, Clark and York, 2011). It is an all encompassing threat which is beginning to seep into all crevices of life. Newspaper headlines all over the world are reporting unprecedented weather events. Australia recently experienced a record high heat wave causing bush fires and mass death of wild animals (Dalton, 2019). Within six months the United States experienced record low arctic temperatures (The Guardian, 2019), and massive wildfires (Milman, 2018). In the past year countries such as Ethiopia, Haiti, and Madagascar experienced food crises resulting from climate change-induced droughts and hurricanes (Neslen, 2019), while people along the coast of Bangladesh are threatened with climate-driven displacement (McDonnell, 2019).

The escalation of climate change is largely attributed to the increased levels of three greenhouse gases (GHGs) in the atmosphere: carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O). These gases when released into the atmosphere trap heat and create a greenhouse effect which causes global average temperatures to rise, resulting in regional and global climate patterns to change. Carbon dioxide is the main driver of climate change, remaining in the atmosphere for thousands of years. Using a 100 year lifespan, methane has between 28-36 times the global warming potential (GWP) of carbon dioxide, and nitrous oxide has between 265-298 GWP,

remaining in the atmosphere for 10 years (CH_4) and over 100 years (N_2O) (EPA, n.d.). Despite remaining in the atmosphere for a shorter time, with climate change threatening the habitability of life on earth in the coming decades, it is critical to tackle CH_4 and N_2O as these gases exacerbate temperature rise.

With a developed reliance on fossil fuel following the Industrial Revolution, anthropogenic activities have contributed to the exponential growth in GHG emissions and global temperature rise. With fossil fuels feeding capitalism's hunger for profit, it is apparent that we are living in the "Capitalocene" (Malm, 2016). With capital intensive human activities, the global average temperature is projected to increase between 0.3°C and 4.8°C by 2100 (IPCC, 2013, p.89). It is predicted that if temperatures reach beyond a certain threshold, positive feedback loops[1] will be activated, making it virtually impossible to halt the warming of the planet.

In order to prevent adverse consequences of climate change, in 1992 an environmental treaty known as the United Nations Framework Convention on Climate Change (UNFCCC) was established. Every year since 1995, countries which ratified the treaty meet to discuss the progress and the way forward at the Conference of the Parties (COP). Despite the many world-wide conferences, speeches, negotiations and developments of new funding agencies, international discussions and climate action have been slow (Ciplet, Roberts and Khan, 2015). Ciplet et al. (2015) refer to these processes as "active inaction" due to the various powerful interests and global politics taking place simultaneously. Though not legally binding, it was only with the 2015 Paris agreement that it was agreed that global emissions must be limited in order not to surpass a rise of 2°C above pre-industrial levels, with 1.5°C being the aspirational goal.

In October 2018 the Intergovernmental Panel on Climate Change (IPCC) released a special report on the effects of global average temperatures increasing by 1.5^oC and 2^oC respectively. In both scenarios major ecological and social stresses are predicted, however the effects of a 2^oC rise are projected to be much more severe (IPCC, 2018). The report states that climate change will have a negative effect on human health due to heat morbidity and ramped increase of diseases such as malaria and dengue fever in new locations. The report warns that land and water

[1]Positive feedback loops enhance and amplify changes. One example of a positive feedback loop is how with warming temperatures permafrost in Siberia thaws and releases methane (a powerful GHG) into the atmosphere. With its release the temperature increases further, causing more permafrost to thaw, releasing even more methane into the atmosphere. This illustrates a perpetual process referred to as a positive feedback loop.

stress is inevitable. A reduction in major cereal crops is expected which poses a serious cause of concern for food security. The report (p.11) also addresses that since climate change exacerbates current hazards, the most vulnerable and exposed people such as certain Indigenous groups, people in developing countries, and those dependent on agriculture and coastal livelihoods will be most affected.

In a report issued by the European Commission it was stated that in order to limit the unfavourable effects of climate change, GHG emissions need to be cut by 50% globally and 80% in developed countries by 2050 compared with 1990 levels of emissions (European Commission, 2007, p.3). With such drastic cuts in emissions, mitigation efforts must come from diverse sources (Mason and Lang, 2018, p.121). Since the current food system heavily contributes to several environmental pressures (Hallström, 2013), the UK Food Climate Research Network (FCRN) issued a report stressing the need to reduce GHG emissions from food production by 70% (Garnett, 2008, p.4).

Agriculture has changed the face of the planet like no other human activity, with its negative effects only being realized now. In an extensive meta-analysis looking at the environmental impacts of ~38,000 farms in 119 countries around the world, Poore and Nemecek (2018) found that agriculture occupies 43% of arable land and uses the greatest amount of fresh water withdrawal. The Stockholm International Water Institute estimates that agriculture accounts for 70-80% of fresh water withdrawal (cited in Mason and Lang, 2018, p.130), where a study by Hoekstra and Mekonnen (2012, p.3233) found that the number may be closer to 92%. According to Poore and Nemecek's (2018, p.987) findings, agriculture is also responsible for approximately 26% of anthropogenic GHG emissions, with the farm stage being responsible for 61% of food's emissions.

2.2 Animal Agriculture

Within agriculture, livestock has the heaviest environmental footprint. In their meta-analysis Poore and Nemecek (2018, p.990) found that 83% of farmland is dedicated to livestock production, where much of this land is comprised of food crops to feed animals. Livestock production also uses 30% of global anthropogenic available fresh water (Mekonnen and Hoekstra, 2012, p.3234), and is the largest sector-specific source of water pollution (UN, 2011, p.78). With the destruction of habitats and ecosystems, animal agriculture is also a major driver

of biodiversity loss (Willet et al., 2019; WWF, 2017). The IPEBS recently released a report stating that approximately 1 million animal species face extinction in the coming decades due to various human activities, and climate change will only exacerbate this process (Díaz et al., 2019).

When it comes to GHG emissions within agriculture, animal-based food production is the major culprit (Willett et al., 2019; Vieux, Darmon, Touazi et al., 2012; Garnett, 2011; Carlsson-Kanyama and Gonzalez, 2009). According to the heavily cited 2006 report by the FAO, *Livestock's Long Shadow*, livestock is responsible for 18% of global anthropogenic GHG emissions (FAO, 2006, p.112). Despite this highly referenced number, some claim that the report's numbers are too conservative, and assert that emissions from livestock are closer to 51% (Goodland and Anhang, 2009, p.11).

If nuances are to be observed, it is important to note that different meat and animal-derived foods have different environmental impacts, and therefore should not be generalized. According to Mason and Lang (2018), "[b]eef and cows' milk production account for the majority of emissions, respectively contributing 41% and 19% of the sector's emissions" (p.123). This is due to ruminants' specialized digestive processes which generate methane (CH_4). In terms of GHG emissions, monogastric animals such as chickens have a smaller environmental impact. However, according to Poore and Nemecek (2018, p.990), even the lowest impact animal-based product exceeds the average vegetable substitute. They further state that animal-based foods "contribute 56 to 58% of food's different emissions, despite providing only 37% of our protein and 18% of our calories" (p.990). Targeting agricultural efficiency alone will not generate substantial mitigation. Hallström (2013, p.43) explicitly writes that technological fixes will not create a large enough impact, and advocates for dietary change.

With livestock playing a major role in environmental degradation and climate change, this sector shows promise in mitigation opportunities. Ripple et al. (quoted in Mason and Lang, 2018, p.121) argue that "reduction in fossil fuels and large cuts in CO_2 emissions, although necessary, will not alone abate climate change and simultaneous cuts in non- CO_2 GHG emissions will be needed". Methane (CH_4) and nitrous oxide (N_2O), present within agriculture, have respectively 28-36 and 265-298 times the GWP of carbon dioxide (CO_2) (EPA, n.d.). Given the current food

system, potent GHG emissions can be reduced by targeting ruminants within food production (Hedenus, Wirsenius and Johansson, 2014; Ripple et al., 2013).

The production and consumption of meat and animal-derived foods is not only harmful for the environment. Studies have shown that meat consumption increases the risk of strokes (Chen, Lv, Pang and Liu, 2013) and non-communicable diseases such as cardiovascular diseases (Bovalino, Charleson and Szoeke, 2016), type II diabetes (Feskens, Sluik and van Woudenbergh, 2013), and certain cancers (Hallström, 2013, Larsson and Wolk, 2012; Ferguson, 2010). People consuming mostly plant-based foods show a lower risk of cardiovascular disease (Satija and Hu, 2018), and people with vegan and vegetarian diets are found to be less prone to non-communicable diseases (Campbell and Campbell II, 2016; Orlich et al., 2013).

Several international studies comparing diets with their health and environmental effects have been conducted, all generating similar conclusions. A Dutch study, comparing six diet types, found that vegan and Mediterranean diets scored highest on the health score, and the vegan and vegetarian preformed best on environmental impact which looked at GHG emissions and land use (van Dooren, Marinussen, Blonk et al., 2014). An EU study which looked at the potential effects of replacing 25-50% of animal-based foods with plant-based foods in Europe found that by decreasing consumption by 50%, nitrogen emissions would decrease by 40%, GHG emissions between 25% and 40%, and cropland for food production by 23% less per capita (Westhoek, Lesschen, Rood, et al., 2014).

An authoritative study conducted by the EAT-Lancet commission was recently released addressing the current food system in connection to human health and sustainability. The report calls for an increase in healthy foods such as vegetables, fruits, whole grains, nuts and legumes and a decrease in undesirable foods such as meat, sugar, and refined grains (Willett, et al., 2019). The report suggests that a shift towards more plant-based foods will result in health benefits and prevent ~11 million annual food-related deaths. The report further states that a shift towards the "planetary health diet" will be necessary in order to meet the Paris Agreement as well as the UN Sustainable Development Goals (SDGs). The report stresses that "[d]ata are sufficient and strong enough to warrant action, and delay will increase the likelihood of serious, even disastrous, consequences" (Willett et al., 2019, p.31).

The EAT-Lancet report is revolutionary in the sense that it is the first to assess the global food system and set scientific targets for both healthy diets and sustainable food production. This commission is brought about by 37 commissioners and coauthors from 16 different countries from various disciplinary fields such as human health, agriculture, environmental sustainability, and political sciences (Willett et al., 2019, p.1). The report states that "[s]trong evidence indicates that food production is among the largest drivers of global environmental change by contributing to climate change, biodiversity loss, freshwater use, interference with the global nitrogen and phosphorus cycles, and land system change" (p.1). In order to transform the current food system, and provide major health benefits for people, the commission provides a healthy reference diet.

Since its publication, the EAT-Lancet report has received major media attention and sparked debate around the world. The response to the report is two sided, with some people supporting the report and its findings and others disapproving it. What discourages many lay people from taking the report seriously is how it advocates for a huge reduction in meat consumption (compared to average meat intake within western countries), and the fact that without closer inspection the report seems to present a universal framework. However, the report states that the reference diet allows for local and cultural adaptation as well as scalability, and acknowledges that in less affluent parts of the world people require eating differently than the reference diet (Willet et al., 2019, pp.11, 39). Despite empirical data supporting such a shift in diet, many people still see it as extreme.

2.3 Previous Studies

The considerable impact of meat and animal-derived food production has been largely overlooked when dealing with climate change, yet shifting towards plant-based diets has the potential to significantly reduce the costs of climate change, while improving human health (Stehfest et al., 2009). Indeed, de Boer et al., (2013) state that "eating less meat is a very much under-explored option for mitigating climate change" (p.6). Subsequent studies exploring the potential for shifting towards plant-based diets, all state that further research is needed in this emerging field.

Most of the research on animal-based food production and climate change utilize surveys as a research method. The strength of this is that it allows for a larger sample population. However, it

also restricts answers and hinders access into the deeper understandings of people's inner worlds— their awareness, motivations and perceptions (Brinkmann and Kvale, 2005). Only two studies (Macdiarmid, Douglas and Campbell, 2016; Cole et al., 2009) were identified to have used methods which allowed the researchers to interact with participants through focus groups, conversation, and observation to gain a more complex picture of individuals' relationship to animal-based foods.

Much of the current research focuses on the individual consumer and his or her awareness of the relationship between animal-based foods and climate change (Macdiarmid, Douglas and Campbell, 2016; Pohjolainen et al., 2016; de Boer, Schösler and Boersema, 2013; Cole et al., 2009). Findings from these studies show that there is a general lack of awareness in regards to how the consumption of meat and animal-derived foods effects the environment and climate change. To illustrate this, in a study conducted by de Boer, de Witt and Aiking (2016, p.23), 12% of Dutch participants and only 6% of American participants saw decreasing meat consumption as an effective mitigation option.

Research examining perceived benefits and barriers to adopting a plant-based diet in Australia found that there was a high awareness of the potential benefits of eating a plant-based diet, and few perceived barriers (Lea, Crawford and Worsley, 2006b). The barriers identified related to lack of information on plant-based foods. Lea et al., (2006b) state that more research is needed to understand these findings since most people who perceived health benefits and no barriers continued to eat meat and animal-derived foods. Furthermore, despite being aware of the health benefits of a plant-based diet, "[n]on-health-related benefits, such as environmental and animal welfare benefits, ranked relatively low, with a large proportion of respondents being unsure of these benefits" (p.833).

Studies suggest that the meat-climate problematization is not a very promising approach to facilitate dietary change (de Boer, Schösler and Boersema, 2013; Cole et al., 2009). de Boer et al. (2013) found that people who took climate change seriously did not necessarily respond well to decreasing meat consumption. And despite talking to and observing UK residents who were aware of, and concerned with environmental problems, only one participant out of eleven was conscious of the negative environmental effects connected to animal agriculture (Cole et al., 2009).

Even with the considerable amount of evidence showing the detrimental effects of meat and animal-derived food production and consumption on the environment and on human health, there is still a general reluctance to stop eating meat and animal-derived foods in western countries (Latvala et al., 2012; Schösler, de Boer and Boersema, 2012; Lea, Crawford and Worsley, 2006a; 2006b). These findings suggest that further investigation into personal motivations is needed, as well as the need to look at individuals within larger social structures.

Generally there has been minimal attention given to animal-based foods in relation to climate change in the public discourse. However, with recent publications addressing the effects of meat and animal-derived food production and consumption on the environment and human health (Willett et al., 2019; Poore and Nemecek, 2018), media responses to the reports are bringing the topic into public conversations and debates. With the EAT-Lancet report recently released and causing a stir, an exploration of consumers' impressions, awareness, willingness and resistance towards reducing meat and animal-derived foods proves to be an interesting and potentially insightful area of inquiry.

3.0 Theoretical Framework

This thesis uses political ecology as a framework for investigating the political, social, and environmental dimensions of meat and animal-derived food consumption in the age of climate change. Political ecology can be understood as the exploration of "social and environmental changes with an understanding that there are better, less coercive, less exploitative, and more sustainable ways of doing things" (Robbins, 2012, p.20). By moving beyond the environmental aspects and politicizing the normalized consumption of meat and animal-derived foods, this thesis connects to three of the elements which constitute the human ecological triangle: environment, society, and the individual (Steiner and Nauser, 1993, pp.56-57). In doing so it also incorporates the fundamental themes of culture, power, and sustainability found within the disciplinary field of human ecology.

As political ecology has a broad and interdisciplinary scope, this thesis draws on theories and concepts from various academic disciplines to serve as entry points to address meat and animal-derived food consumption. The basis of the theoretical framework is comprised of the theory of socially organized denial, and the theory of carnism. Using these two theories, this thesis aims to expose how the consumption of meat and animal-derived foods is a socially learned and

reproduced process. In addition to the theoretical element, ethnographic work by sociologist Kari Marie Norgaard (2011) gives deep insight into Norwegian culture, and serves as a useful building block for this thesis.

3.1 Socially Organized Denial

Unlike most research on denial which focuses on the psychology of the individual, socially organized denial recognizes that what is paid attention to, and what is ignored, is socially constructed (Norgaard, 2011, p.5). It moves beyond the individual as the unit of analysis and recognizes that individuals are part of "optical communities" with different "cognitive traditions" which socially condition them to pay attention to some things and ignore others.

In her search to understand why western nations have not acted in response to climate change, Norgaard (2011) uses the theory of socially organized denial. Through conducting interviews and gathering ethnographic data, Norgaard (2011) seeks to answer why climate change is faced with inaction in the context of a Norwegian town with the pseudonym "Bygdaby". Building on Eviatar Zerubavel's theory of the social organization of denial, Norgaard (2011) incorporates culture and emotions as key emerging elements shaping the production of denial in relation to climate change.

Norgaard's (2011) work illustrates how information is not the only barrier to action. She approaches inaction through a different angle, one not congruent with the popular discourse in research which relies on the information deficit model. Norgaard's work reveals that there are more complex mechanisms at work both at the individual and societal level which require attention.

Norgaard (2011) is largely influenced by sociologist Eviatar Zerubavel, who invested much of his life in cognitive sociology, exploring how individuals' mental lives are largely shaped by society rather than their innate human nature. Zerubavel (1997) looks beyond the more traditional cognitive individualism and explores "the social foundations of our thinking" (p.21); the social mindscapes we all navigate respective of our individual communities.

Building on Zerubavel's work, Norgaard (2011) reveals that how we see, and attribute meaning to what we see, is largely shaped by society. This mechanism is what Zerubavel refers to as "optical socialization", teaching individuals within societies what to pay attention to and what to

ignore (Zerubavel, 1997). Norgaard (2011) applies this idea beyond everyday perceptions, administering it to the global phenomena of climate change. She uniquely uses cognitive sociology in order to understand what is occurring beneath the apparent inaction to climate change within a society with specific cognitive traditions.

The core idea within Norgaard's (2011) use of cognitive sociology is that it is essential to move past the individual, and acknowledge that individuals perpetuate socially learned cognitive traditions – patterns of thinking which dictate perception, meaning, and ultimately behaviour. Norgaard expresses that "what individuals choose to pay attention to or ignore must be understood within the context of both social norms shaping interpersonal interaction and the broader political economic context" (p.6). Thus historical, cultural and geographic context is paramount.

Within thought communities, why we choose to pay attention to some things and not others appears common sense. It is only once outside the boundaries of that thought community's cognitive traditions that it can be perceived as puzzling or unusual (Norgaard, 2011, p.6). It is precisely the social conditioning of individual awareness, thought patterns and memories which deny recognition to things operating outside these boundaries. Norgaard states that this is what Zerubavel originally identified as the social organization of denial.

According to Norgaard (2011) the term denial is not meant to be seen as negative, but as a "testament to our human capacity for empathy, compassion, and an underlying sense of moral imperative to respond even as we fail to do so" (p.61). Thus to her, socially organized denial is like a socially produced coping mechanism to deal with abstract threats such as climate change. Norgaard explains that it is a process of collective active resistance to information; it is knowing and not knowing. Using Stanley Cohen's words she attests that people are "vaguely aware of choosing not to look at the facts, but not quite conscious of just what it is that [they] are evading" (Cohen quoted in Norgaard, 2011, p.60).

3.2 Anthropocentrism, Humanism and Speciesism

In order to be able to understand the rationale and mechanisms within carnism it is crucial to address the cultural hegemony of human-centered ideologies and institutions. In doing so it is important to briefly introduce certain concepts such as anthropocentrism, humanism, and

speciesism, as these concepts together with carnism legitimize and construct a human-animal hierarchy which rationalizes the consumption of (certain) nonhuman animals.

Anthropocentrism is the belief that human beings are the center of the universe. The underlying ideology privileges human beings due to their perceived superiority while disregarding and subordinating nonhuman perspectives and interests (Weitzenfeld and Joy, 2014, p.4). According to Weitzenfeld and Joy (p.4), in order for anthropocentrism to establish itself in society, humanity must be perceived as exceptional, and judge other beings by its principles. Weitzenfeld and Joy (p.5) assert that this inevitably leads to either a "human-animal dualism", where humans are seen as one homogenous group above another group of nonhuman animals, or a "human-animal continuum", which places humans and nonhuman animals hierarchically along a continuum based on characteristics of humanness.

The prevalence of anthropocentrism is largely attributed to "humanism". Humanism is a philosophical stance emerging in the eighteenth century emphasizing the value of individual and collective critical thinking over dogma, superstition and religion (Weitzenfeld and Joy, 2014, p.5). It was with the Age of Enlightenment that instead of gods and deities, human beings were seen to be the source of knowledge. Since then humanism has morphed into what some critical scholars refer to as "anthropocentrist humanism". This is largely attributed to "its ideological commitment to conceptualize human being over and against animal being, and privileging human consciousness and freedom as the center, agent, and pinnacle of history and existence" (Weitzenfeld and Joy, 2014, p.5).

Anthropocentrist humanism is supported by human exceptionalism, self-determination, and dignity (Weitzenfeld and Joy, 2014, pp.5-6). These beliefs all support human supremacy, and essentially make it morally okay to consume animal others. Human exceptionalism lies on the belief that humans are the only ones possessing consciousness, reason, and speech and are therefore superior. Due to our capacity to think freely humans are also uniquely capable of self-realization and self-determination. Since humans are capable of this, Weitzenfeld and Joy's (p.6) reasoning suggests that humans have dignity and intrinsic value. This in turn leads to the belief that nonhuman beings such as animals are thought to have no dignity to desecrate "and thus are owed little to no direct moral consideration" (p.6).

It is not surprising that there are flaws to this way of thinking. Weitzenfeld and Joy (2014, p.6) point out one major irony and contradiction of anthropocentrist humanism— it's attachment to human exceptionalism, despite empirical evidence showing that other species also possess capabilities once believed to be exclusive to humans (Bekoff, 2007; Bekoff, Allen and Burghardt, 2002). Weitzenfeld and Joy (2014, p.11) express that the continued belief in anthropocentrist human-animal dualism, and the superiority of human beings despite empirical evidence is "speciesism".

Oscar Horta (2010) defines speciesism as "the unjustified disadvantageous consideration or treatment of those who are not classified as belonging to one or more particular species" (p.247). The most ubiquitous example of speciesism is in the way humans exploit, objectify and consume nonhuman animals as food (Weitzenfeld and Joy, 2014, pp. 20-21). However, most of us who subscribe to anthropocentrism do not recognize speciesism, and thus the violence and injustice which takes place in order for us to enjoy our steak is kept far away from our moral consciousness. By denying nonhuman animals moral consideration, we implicate ourselves in a carnistic system.

3.3 Carnism

Carnism, a term developed by psychologist Melanie Joy (2010), is a sub-ideology of speciesism which conceptually divides nonhuman animals into "edible" and "inedible" groups, conditioning and legitimizing the killability and consumption of (certain) animal others. Like all dominant ideologies it is entrenched in all facets of society. It is structural and it is internalized, framing our perceptions, attitudes, and behaviours towards nonhuman animals categorized as "edible" (Weitzenfeld and Joy, 2014, p.21).

As a naturalized ideology, carnist logic is perceived as common sense and is constitutive of reality. Writing from a materialist tradition, Rebecca Kukla (2018) expresses that "ideologies are built into practices and the material environment; they are not primarily or essentially 'ideas in the head'" (p.9). Carnism exists in the material environment through institutions, and through the practices of raising, killing, and eating (certain) animal others as food. Through the consumption of the ideology's materiality, it uniquely physically manifests itself inside us. By eating meat and animal-derived foods we not only strengthen carnist ideology, we also embody it.

Ideology is comprised of several elements which maintain its function in society. Swanson (quoted in Kukla, 2018, p.9) puts it nicely by saying that ideology "is a cluster of mutually supporting beliefs, interests, norms, values, practices, institutions, scripts, habits, affective dispositions, and ways of interpreting and interacting with the world". As an entrenched ideology, carnism functions through these different clusters and reproduces certain social relations, while simultaneously generating facts which explain and maintain those relations.

By remaining invisible, and covertly influencing and shaping the status quo, carnism maintains hegemonic power. By constructing individuals' "perceptions, cognitions and preferences in such a way that they accept their role in the existing order of things, either because they can see or imagine no alternative to it, or because they see it as natural and unchangeable" illustrates how carnism utilizes Steven Lukes' "third dimension of power" (Lukes, 1997, p.24).

As a powerful ideology, carnism can be identified in many contexts. Weitzenfeld and Joy (2014) express that "[c]arnism is a global phenomenon; in animal-eating cultures around the world, a select group of animal others are classified as edible while all other species are classified and thus perceived as inedible and disgusting to consume" (p.21). Joy (2010, p.13) expresses that our perception of nonhuman animals has been culturally conditioned in many different contexts guiding us to treat nonhuman animals differently based on our perception of them. This explains why dogs are perceived as edible in many parts of Asia, but their consumption is seen as disgusting and immoral in western contexts.

Why do we, in the west, not react with the same degree of disgust at the thought of eating a cow than a dog? Joy (2010, p.17) suggests that it is because there is a gap in our perception of edible animals, implying that we divorce meat from its animal source. She continues that disgust is a natural first reaction, and thus when it comes to consuming nonhuman animals such as cows, pigs, and chickens "our lack of disgust is largely, if not entirely, learned" (p.17).

Because humans appear to be naturally empathetic, compassionate, and do not like to see animals in pain, carnism depends on the mechanism of psychic numbing which utilizes multiple defenses that help us to disconnect mentally and emotionally from the cognitive dissonance we experience when eating nonhuman animals (Joy, 2010, p.18). Joy states that psychic numbing can be useful as it helps us navigate an unpredictable and often violent world. However, she

stresses the fact that it becomes "destructive, when it is used to *enable* violence" (p.19) in the killing of animal others for food.

Psychic numbing is comprised of multiple defenses operating on the social and psychological levels which facilitate cognitive distortions in order for humans to sustain the carnistic system. The defenses include: "denial, avoidance, routinization, justification, objectification, deindividualization, dichotomization, rationalization, and dissociation" (Joy, 2010, p.19). In this thesis, the defense mechanism of denial will be expanded upon as well as objectification, deindividualization and dichotomization which make up the cognitive trio of internalized carnism.

3.3.1 Denial and the Cognitive Trio

Denial is the most pervasive defense of psychic numbing and is largely responsible for carnism's invisibility (Joy, 2010, p.21). It is hence due to carnism's invisibility that eating meat does not appear to be a *choice,* as being vegetarian or vegan does. Joy writes that it is much easier to identify ideologies outside the mainstream because what is mainstream is so entrenched that its beliefs and practices appear to be common sense. But like veganism and vegetarianism, eating meat also rests on a belief system. Unlike omnivore or carnivore which speaks to biological conditioning, or the a-political term "meat-eater", the term "carnist" developed by Melanie Joy does not try to divorce a person's consumption of meat from his or her beliefs and values (Joy, 2010, p.29). Joy concurs that only by naming carnism can it be made visible for scrutiny.

Denial is the ultimate defense of carnism. If there is no problem to begin with, all responsibility to address it vanishes (Weitzenfeld and Joy, 2014, p.22). This defense mechanism is utilized by many institutions, but none as much as by animal agriculture. The animal agriculture industry denies reality by showing distorted realties of "happy cows" in advertisements and by maintaining invisibility of its production methods. Through cognitive processes of dissociation and internalized denial, human consumers "end up viewing corpses as cuisine and thus feel delight rather than disgust" (p.23).

Internalized carnism, consisting of objectification, deindividualization and dichotomization make up what Joy (2010, p.117) refers to as the cognitive trio. Each is responsible for a specific

distortion of reality, but together they reinforce one another. Objectification distorts living animals into inanimate things. Here language is a powerful tool used to objectify animals; it is used to misrepresent cows as beef, pigs as pork, and enables chickens to be referred to as some*thing* rather than some*one*. Through butchering and mystifying language, animals are made absent from meat-eating entirely (Adams, 2010a). Adams (2010b) states that through this process animals become "absent referents":

> Animals in name and body are made absent as animals for meat to exist. Animals' lives precede and enable the existence of meat. If animals are alive they cannot be meat. Thus a dead body replaces the live animal. Without animals there would be no meat eating, yet they are absent from the act of eating meat because they have been transformed into food. (p. 66)

Deindividualization strips animals of their individuality and musters them into one homogenous group identity (Joy, 2010, p.119). Joy expresses that through deindividualization, when we eat pork we do not think of an individual pig with a unique personality and desires, but as an abstract notion of pig. Dichotomization, the third defense of the cognitive trio, places nonhuman animals into different groups based on our beliefs about them. Joy (2010, p.122) expresses that dichotomizing animal others by placing them into edible and inedible categories allows us to distance ourselves of the discomfort of consuming their flesh.

3.3.2 The Four Ns of Justification

Joy (2010) asserts that denial alone will not keep the carnistic system intact and thus we accept and internalize myths about meat to maintain the moral justness of our consumption of nonhuman animals. Joy (p.98) proposes that the common myths about meat are enforced through many avenues such as media, family, as well as private and public institutions. She states that since carnism is an entrenched system, myth makers are all around, made up of authoritative figures within medicine, education, and the political scene. Unknowingly, raised through the lens of carnism, they perpetuate the beliefs that eating meat is *normal*, *natural* and *necessary*. These beliefs are what Joy refers to as the "Three Ns of Justification".

Eating meat *is* normal, but that is not in and of itself, it is because the ideology of carnism is normalized. When an ideology is normalized its principles are considered social norms and

rarely questioned (Joy, 2010, p.31). Social norms do not only describe how we behave, they also indicate how we ought to behave in order to fit in within society. It is much easier socially and practically to conform to carnistic social norms. Joy (p.106) illustrates that it is much easier to consume meat which is readily available than to search for less available meat-alternatives. Additionally, socially it is easier to conform to the ways of the majority than to choose not to eat meat and be seen as the outsider.

Joy (2010, p.107) writes that in the same way eating meat has been normalized, it has also been naturalized. The myth maintains that humans have eaten meat for thousands of years, we have naturally evolved to eat meat, and therefore it is natural for us to continue to do so. Joy (p.108) expresses that this justification is used with the help of history, religion and science. Through selective historical facts, religion maintaining human uniqueness, and science providing biological support, these disciplines help maintain the myth that eating meat is natural.

The myth that eating meat is necessary stems from its perceived naturalness (Joy, 2010). Joy (p.109) explains that if we believe that eating meat is critical for our biological build up, we then see it as necessary. Related to that, it is also believed that meat is essential to maintain good health. Despite contradictory evidence showing that humans can thrive without consuming meat and that the consumption of meat can actually lead to detrimental health conditions, we advance the myth that meat is necessary.

Building on Melanie Joy's "Three Ns of Justification", Piazza et al. (2015) found that in addition to the three justifications mentioned above, a common justification for eating meat is that it tastes good, that it is *nice* to eat meat. Piazza et al. state that this justification has been previously overlooked due to its weak moral defense, however their research shows that the main justifications people give for consuming meat is that it is normal, natural, necessary and *nice*.

Only by naming carnism can it be questioned, challenged and transformed. Only by recognizing the mechanisms taking place within meat and animal-derived food production can we bear witness— "emotionally connect with the experience of those we are witnessing" (Joy, 2010, p.138), and close the gap in our consciousness. In doing this we allow our own authentic reactions to come forth unhindered by the lens of carnism. Joy (p.139) writes that collective

witnessing is the greatest threat to carnism, and therefore the system uses defenses such as denial, objectification, deindividualization and dichotomization to prohibit it from happening.

4.0 Case Study: Norway

Due to many of its characteristics, Norway makes for a unique case to explore the phenomenon of meat and animal-derived food consumption in the age of climate change. It is a prime example of a western industrialized country within which carnism operates at both the structural and interpersonal levels. As a wealthy and powerful country it serves to illustrate the theoretical arguments of this thesis.

4.1 Country and Population Characteristics

Norway's geography, population, traditions, and cultural norms make it a particularly interesting case to explore. Located in Scandinavia, Norway's arctic regions are experiencing climate change at an accelerated rate (Fjeld, 2019). The island of Svalbard is the fastest warming area in the world, where March 2019 was named the hundredth month in a row where temperatures were above normal (Holm, 2019). The real effects of climate change are being felt in the country, and are acknowledged by 93% of the population (Anderson and Kuiper, 2017).

Despite the country's oil production (a driving factor behind the climate crisis), and high rates of consumerism, internationally Norway is seen as a green pioneer. Its capital, Oslo, was named the European green capital of 2019. Norwegians have a reputation for loving the outdoors and are seen to be very environmentally conscious (Norgaard, 2011, p.13). With their affection for nature, they perceive being environmentally friendly a big part of Norwegian identity (Anderson and Kuiper, 2017).

In addition to the environment, abiding to social norms appears to be important for many Norwegians. The law of Jante (Janteloven) is a very prominent social code running through Norwegian society which exemplifies this. Formulated by Danish-Norwegian author Aksel Sandemose in his 1933 satirical novel "A Fugitive crosses his Tracks" (En Flyktning Krysser Sitt Spor), the law of Jante comprises of ten social codes to live by (Norman, 2018). The codes are often referred to as a homogenous unit expressing the sentiment "do not think you are special or that you are better than us". The core element of the law is its emphasis on the importance of the

collective accomplishments and well-being over individual achievement. As such, drawing attention to oneself and boasting about individual success is frowned upon.

The transmission of customs and beliefs from one generation to the next is seen in many areas of Norwegian society. It can be observed in the traditional clothes (bunader) people wear on special occasions such as Norwegian Constitution Day, in the maintenance of regional dialects, and in the types of foods people eat in both their everyday lives and on cultural holidays (Norgaard, 2011, p.24). As these cultural traditions bear a prominent role in society, food becomes an important part of Norwegian culture and identity. Especially around Christmas, meat and animal-derived foods represent an important part of Norwegian family traditions. It is very common to eat svineribbe (pork ribs), pinnekjøtt (lamb ribs) and creamy risgrøt (rice porridge) throughout the whole country (Høberg, 2017).

4.2 Animal Agriculture

Farming is an important and traditional part of Norway's identity and economy. Currently the food industry is the largest industrial sector (Wood et al., 2019, p.41). Due to Norway's climate and rough terrain, most agricultural activities involve livestock production. Attributed to Norway's large GDP (IMF, 2019) and regional factors, Norway subsidizes agriculture more than any other country, accounting for approximately 20 billion Norwegian Kroner (equivalent to 2 billion Euros) a year (Nykvist, 2019). Approximately 96% of these subsidies go to meat and animal-derived food production (Fyen, 2014).

Norway has very strict regulations when it comes to meat and animal-derived food production, and is known for producing high quality products. A frontrunner in fighting antibiotic resistance, Norway uses the least amount of antibiotics in livestock production (Regjeringen.no, 2019). With strict regulations, and a constant strive to produce livestock more sustainably, Norwegian meat is perceived as healthier, safer, and more sustainable than meat from other countries. Norwegian consumers are reported to be willing to pay extra for Norwegian meat since they are reassured that the meat is safe, and supports local farmers (Opsahl, 2019).

The Norwegian agricultural system is very unique in its set up to support local farmers. Farmers are organized into cooperatives and work together with organizations that promote farmers' interests (Syverud, Bratberg and Almås, 2019). These intuitional foundations support local

Norwegian agriculture by allowing for negotiations between the government and the farmer unions, and by generating financial support.

With industrial intensification, and economic growth, meat and animal-derived food consumption has increased by 165% since 1959 (Rognstad and Streinset, 2010). Despite not eating huge amounts of animal-based foods compared to other western countries (OECD, 2018), Norwegians consume a high amount of red meat. On average Norwegians eat approximately 140g of red meat a day while the national dietary guidelines recommend no more than 500g a week (Wood et al., 2019, p.16). The recent report by Wood et al. indicates that beef production is decreasing slightly while pork and poultry is increasing. To meet Norwegian consumer demand Norway imports meat from Germany, Botswana, Namibia and Uruguay, among others (Lindahl, 2017). Imported livestock products account for the largest amount of food-related GHG emissions outside the country's regions (Wood et al., 2019, p.26).

4.3 Current Socio-Political Climate

With climate change intensifying and more attention given to livestock's contribution to GHG emissions, lively debates in regards to Norwegian agriculture and what foods should be consumed and avoided are presently occurring within the public and political discourse. Articles arguing against meat consumption (Nøst, 2018) and for (Johansen, 2018) are both presented within Norwegian newspapers. These debates have heated up following the release of the EAT-Lancet report earlier this year. With the prominent public figure, Gunhild Stordalen, being the founder and executive chair at the EAT Foundation, the report received a lot of media attention in Norway.

Prior to the report's release, the meat and dairy industry lobbied to discredit the report. Anticipating that red meat will be addressed in relation to health and climate, the lobbying effort aimed to stress that Norwegian meat is among the most-climate friendly there is (Wig, 2019). In addition, top executives of the meat industry came out stating that the report's proposed reference diet is unrealistic, and that Norwegian agriculture is sustainable already (Johannessen, 2019).

Despite surveys showing that Norwegians are unwilling to cut their intake of meat (Lassen, 2018), the younger population is beginning to turn to veganism and vegetarianism (Nipen,

Hansen, Byhring and Tønnesen, 2019). With more Norwegians beginning to cut their intake of meat and animal-derived foods (Holm, 2018), meat and dairy industries are responding by lobbying or meeting demand. Sunniva for example, owned by TINE, one of Norway's leading dairy suppliers, recently launched a plant-based line of products called Gryr (TINE, 2018). The food company Synnøve Finden which specializes in dairy products, launched a "Go' Vegan" cheese (Synnøve, n.d.). Additionally supermarket chain REMA 1000 and Coop Norge stores are continuously supplying more vegan and vegetarian options.

According to a recent report (Wood et al., 2019), Norway is in a unique position to be able to become a pioneer for healthy and sustainable food systems. Its strict regulations on animal health, welfare, and antibiotic use, strong social and institutional foundations, and multi-sector collaboration, create the ideal conditions for a healthy and sustainable food system. However the report states that currently the environmental impacts stemming from Norwegian food consumption is still too heavy, and diets need to change in order to meet healthy eating targets. Currently Norwegians' consumption of red meat is too high. As diet related diseases are the third leading cause of death in Norway (Wood et al., 2019, p.22), the report by Wood et al. (pp.6-7) encourages an increase in vegetables and legumes, whole grains over refined grains and decreasing one's intake of sugar and red meat.

5.0 Research Methodology

This thesis utilizes a qualitative exploratory approach to research with a case study design. The research is qualitative in its nature as it is interested in investigating the inner worlds of individuals within larger social structures (Bryman, 2016, pp.375-383; Brinkmann and Kvale, 2005). Due to its uniqueness, Akershus County, Norway, was chosen as a case to illustrate the theoretical reasoning of this paper (Schwartz-Shea and Yanov, 2012). Recognizing the importance of cultural and geographic differences, a case study design was chosen as it acknowledges that context specific factors are integral in comprehending a given phenomenon (Yin, 2012).

As researcher, my ontological and epistemological position rests in social constructionism. I agree with the notion that knowledge is not objective or rational, but reflects power, particular interests, and ideological conditioning (Alvesson and Sköldberg, 2009, p.25). As a social

constructionist I consider that what we believe to be true, and how we see the world to be is socially constructed, and this is reflected in my methodology.

5.1 Methods

Face-to-face semi-structured qualitative interviews were chosen as a method for obtaining data in this thesis in order to gain a deeper understanding of how individuals relate to climate change, and their connection to meat and animal-derived foods. This method was used to stimulate conversations that would allow access to individuals' life-worlds (Brinkmann and Kvale, 2005, p.157). Semi-structured interviews gave consistency by providing common themes in all the interviews, and at the same time allowed for participants to share their feelings and thoughts freely. The benefits of conducting interviews in person included being able to ask follow up and clarification questions, observe body language and the energy in the room, and allowed me to establish an ease and trust with the participants.

Ten interviews were conducted between March 1st and March 18th, 2019. Four male and six female university students from different disciplinary backgrounds were interviewed (see appendix 1). The interviews were conducted in private spaces so that the participants could speak freely without worrying about being overheard. The interviews conducted lasted between 30 minutes and 1 hour and 5 minutes. Ten interviews were deemed sufficient as data saturation was achieved (Bryman, 2016, p.417). Furthermore, a sample of ten participants allowed me to spend more time with each participant, ask follow up questions, and generate richer data than if I were to have a larger sample (Onwuegbuzie and Collins cited in Bryman, 2016, p.417).

Before each interview a cover letter was handed out to the participant stating the purpose of the research and explaining how the data would be handled (see appendix 2). The purpose of the research was not explicitly stated in order not to generate any biased responses. Data was collected through audio recording upon the participants' consent, and transcribed manually in a Word document. Rudimentary notes were also taken during the interviews as a safety precaution in case the recording failed.

The interview questions were crafted based on the literature review (de Boer, de Witt and Aiking; 2016; Macdiarmid, Douglas and Campbell, 2016; Pohjolainen et al., 2016; Graça, Oliveira and Calheiros; 2015; de Boer, Schösler and Boersema, 2013; Belasco, 2008; Lea,

Crawford and Worsley, 2006a; Lea, Crawford and Worsley, 2006b). The interview guide (see appendix 3) consisted of a series of thematic questions which were developed to help answer the research question. The thematic questions included demographic background information, and questions pertaining to (i) environmental awareness; (ii) relationship to meat; (iii) relationship to animal-derived foods; (iv) questions relating to theory of carnism; (v) perceived impacts of animal agriculture; (vi) thoughts about vegan and plant-based diets; (vii) questions about the recent EAT-Lancet report; (viii) and different scenario questions. Participants were also given an information card (see appendix 4) and asked about their immediate reactions and whether this information was new to them. This was followed by questions asking (ix) under what conditions they could see themselves eating mostly plant-based foods and (x) what they identified as personal barriers for not eliminating meat and animal-derived foods from their diet.

Since interviews were the primary method for data collection, triangulation was used as tool within the interviews. Data was additionally triangulated through the method of direct observation. As I have been situated in Norway for approximately three years within the time period of September 2014 to summer 2019, I have been able to directly observe the role of meat and animal-derived foods in society, in traditional holidays, in individuals' everyday lives, and in how it is portrayed by the media.

5.2 Sample Population

A purposive sampling frame was used in order to recruit university students from Akershus County, Norway, who consume meat and animal-derived foods. Initial participants were contacted through social media platforms, and snowball sampling was used to access further participants. Akershus County was chosen because Norway's leading agricultural and environmentally focused university lays there, Norges Miljø- og Biovitenskapelige Universitet (NMBU). Thus interviewing students who presumably care about the environment and climate change, who are well educated, yet still consume meat and animal-derived foods, allowed for a deeper investigation into the underlying mechanisms of meat and animal-derived food consumption.

Interviewing students from NMBU allowed me to obtain the perspectives from individuals from various parts of the country. In my sample population participants came from six different fylker (counties) – Oslo (1), Vestfold (1), Oppland (1), Trøndelag (2), Rogaland (2), and Hedmark (3)

(see appendix 5). This allowed me to gain unique insights from individuals who grew up in both urban and rural settings. Furthermore interviewing students allowed me to gain insights from various disciplinary backgrounds. By speaking to students from various regions of the country, from several disciplinary fields and stages of education, I aimed to get a diverse sample as possible given my sample criteria.

5.3 Data Analysis

After the audio recordings of the interviews were manually transcribed, NVivo 12 Plus software for Windows was used in order to organize the data. Initially a descriptive analysis was conducted in order to uncover the frequency of responses given by participants in relation to the thematic questions in the interview guide. As these results are not so relevant and quite dense, they are omitted from this paper. They served as a useful tool for me to become familiar with the data and helped me to identify key emerging themes for the thematic analysis.

After I familiarized myself with the data, data was reduced and organized. It was thematically arranged in order to identify main and recurring themes throughout the interviews (Bryman, 2016, pp.587-588). This allowed me to interpret my findings in connection to the theoretical framework. Anonymised quotes[2] from the interviews are presented in the findings chapter to illustrate the different emergent themes, and to lay the foundation for the interpretation and theoretical analysis of the data.

5.4 Ethical Considerations

In terms of ethical considerations, participants were informed about how the data would be used (see appendix 2) and gave their informed consent before the interviews began. A potential ethical challenge is that I did not disclose to the participants that I am vegan. This was a conscious decision in order not to generate any biased responses. However, some participants had prior knowledge of my veganism, but this knowledge did not appear to influence their responses.

5.5 Limitations and Future Research

A perceived limitation in this research is that as a person who does not speak Norwegian fluently, I was not able to hold the interviews in the participants' mother tongue. Conducting interviews in Norwegian could have revealed more personal and nuanced data. Despite this

[2] For flow and legibility minor grammar edits have been made in some of the quotations.

limitation, most people I interviewed spoke a very high level of English. Furthermore, being a foreigner may have helped me in this research process. It allowed me, an outsider, to show a sincere yearning to understand Norwegian eating habits and values. It also allowed me to ask questions which a Norwegian may have not considered given his or her specific cognitive traditions.

Time and resources were also a limiting factor. With more time and resources I could have interviewed experts from various sectors of society in order to obtain a more complete picture of the Norwegian social and political context. Analyzing newspaper articles in the public discourse is also something I wanted to do that time and resources did not allow for. These areas of inquiry may be interesting to investigate and pursue in future research. In order to access a more nuanced understanding of the social environment, future research could also consider interviewing vegans and vegetarians in contrast to "carnists".

6.0 Findings

This chapter presents the findings of the study at hand. Guided by the theoretical framework, a thematic analysis was used as a method to identify and explore emerging themes throughout the interview transcripts. Four major themes were identified: environmental awareness, social conformity, learned behaviour, and human-animal dualism. The emergent themes are presented here and are the building blocks for the discussion which follows this chapter.

6.1. Environmental Awareness

With varying degrees of knowledge, all the participants interviewed showed some understanding of the environmental problems associated with meat and animal-derived food production. Some participants expressed more awareness of the environmental impacts, where one participant remarked,

> Oh I think it has big impacts. I've heard a lot of forest has been chopped down so that the cows can have the ground to eat, and the climate gases from cows, like methane, have a big effect. And in general we use so many resources to make food that is only food for our animals. It's so much land only for animal food and then again land where the animal can live…it's not really sustainable to have that many domestic animals in the world. (participant 5)

This participant, along with several others, showed a larger understanding of the various environmental impacts associated with animal agriculture. Out of the ten participants interviewed only one was unable to state how the production of meat and animal-derived foods impacts the environment, admitting, “I don’t really know but probably not in a good way” (participant 2). Despite not knowing the specifics, the participant implied knowing that some negative effects were associated.

Generally there was more awareness of environmental effects associated with meat production; animal-derived foods came in as a second thought. One participant did not realize animal-derived foods have environmental impacts, expressing, “I can understand that meat has some issues. But I don’t understand why milk shouldn’t be consumed” (participant 10). This highlights that when habitually consumed products are not problematized in the dominant discourse, individuals may not think to question them.

Some participants recognized that meat and animal-derived food production has an effect on climate change, where one participant expressed that,

> The animals need food and the food needs to be grown and that means that for example rain forests need to be cut down to clear more space for agriculture, which has its affect again on the environment, and climate change. (participant 7)

However, there were also some that were more skeptical of the connection, expressing that, “It has some impact. I don’t think it’s the biggest contributor to climate change, but it has some undeniable impact” (participant 10), and “Mmm, maybe a little. But I don’t think that’s the biggest part of it” (participant 6).

Despite being aware of the negative environmental effects, participants appeared to have distanced themselves from those thoughts and that reality. One participant shared that,

> I have come to understand that it’s quite bad, especially the cow industry. So I know it’s bad but I don’t know…you don’t think about it when you go to the store. You can see a documentary and a couple of days pass and then you see another thing because so much is happening in the world and everything is so easy to find online. So it’s like you see it and think “oh that’s sad” and then you forget it. It’s sad to say that but that’s how it is. So

> yeah, I think you just try to forget it so that you can keep going like the way you're used to so we don't have to change. (participant 4)

This notion of knowing and trying to forget or not think about what is happening was an occurring theme throughout the interviews.

Although most participants were aware of some of the negative environmental effects associated with animal agriculture, these did not outweigh the social and pleasurable taste benefits of consuming meat and animal-derived foods. However, many participants expressed decreasing their consumption of meat since moving away from home and starting university. The main reasons for reduction were the high cost of meat, knowledge about the negative environmental effects, and meeting other students who did not eat meat.

6.2 Social Conformity

Social norms, society, and being a part of the community emerged as a clear theme throughout all the interviews. Participants expressed feeling "socially awkward" (participant 2), and uncomfortable inconveniencing others and standing out as different. When speaking about disadvantages of a plant-based diet one participant expressed,

> I imagine there must be some sort of social issue connected to it, if you and a group of friends go out to eat or order something together but they have to take into consideration that someone is vegetarian or vegan that might be challenging for the vegetarian who feels that the whole group must take him or her into consideration. (participant 10)

Another participant communicated the same sentiment sharing that,

> Some disadvantages are the get-togethers with friends I think because then they always have to ask if there is a vegetarian option for them. And I think it's a big disadvantage in the more kind of traditional holidays like Christmas, where the main food is meat, and to break that kind of cultural tradition is kind of hard in some families. I heard my friends talk about it, it's like their father gets angry if they don't want to eat the meat at Christmas. (participant 5)

Social gatherings with friends and family were a recurring theme, where another participant stated,

> If you visit your family for example, it's not always so easy to… like if they serve something you can't eat. […] first of all you can't eat it and then it's also maybe a bit difficult to ask for different food… like it has to be communicated at least beforehand. (participant 7)

Several participants expressed that it would be difficult to shift to a plant-based diet when their families eat and prepare traditional Norwegian food. One participant explained,

> In the big community or family gatherings, meat is like the center, and to say no to it then is hard for me because I also feel like I let my whole family down, and also my tradition. So, that is yeah, kind of the feeling to be the outsider. (participant 5)

These responses speak to the social norms of fitting in, maintaining the social order, and being polite. One participant expressed that she has friends who are vegetarian but they will eat meat in social settings. She expressed that,

> I don't know if it's a Norwegian cultural thing or not but I know for example many [of my friends] are vegetarian in their everyday life but if they go visit someone or they go visit and get a dinner and it's meat they eat it, because you're being polite. (participant 9)

The stigma associated with being vegan was also expressed as a deterrent where some participants expressed that,

> You get like a mark, "ah vegan", you also use homemade clothes and are really weird and listen to hippy music and you only bicycle, you don't own a car, and stuff like that […] that's something I have seen, that people are very quick to mark that, ok you're vegan so you have to be that type of person. (participant 6)

Also referring to social stigma, another participant gave the hypothetical example of being vegetarian, stating, "Well [let's say] I'm a vegetarian, ok, like here [in Ås] everybody knows why you're vegetarian, but in many other groups in society –oh you're vegetarian you're one of *those,* [one of] *them*" (participant 9). Being seen as an outsider and different appeared to be a big disincentive for eating plant-based for most participants, where the majority wanted to be accepted by their friends, family and society.

In addition to social factors hindering the shift to plant-based diets, participants also referred to the larger social environment when it came to things that would make the shift easier. Some participants expressed that if other people around them also did not eat meat or animal-derived foods it would be more manageable. This was expressed by two participants, who stated, “as long as everyone else around me also doesn’t eat those products I think it would go nicely” (participant 5) and “if it gets more common to be vegetarian or vegan I think that would help because then you could learn how to cook from your friends and family” (participant 4).

Another participant expressed that it would be easier not to eat meat if it was not accepted by society, stating that “the easiest way would be some sort of social stigma where eating meat would be frowned upon like smoking for instance” (participant 10). With these responses it seems as though societal change is needed in order for people to shift away from meat and animal-derived foods. This was apparent in one participant’s statement; “I already know that the environment is in danger, but still I eat meat, so I think there must be something else… maybe more community change [is needed] to make me stop eating meat” (participant 5).

Ultimately the data shows that it is important for participants to feel like they belong in their social groups and community. Drawing attention to oneself was expressed as breaking a social norm. Being polite was seen as a virtue, and refusing to eat meat and animal-derived foods that someone else prepared was expressed as being impolite.

6.3 Learned Behaviour

Through the interviews it is apparent that eating meat and animal-derived foods is not a conscious decision, but a socially learned behaviour which fosters specific eating habits. Since most people never had their consumption of animal-based foods questioned, the interview process allowed for deeper personal reflection. One participant shared,

> I feel that I’ve kind of been programmed to eat it, ‘cause its food, and I’ve always eaten it, I find it tastes delicious. But then again I also find the taste of fruits and vegetables delicious. So I’m not sure why it’s such a huge part of my diet. (participant 3)

Another participant expressed,

> For me, meat is something I have always eaten, since I was little. It's kind of in my food tradition as we could say. My family has always made food with meat. But it's not my favourite thing. I also don't need to eat meat every day, but it's kind of become kind of a cultural thing. (participant 5)

All participants expressed being raised eating meat and animal-derived foods, where one participant expressed "I look at it as food and I think it's good and it's, I don't know, I've been served such products since I was born more or less" (participant 10). With another participant stating, "I think it's good, and I have always eaten it, so it's easy" (participant 9). None of the participants interviewed had family members who did not eat meat and/or animal-derived foods. The closest to vegetarian was one participant's grandfather who was pescatarian.[3]

What was perceived as cultural and traditional was also expressed as normal, with one participant stating,

> All my relatives are farmers. I came from a pig farm, and my mom came from a cow milking farm. So I think it's traditional in the sense that we used to have meat every day when I was little, it was a normal part of the meal. (participant 8)

Another participant stated that eating meat and animal-derived foods "has been done for so many years. My family, or some members of my family, have been farmers producing meat-based food. I think it's perfectly normal" (participant 10). Another participant expressed that "I think a lot of Norwegians drink milk. So that's kind of typical Norwegian. Its traditional Norwegian food I think" (participant 4).

It was apparent that meat and animal-derived foods are a big part of people's diets and also contribute to their identity as Norwegians. One participant expressed,

> I think to an average Norwegian [animal-based foods] are very important. We are like fostered on milk many of us. We had to drink milk at school […] that was a "skole melkeordning" (school milk scheme), I think everyone gets that. (participant 8)

[3] A pescatarian is someone who eats fish and seafood but not other types of meat.

Two other participants also expressed receiving milk at school as young children, stating "all of elementary school I had milk every day […] we got it for lunch. They brought it. As long as you signed up for it I guess, which most kids [did]" (participant 1). The other participant recalled that you could sign up to receive milk every day:

> I think it was every day. You could choose I think, and there was a cost, it wasn't for free. So it was more expensive to have it every day than just a few days. I think I had it every day. (participant 10)

Growing up with milk at home and at school, it is no wonder participants showed a fondness for milk, where one participant expressed, "I'd say eating breakfast without milk is pretty dull. Boring. We do love our milk I'd say" (participant 3). It also appeared to have fostered a belief that milk is healthy, with participants stating, "[it] is something you drink from a young age, at school. It's viewed as very healthy" (participant 1), and "I drink more milk now than I did because it's not so expensive and I think it's healthy to get all the calcium, and all that in the milk" (participant 6).

Participants expressed learned beliefs through their social surroundings. One participant who was an athlete expressed that,

> Meat tastes nice. And I think if you are training a lot it's a nice way to get proteins and to refill your body. I think it will require a lot of knowledge about food and your body to train a lot and have no meat in the diet. (participant 2)

These beliefs appear to be reflected back to him in his social surroundings, as he further expressed that,

> When I was playing football, like professionally, there was always a lot of attention to what we should eat and not eat before and after training. And eggs and meat were on the list of what we should eat a lot of after training, to refill, and perform better. (participant 2)

Reflected by their social surroundings, participants expressed the belief that meat is healthy. One participant remarked, "I'm a farmer, so I'm like on that side. You don't need to have meat in every meal to call it a meal, but meat is really, it's actually very healthy" (participant 6). Another

participant shared that when she was thinking about eating less meat her family responded by saying “be careful if you’re going to go plant-based because you’re not going to get all the nutrition that you need” (participant 8). She further shared that,

> I have a friend who is a nutritionist; she studies food science [at NMBU]. She said that her sister wanted to become a vegetarian and she was also worried about the uptake of nutrition. She said some products that are animal-derived are better than vegan [products]. (participant 8)

The findings indicate that the social context was central in establishing certain perceptions, attitudes, beliefs and behaviours in relation to meat and animal-derived foods.

6.4 Human-Animal Dualism

The fourth emerging theme is human-animal dualism, where humans are perceived to be distinctly different and superior to nonhuman animals, thus justifying their exploitation. All of the participants referred to farm animals as a homogenous group and resource for humans. Participants stated that “they are effective for producing meat; you can get a lot of meat out of them and their meat type tastes good” (p1). One participant further expressed that,

> Those species have been domesticated for many years, many thousands of years, so they kind of became our food source in the way that we made them for our consumption… they get fat and give a lot of meat, or produce very fatty milk. (participant 5)

Animal-derived products were expressed to be a valuable resource according to one participant, who firmly stated that,

> I think it’s perfect actually. It’s a resource, and we need to use them. It will be stupid of us not to use it especially if you still are going to eat meat, because it’s a byproduct the animals produce, and well it also tastes good […] and we can digest it [so] we can use it and it’s a resource that’s there for us. (participant 6)

Nearly all of the participants expressed taste being a key factor in why they eat meat. When asked why participants choose to eat meat and animal-derived foods nearly all responded “because it tastes nice”.

The sentiment that farm animals could not exist without humans appeared in some participants' narratives, where one person expressed,

> Over thousands of years, we have domesticated these animals in some way. If you don't look at animal welfare only the natural, or the evolution, they are so domesticated today. You can always talk about maybe setting them free and all those things but I think that in the same way they would never manage. So as long as the animal welfare is good I think its ok [to eat them]. (participant 9)

When asked how animal agriculture affects the animals one participant remarked that,

> They die mostly. But so do we all. Without the production they aren't going to live at all, so it's either have a life, if you are lucky and born in Norway, Sweden or Denmark, you get a really good life and then you die in a good way 'cause they don't feel much […] especially in Norway and Sweden and Finland, we have really good animal care, so we shouldn't feel sorry for eating those, 'cause they lived a good life. I don't feel sorry for it, 'cause I know how the animals were treated before, and it's a big part of the whole system 'cause we have been domesticating those animals since we started farming, and those animals won't survive without us. (participant 6)

There was also an apparent disconnect between the once living nonhuman animal and meat in how some participants spoke about meat. This was most noticeable in how one participant talked about what she did not like to eat:

> I don't like products that are made of like, what is it called, like the kidneys and lungs and intestines and those kind of products. I don't like those so much I like more the meat products, if that makes sense.

When asked what she meant by this the participant continued,

> I guess I don't like... there is something called "blodpølse" (blood sausage) and lungemos (mashed lung). It's made from the lungs and the blood, and I don't like that so much. I find it a bit nasty. It's just, I just feel like that's not proper food, but of course it is because people eat it. Yeah I don't know. I just don't like thinking about what it actually

> is. I don't know actually… I just, I like the meat and not so much the other parts of the animal I guess. (participant 7)

Another participant recognized this apparent disconnect. Reflecting on her associations of meat she said,

> I think about just like the shelves in the stores which are filled with meat and the kind of separation between the animal itself and the product. And that, that way you don't really recognize what's on the shelf based on what part of the animal it is. (participant 8)

A participant who grew up on a farm also touched upon this disconnect stating that,

> I actually think it's healthier for people's minds to actually know how everything is made, to not get disconnected from their food. You need to know it actually has been living; it's not just happening in the store, there is so much behind it. And because of that yeah, I have never doubted it, I actually like it, it's ok. And its right and you shouldn't regret it or feel bad about it. (participant 6)

These responses reflect the contrasts between an urban and rural association with meat based on how individuals were socialized at a young age in their given contexts. Despite being aware and unaware of the processes behind meat production, the participants on both sides continued to eat meat and animal-derived foods.

When talking about what type of animals people in Norway consume, some participants expressed that people in different cultures eat different animals. One participant stated, "I know that in other parts of the world they eat other animals too. But it's not so normal here" (participant 7). Another participant remarked,

> Well, here I can say we eat cows and pigs and sheep and wild animals. And the wild animals that we eat and cows are in the same family so it's mostly the same […] But yeah we don't like to eat our pets. So when we think about China, and they eat dogs and cats we are like oh my you can't do that, but it's just about culture. (participant 6)

She continued by expressing that "some animals we can accept that they are going to get slaughtered, and some animals we want to keep in our family and we keep them closer to us".

Another participant expressed thinking about what type of animals she eats after an experience she had with her friend in Indonesia. Amongst laughter, she shared that,

> We started discussing it in Indonesia because we got served dog. But for us it's an animal that we love, but in Indonesia it was like ok this is food so we're gonna eat it. So that was quite different… and how we thought about it, but I didn't eat it. But my friend, she did […] I thought it was weird. And I don't even like dogs. So I don't know, there's just something weird about it. It's like, it's a dog, you know it […] it's just something you learn, that you don't eat dogs, that's something they do in China! (participant 4)

When I asked why her friend had eaten the dog but not her she replied,

> Yeah but that's because she didn't know, or she got it on her plate and then they told her its dog. But then it was on the plate and she was just like, she didn't want to be rude so she ate it.

This speaks both to the participants' dichotomization of animals— characterizing animals as edible and inedible—but it also illustrates the importance of being polite. Despite knowing that she was served dog, the participant's friend ate it. However, the friend informed her before she too filled her plate with dog.

Despite consuming meat and animal-derived foods, some participants showed an understanding that animal others are not thoughtless creatures. One participant recalled an incident where a cow needed to be put down on a farm he had worked at, expressing,

> Unfortunately we had to kill it. And you could sense within the animals that they knew that it had died there. So they wouldn't touch the spot, so I think that if we are gonna do this humanely we're gonna have to transport it. I would say that no species enjoys watching a member of its own species die if it's within close proximity where you live. Yeah, so I think that slaughterhouses must be one of the most stressful events in any life, in any animal. (participant 3)

Given this example the participant clearly knows that animals slaughtered for meat experience stress. It appears that only through such personal experiences were participants capable of

reflecting on the nonhuman animals themselves. One participant expressed that she does not eat sheep, and when I asked her why not she explained,

> Because I grew up with sheep, with lambs that we had to feed with the bottle. And the first time they slaughtered it I stopped eating it. But I think, I don't think I really like the taste because I eat other meat even though I know it's been slaughtered. So I'm not sure. Maybe it's something psychological… I'm not sure. (participant 5)

Another participant shared that many people who have horses do not eat horses, but she on the other hand has no problem eating them despite having one of her own. However she added "but I don't know if I will eat my horse. 'Cause I'm so close with my horse. But maybe? Maybe not" (participant 6).

It is apparent that there is a persisting belief that human beings are superior to nonhuman animals, and that using nonhuman animals as resources is perfectly logical. The findings also show that through cultural conditioning participants unquestionably partake in the practice of eating animal others perceived as "edible" but see eating dogs as morally problematic. Furthermore, by empathizing with nonhuman animals participants showed reluctance to eating them, or concern over their mental lives.

7.0 Discussion

Using the two theories of carnism and socially organized denial, this chapter discusses and interprets the findings of the study at hand. Guided by the theoretical framework, this chapter aims to illustrate how the ideology of carnism contributes to the socially organized denial responsible for the normalization of meat and animal-derived food consumption which is hindering dietary change to be perceived as an effective climate change mitigation option in the Norwegian context. In this process the chapter aims to answer the research question "In which ways is the ideology of carnism impeding a shift towards a plant-based diet among environmentally conscious Norwegian university students?".

The major findings of this thesis are fourfold. Firstly, the findings show that the Norwegian university students interviewed for this project are worried about climate change, recognize (with varying degrees of knowledge) the negative environmental effects related to animal agriculture, yet still consume meat and animal-derived foods regularly. Secondly, given particular social

norms they do not want to stand out, draw attention to themselves, or inconvenience others. Thirdly, the findings show that eating meat and animal-derived foods is a socially learned behaviour, encouraged by society. Finally, there is an apparent human-animal dualism, where nonhuman animals bred for consumption are perceived as resources for humans.

By working with the data, and exploring the emerging themes it is evident that aspects of carnism can be identified. Both structural and internalized elements are expressed within the findings. Furthermore, looking beyond the individual, it is clear that there is a larger social system and agreement taking place which enables the normalization of consuming nonhuman animals and the products derived from them. The findings illustrate an intricate web of culture, power, and sustainability implicating the individual, society and the larger natural environment.

7.1 Structural Carnism

In a wealthy and industrialized country like Norway, people eat meat and animal-derived foods not because they have to but because they *choose* to. However, the structural elements of carnism make eating meat and animal-derived foods not appear to be a choice, but the default. This is attributed to how deeply entrenched the ideology of carnism is.

Given the findings, it seems as though carnism as an ideology is naturalized in the Norwegian context. Its logic appears common sense and is reproduced by individuals and society in tandem. This is seen in how the participants speak about meat in their every-day lives as well as in relation to holiday traditions. Through social processes it is normalized. Kukla (2018) expresses that this is "part of how ideology reproduces itself: not just by transmitting ideas, but by inducting people into norms and rituals that not only reflect that ideology but make it the case that the ideology actually structures social life" (pp.11-12).

Supported by major institutions in society, the ideology is able to shape public beliefs, attitudes, and practices in regards to nonhuman animals. Joy (2010, p.98) expresses that through policies and recommendations, professionals and authoritative figures from medicine to education play a big role in perpetuating the system. Raised with a carnist logic themselves, they perpetuate powerful myths which individuals internalize.

Myth makers are a critical component keeping the system intact (Joy, 2010, p.98). In Norway dairy representatives influence young children by establishing milk schemes in elementary

schools. The findings show that receiving milk at school fosters beliefs that it is nutritious. The participants interviewed expressed how milk is very healthy, and that they drink it in order to obtain the necessary nutrients for their bodies. Blay-Palmer (2008) writes how to ensuring brand loyalty food companies often target children in order to build "nostalgic memories of a brand" in hopes of leading to "a lifetime of purchases" (p.59). Within a carnist capitalist society beliefs about specific foods are fostered at a young age to ensure lifetime beliefs, and purchases in line with those beliefs.

Reflected by society, carnist beliefs are reinforced throughout individuals' lives by various mythmakers. They are reinforced by family members, health professional, and educators. The findings show that participants' normalized notion of meat and animal-derived food consumption stems from their upbringing. Growing up in carnist families with carnist practices, participants learn that meat is normal, natural, necessary, and tastes nice.

Carnist conditioning fosters and perpetuates specific myths about meat and animal-derived foods. One myth that presents itself in the findings is that animal-based foods are necessary to maintain good health. This is illustrated by one family expressing concern over nutrient content in plant-based diets. Additionally it is seen in one participant's beliefs about meat. As well as his family, his coach and football environment reinforce the notion that meat and animal-derived foods are important for maintaining muscle and performing better. In a carnist society this conditioning also takes place in universities. This is observed in the findings where one nutritionist student was skeptical about her vegetarian sister receiving adequate nutrients from plant sources, suggesting that some animal-derived products are better for health.

In addition to individual actors, the media is a powerful tool which creates and reinforces particular beliefs and attitudes about meat and animal-derived foods. The media maintains the invisibility of the system by reinforcing and justifying the consumption of meat and animal-derived foods (Joy, 2010, p.103). Joy stresses that it is the media together with the legal system that legitimize the carnist ideology. The law makes it legal to use nonhuman animals for human consumption, and conceptualizes exploitative methods as standard practice. Joy (p.105) points out that newspapers and magazines regularly feature animal-based recipes, and health advocates who appear in the media often recommend a moderate amount of meat or eating leaner meats,

which does not challenge carnism but advocates for it. Through direct observation I also saw this to be the case in Norway.

Media is a powerful tool used by many meat and dairy lobbyists around the world (Nestle, 2002). The meat and dairy industry in Norway has a lot of power, receiving 96% of agricultural subsidies (Fyen, 2014). As the livestock industry is imbedded within a capitalist system it ultimately seeks economic profit, and hence depends on the carnist system and the myths pertaining to it to maintain consumers. In order to reinforce the necessity and normalization of animal-based food consumption, meat and dairy lobbyists covertly influence the public through media channels. The livestock industry has a lot of power in shaping the public discourse in Norway. Through the information and advertisement channel MatPrat, the Information Office for Eggs and Meat (Opplysningskontoret for Egg og Kjøtt (OEK)) influences people, and reinforces the notion that Norwegian meat is sustainable and healthy (MatPrat, 2019).

Structurally, carnism also creates a social environment in which it is easy to eat meat and animal-derived foods, and where searching for plant-based alternatives requires effort. In Norway the default food product always contains meat or animal-derived foods. Mainstream restaurants have many meat entrées, but only one or two vegetarian options. Holidays are celebrated around meat-based foods, and annual ski trips are accompanied by grilled sausages and the Freia chocolate bar "Kvikk Lunsj". In Norway the structural elements of carnism coupled with social and cultural norms deeply internalize carnism, and make it "easier by far to conform to the carnistic majority than eschew the path of least resistance" (Joy, 2010, p.106).

7.2 Internalized Carnism

Since carnism is an ideology, when it is naturalized in society its logic becomes common sense, and internalized. Rebecca Kukla (2018) expresses that "when ideology manifests itself in cognitive states, these can be implicit rather than conscious or intentionally endorsed" (p.9). The findings in this study show that carnism has been unknowingly internalized by the participants interviewed for this study. The defense mechanisms objectification, deindividualization and dichotmization, which constitute Joy's (2010) cognitive trio are a strong indicator for internalized carnism.

In this case mystifying language like “meat” and “source of protein” is used to distort dead animals into inanimate objects which can be conceptualized as “food” and perceived as “tasty”. Participants objectify (certain) nonhuman animals by reducing them to resources for humans. This anthropocentrist humanist stance is constitutive of carnist ideology.

Internalized carnism can also be observed by how individuals refer to nonhuman animals produced for meat as an abstract group of animal others. They are stripped of their individual personality and desires and referred to as a homogenous group of “cows” or “chicken”. As a defense mechanism this allows individuals to disconnect from the moral implications of eating them.

Dichotomization, the third of the trio, is observed by how some participants bring up the consumption of dogs. They express that it is acceptable in other countries like China, but it is not okay in Norway. Dichotomizing animal others into edible and non-edible categories creates structure and rationale for the participants. It is okay to eat pigs, cows, and sheep, but you do not eat your “pets”. Conceptually categorizing animals into “food” and “pets” creates some distance and moral justification for consuming the former’s flesh. Through this practice, the act of eating certain nonhuman animals and not others strengthens the carnist ideology.

Interestingly, unlike many of the studies in the literature review (de Boer, de Witt and Aiking, 2016; Macdiarmid, Douglas and Campbell, 2016; Pohjolainen et al., 2016; de Boer, Schösler and Boersema, 2013; Cole et al., 2009), most of the participants in this study have some awareness of the negative environmental effects related to animal agriculture, and how it contributes to climate change. Furthermore, participants do not overtly justify eating meat by expressing it is necessary. Most acknowledge that meat is *not* necessary, but express that in order to eliminate it from one’s diet effort and knowledge around plant-based food is required. The justification that eating meat is natural is not that common either. It is implicitly brought up in reference to humans domesticating animals for thousands of years, and animals being a part of our human evolution. The justification for meat being normal is implicit in participants’ perceptions of tradition and culture being normal. Surprisingly the most common justification is that meat is nice. All the participants state that they like the taste of it, and most give this morally weak justification for eating meat.

7.3 Carnism as Foundation for Socially Organized Denial

It is apparent that both structural and internalized elements of carnist ideology lay the foundation for the normalized notion of consuming meat and animal-derived foods in the Norwegian context. Given particular Norwegian social norms, carnist ideology is able to shape cognitive traditions and reinforce carnist beliefs through optical socialization in society. These processes enable socially organized denial to take place, which hinders the possibility for dietary change to be perceived as a viable climate change mitigation option.

Raised within specific thought communities, with family and society consuming and feeding children meat and animal-derived foods, from infancy the participants have been socialized to develop specific cognitive traditions and adopt their thought community's outlook. In this case they learn that eating meat and animal-derived foods is a normal, natural, necessary, nice, and traditional part of a Norwegian diet and lifestyle.

The participants in this study all grew up in households where eating meat and animal-derived foods was part of everyday life. Through optical socialization the notion that these foods are healthy and important continue to be reinforced throughout the participants' lives through social environments, family, media, education, and public authoritative figures. Meat and animal-derived foods are readily available, they are the center of holiday celebrations, milk is served to children at schools, universities teach students that some animal-derived foods are necessary, and the media and health professionals indicate that meat in moderation is a healthy and important part of a Norwegian diet.

Through socialization, individuals have adopted these cognitive traditions and in turn internalized a carnist ideology which shapes beliefs, attitudes, actions and behaviours. Internalized carnism, expressed as the cognitive trio, can be seen as naturalizing a thought community's outlook. As the defense mechanisms of objectification, deindividualization and dichotomization did not appear to be consciously used among the participants, indicates that these defenses stem from social conditioning.

Since the carnist system is naturalized in society it maintains its invisibility. As it is both structural and internalized, its logic is deemed rational and normal. Raising nonhuman animals for food is seen as the norm. This is not only descriptive, social norms "are also prescriptive,

dictating how we *ought* to behave" (Joy, 2010, p.105). In a society which values conformity, eating meat and animal-derived foods is not only normal, it is what you must do in order to fit in.

The participants in this research expressed that social conformity and being polite is important. Their answers implied that behaving differently breaks the social code as it draws attention to oneself and emanates the notion that one thinks she or he is special and better than everyone else. Since veganism and vegetarianism is not the norm, not eating meat and breaking away from the carnistic majority can be interpreted as defying society.

Since how individuals see things and make sense of them is socially conditioned, ultimately what they deem irrelevant is also a social process. This way, optical socialization can be seen to lead to socially organized denial (Norgaard, 2011, p.6). Norgaard attests that denial is not an individual phenomenon but a social one. In order to understand why individuals pay attention to some things and ignore others, the broader social, political and economic context must be taken into consideration. Individuals can block out information, but systemically "denial occurs through a process of social interaction" (p.6).

By socializing individuals to perceive consuming meat and animal-derived foods as normal and rational, the arguments against their consumption naturally fall outside the boundaries of that thought community's cognitive traditions and become irrelevant. By internalizing carnism, and maintaining the "Four Ns of Justification", the reality that meat and animal-derived foods involve the unnecessary exploitation of nonhuman animals, and contribute to non-communicable diseases, climate change, and other environmental burdens is denied by society as a whole.

With more and more studies coming out about the negative effects of meat and animal-derived foods, and the internet and social media platforms spreading the information, it is difficult to deny the facts. Therefore the entrenched carnist system uses powerful defenses and justifications which support the social organization of denial. This appears to be the case here. Information is readily available, participants are aware of some of the environmental harms associated with meat and animal-derived food production but deny that reality in their everyday lives. They continue to consume these foods by justifying that it tastes good, that nonhuman animals are a viable resource for humans, and though possible, a lot of effort is required to change.

Denial is not absolute. Stanley Cohen (quoted in Norgaard, 2011, p.60) expresses that "[d]enial is always partial; some information is always registered". Therefore at all times there exists this delicate balance between knowing and not knowing. In the present case, participants expressed knowing the general facts surrounding animal agriculture, but not the more nuanced details or how they all connect. They also expressed knowing to some extent, but choosing not to think about it. With the naturalization of carnism in society, the social environment makes it easy for people to hear about the damaging effects of animal agriculture and continue business as usual.

It is apparent that in the case at hand the naturalized carnist ideology enables socially organized denial to occur. Through optical socialization individuals develop specific cognitive traditions which reflect society's outlook. In Norway, where social conformity is desired, and being polite is a virtue, behaving in a way that makes one stand out is undesired. Thus despite being aware of some of the negative environmental effects of animal agriculture, participants continue to eat animal-based foods. Although many have decreased their consumption of meat, nonhuman animals are still perceived as viable resources for humans, and a good source of protein to maintain good physical health.

Since Norwegian society is structured with meat and animal-derived foods being the default, and myth makers reinforcing the notion that these products are healthy and important, makes it difficult to "eschew the path of least resistance" (Joy, 2010, p.106). Furthermore, normalizing the consumption of these foods makes it difficult to imagine an alternative. Even though most participants cared about the environment, and stated that environmental reasons would be the driving factor for decreasing meat consumption, they still continue to consume it. Like de Boer et al., (2013)'s findings, this study also finds that a singular meat-climate problematization is ineffective. It appears that in order to be able to critically address human consumption of nonhuman animals and its moral and environmental implications, the system of carnism must be named and identified (Joy, 2010).

8.0 Concluding Thoughts

The findings of this thesis suggest that carnist ideology is naturalized in Norwegian society. The findings further propose that carnism is present within both the structural and interpersonal levels, forming the basis of cognitive traditions which are reinforced through optical socialization. From a young age the individuals in this study learned that eating meat and animal-

derived foods is normal, natural, necessary and nice, and developed specific eating habits (and justifications for those habits) in order to maintain their thought community's outlook, and in order to fit into society.

Despite the acknowledged negative environmental effects stemming from animal agriculture, in a society which values social conformity, it appears to be extremely difficult for individuals to shift towards a plant-based diet when the rest of society conforms to a carnist system. It is much easier to resist information and maintain the status quo by partaking in socially organized denial. With such conditions, dietary change from animal-based foods to plant-based foods is not recognized in the dominant discourse as a viable mitigation option for climate change.

To answer my research question, the ideology of carnism impedes a shift towards a plant-based diet among environmentally conscious Norwegian university students by naturalizing itself within individuals and society in tandem. By maintaining that meat and animal-derived foods are normal, necessary, natural and nice, carnism is able to create deeply embedded beliefs and attitudes that constitute social norms which are in turn supported by material institutions, social entities and practices. Since carnism perpetuates and reinforces the narrative that animal agriculture is an important and natural part of Norwegian society, tradition, and identity, choosing not to eat meat and animal-derived foods and break from carnist conditioning is undesired in the Norwegian context as it defies society and ostracizes oneself.

Given the findings of this thesis it is clear that if dietary change is to be taken seriously as a climate change mitigation option, policies and recommendations cannot target individual consumer behaviour. Dietary change must be systematically supported throughout all sectors of society to make plant-based foods the default, and meat and animal-derived foods the undesired alternative. As the ideology of carnism is currently imbedded in both the social and economic system, a systems change is required for such a shift to occur.

To begin such a shift several actions can be implemented. Governments, for example, can move subsidies towards plant production and work with farmers to help them transition to producing more climate-friendly and socially responsible foods. Moving subsidies towards plant-based foods would make them more affordable, making people more willing to buy them. In order to discourage the consumption of resource intensive foods, a meat tax could be implemented, the

advertisement of animal-based foods could be restricted, and state institutions could provide plant-based foods as the default. In addition to these initiatives it is important that information about the positive effects of plant-based foods is spread, and that climate-friendly and socially just enterprises are supported. If the social environment is created so that plant-based foods are the most convenient and logical choice, justifying meat and animal-derived food consumption will be more difficult.

Addressing meat and animal-derived food consumption in the age of climate change is critical. Supporting an industry which exacerbates climate change and biodiversity loss, consumes vast amounts of the world's depleting resources, kills and exploits nonhuman beings, while simultaneously making people sick is illogical. With population growth, vast climate-induced migration, and increased temperature rise causing a cascade of changes, producing animal-based foods will no longer be an option in the future. Thus it is crucial to address it now while there is still time to use dietary change as a mitigation option and not only as a means for adaptation.

9.0 References

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10.0 Appendices

Appendix 1: Participant Demographic Information

Participants	Age	Gender	Study Program	Level of Education	Home County	Currently living in:
1	24	Male	Economics	1st year Master	Rogaland	Ås, Akershus
2	25	Male	Economics	2nd year Master	Hedmark	Ås, Akershus
3	24	Male	International Environment & Development Studies	3rdyear Bachelor	Vestfold	Ås, Akershus
4	26	Female	Water & Environmental Technique	2nd year of second Bachelor	Oslo	Ås, Akershus
5	21	Female	Biology	2nd year Bachelor	Hedmark	Oslo, Oslo
6	20	Female	Biology	1st year Bachelor	Hedmark	Ås, Akershus
7	23	Female	Biotechnology specializing in Molecular Biology	2nd year Master	Oppland	Ås, Akershus
8	23	Female	International Environment & Development Studies	2nd year Bachelor	Trøndelag	Ås, Akershus
9	26	Female	Environmental Science	1st year Master	Trøndelag	Ås, Akershus
10	25	Male	Economics	1st year Master	Rogaland	Ås, Akershus

Appendix 2: Cover Letter

LUND UNIVERSITY

Dear Participant,
Thank you for taking the time to assist me in my master thesis research.
My name is Madelaine Bereza and I am currently studying Human Ecology at Lund University in Sweden. For my Master's Thesis I am examining Norwegian university students' eating habits in the 21st century. As I am interested in human-environment relationships, exploring our associations with food and our current eating habits in a changing world makes this area of research intriguing and important to examine.

Your participation in this research is very much appreciated, and will prove to be useful in understanding the different dynamics within 21st century eating habits. Your responses in this interview will remain confidential and anonymous. Data from this research will be securely stored and reported only as a collective combined total. No one other than I, the researcher, will know your individual responses in the interview.

If you would like to receive a copy of the finished report, please send an email with the subject line "Interview Participant – Report". If you have any further questions please feel free to send me an email.

Sincerely,

Madelaine Bereza

Email: ma4221be-s@student.lu.se

Appendix 3: Interview Guide

Interview Guide

[Ask for informed consent, and ask to record interview]

Demographic background Information

- How old are you?
- What gender do you identify with?
- Where do you currently live?
- Where did you grow up?
- What is your level of education?
- What do you study?

Environmental awareness/caring for the environment

- What are your feelings about climate change?
- How serious do you think it is?
- Do agree with the belief that human activities are largely responsible for climate change?
- If yes, in what ways?
- Who do you think is most responsible to fix it?
- What do you think individuals can do to stop or decrease the severity of climate change?
- [If not worried about climate change] How do you feel about the state of the environment and what do you think the world will be like in 50 years?

Personal relationship to meat* and animal-derived foods**

Meat= all types of meat including beef, pork, chicken, and fish.*
*Animal-derived foods**= all foods from animals eg. dairy (milk, yogurt, cheese), butter, cream, and eggs.*

- What thoughts or words do you associate with the word meat?
- What does meat mean to you personally?
- How often/many times do you eat meat a week?
- What meat products don't you like? Why don't you like them?
- Has your consumption of meat changed since you moved away from your parents' home?
- In what ways?---(increased, decreased, varied in the types of meat, limited the certain meats you eat?)

Now, when it comes to animal-derived foods…

- What thoughts come into your mind when you think animal-derived products such as eggs, dairy and cheese?
- What do these products mean to you/to an average Norwegian?
- Is there some that you prefer or dislike? How come?
- Has your consumption changed since you moved away from home? In what ways?

Questions related to theory of carnism (Melanie Joy)

- *Why* do you eat meat and animal-derived foods?
- Do your parents, family, friends, teachers, or politicians every question your choice of eating meat and animal-derived foods?
- What do you think about eating meat and animal-derived foods in general?

- Have you ever considered why out of the about 2 million animal species we only eat a handful of them? --- (cows, pigs, chickens, sheep, fish)---
- Was there ever a moment in your life where you questioned eating meat or animal-derived foods? That something didn't feel quite right? (Maybe as a child?)

Perceived impacts of animal agriculture

- How do you think the production of meat and animal-derived foods (ADFs) impacts nature?
- How do you think the production and consumption of meat and ADFs impacts human health?
- How do you think the production of meat and ADFs impacts the animals?
- Do you see any relationship between animal-derived food and climate change?

Plant-based diets

- Have you ever heard of veganism or plant-based diets?
- What do you think about it?
- Do you personally know any vegans? And vegetarians? (family, friends)
- What do you think are some benefits of eating vegan or plant-based diets?
- What do you think may be some disadvantages with this type of diet?

Meat reduction/experimenting with vegan and plant-based food

- Do you ever deliberately avoid eating or buying meat and/or animal-derived foods? (Perhaps at the cafeteria you choose a plant-based option? Or buy a meat alternative at the grocery store? Or ask for non dairy milk with your coffee?)
- If yes, what motivates you to make that decision?
  (awareness about environment, health, animal suffering, influenced by someone?)

EAT-Lancet report

- Have you heard about the recent report by the EAT-Lancet commission?
- (for both human and environmental health it suggests decreasing the amount of meat we eat and increase the amount of plant-based foods)
- How did you hear about it?
- How do you feel about their recommendations?

Different scenarios

- How would you feel if you were unable to eat meat any longer?
- How would you feel if you were unable to eat meat or any animal-derived foods?
- Currently there is experimentation of lab grown meat, have you hear about this? What do you think about it?
  If lab grown meat was affordable and available to you would you eat it? Why/Why not?
  **** *Hand interviewee information card*****

Willingness to change/resistance

- What are your immediate reactions after reading this?
- Is this information new to you?
- Under what conditions could you see yourself eating mostly plant-based foods?
- What would be the main reason to motivate you to decrease or eliminate meat and animal-derived foods from your diet? (environment, animal suffering, personal health, sociability, economic?)

Appendix 4: Interview Information Card

Consider…

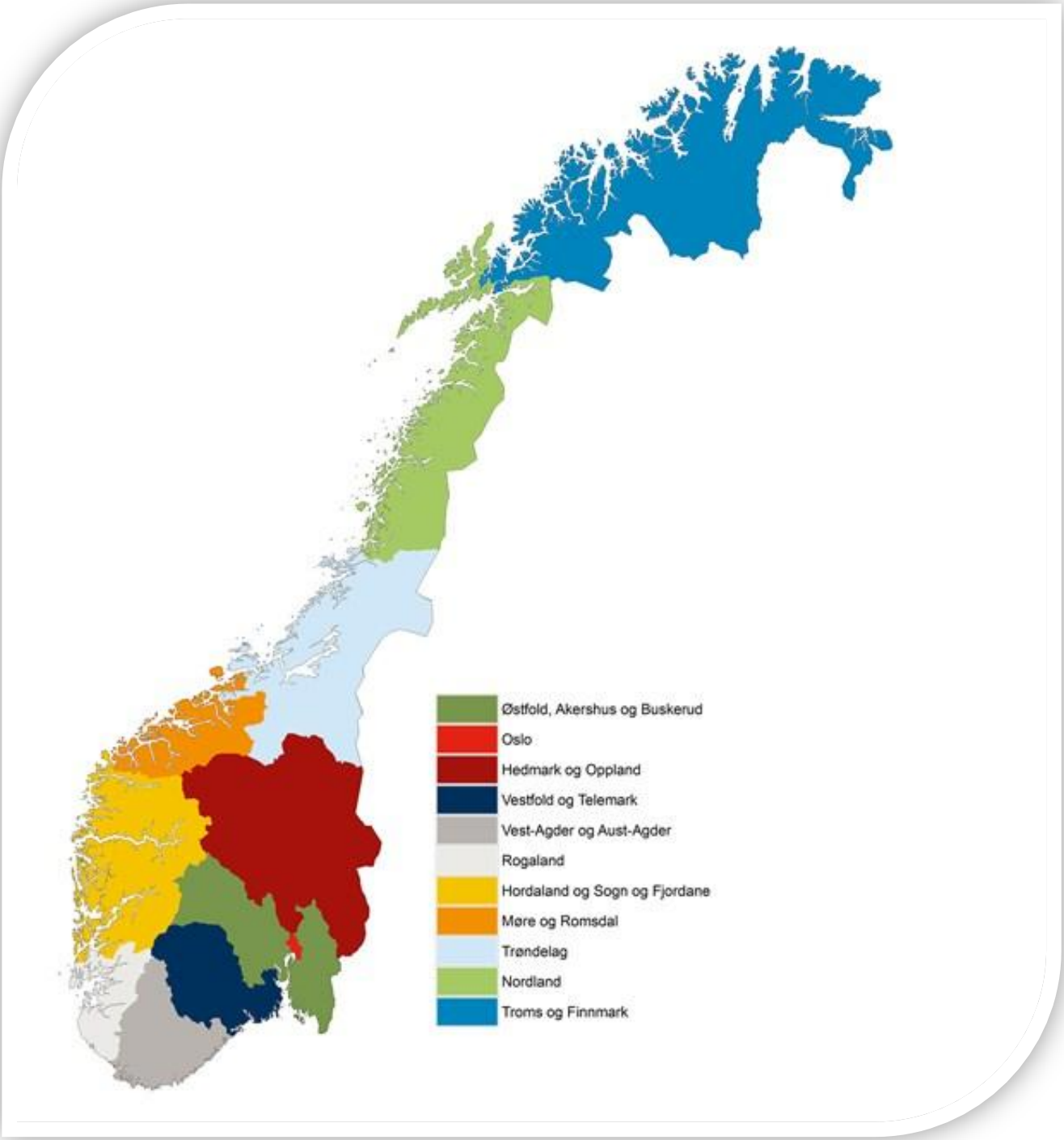
- Within agriculture, meat and animal-derived food production has the heaviest environmental footprint.
- Approximately 83% of global farmland is dedicated to animal-derived food production. Most of this land is used to grow food for animals, not humans, while an estimated 795 million people are undernourished.
- Animal-derived food production uses 30% of global water withdrawal. It is also the largest sector-specific source of water pollution, yet in many parts of the world water is becoming a scarce resource.
- Animal-derived food production is the major culprit within agriculture when it comes to green house gas (GHG) emissions. It is responsible for 18% of global human produced GHG emissions.

- Studies have shown that the consumption of red and processed meat increases one's likelihood of developing non-communicable diseases such as cardiovascular disease, type II diabetes, and certain cancers.
- People who eat vegan and vegetarian diets have been found to be less prone to non-communicable diseases.
- There is growing evidence that antibiotic resistance in humans is promoted by the widespread use of non-therapeutic antibiotics in animals.
  The World Health Organization called antimicrobial resistance "an increasingly serious threat to global public health that requires action across all government sectors and society."

- *Pigs are a delicacy in many parts of the world. Yet pigs are one of the smartest animals on the planet. Their intelligence ranks higher than dogs and even some primates.
- *When they are trained, piglets can learn their names by two to three weeks of age and respond when called and can learn tricks faster than dogs.
- *Pigs have very long memories and can remember things even years later.
- Globally 150,000,000 land animals are killed for food every day.

(*facts were added after interview 6, after I worked more with the theory and felt it would be appropriate to include.)

Appendix 5: Map of Norwegian Fylker (Counties)



Norwegian Counties. Reprinted from 'Nye Fylker' by Regjeringen.no, 2019.
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