# Protecting animals, until dinner?

Investigating the existence of Meat-Related Cognitive Dissonance among veterinary students in Sweden.

Lydia Soilemezi

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A thesis submitted in partial fulfillment of the requirements of Lund University International Master's Programme in Environmental Studies and Sustainability Science (30hp/credits)







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Submitted September 29, 2022

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# Abstract

Even though animal farming is one of the leading causes of climate change and more people in the west are raising concerns over animal welfare, meat consumption here is high and expected to rise. This thesis examines the reasoning and tensions that arise when omnivores' dietary choices clash with their love for animals by studying how the concept of the meat paradox and cognitive dissonance theory can be explained among veterinary students in Sweden. Results show that Meat Related Cognitive Dissonance respondents unanimously argued that they only consume humanely produced meat, yet taste was voted as the primary justification for eating meat. Political beliefs were identified as the biggest MRCD predictor and the availability of plant-based products was found to be a key factor to enable decreased meat consumption. To counter the meat paradox and reduce meat consumption government-initiated information campaigns, in addition to engagements between animal welfare activists and veterinary students could influence dietary choices.

Keywords: meat paradox, cognitive dissonance, veterinary students, animal welfare, meat reduction, plant based

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# List of abbreviations

CD	Cognitive Dissonance				
CDT	Cognitive Dissonance Theory				
MRCD	Meat Related Cognitive Dissonance				
MP	Meat Paradox				
PB	Plant Based				
РО	Participant One				
РТ	Participant Two				
RQs	Research Questions				
SDGs	Sustainable Development Goals				
SLU	Swedish University oF Agricultural				
	Sciences				
SSIs	Semi Structured Interviews				
UN	United Nations				
US	United States				

## **1** Introduction

Meat has been part of the human diet for millions of years now and many would argue that it is what helped us evolve (Mann, 2007; Ungar & Teaford, 2002). In today's Anthropocene, it is estimated that around 70 billion land animals are killed for food each year (FAO, 2022). This has resulted in animal agriculture being a leading cause of climate change, responsible for about 14.5% of all anthropogenic CO2 emissions (Grossi et al., 2019; Gerber et al., 2013). Meat production requires huge amounts of land, energy, freshwater, and feed (Hong et al., 2021; Steinfeld et al., 2006). The relentless industrialization of animal farming has caused numerous environmental problems such as land degradation, water and air pollution, deforestation, and biodiversity loss (Hong et al., 2021; Steinfeld et al., 2006). Simultaneously, a staggering 83% of all land used for agriculture is dedicated to animal farming but only produces 18% of the world's calories (Poore & Nemeck 2018). It is also very distressing that 75-80% of the world's soy is fed to livestock animals (Fraanje & Garnett, 2020). However, it is not just the scale that matters. Another concern that has grown more in this century is the welfare of farmed animals, which has led many people to exclude meat and other animal products from their diet (Loughnan et al., 2014). Despite the increasing number of vegetarians and vegans, global meat demand is expected to be 70% higher by 2050 (Searchinger et al., 2019), due to population growth, income growth, and changes in dietary patterns (Gerber et al., 2013). This alarmingly indicates that animal agriculture is not tenable in a sustainable food system and needs to be drastically reevaluated if we want to avoid graver environmental consequences.

#### 1.1 Cognitive dissonance

The amount of meat the world consumes today phenomenally implies that people do not value animals (Loughnan et al., 2014). This is not true though as at the same time our meat consumption rises, so does pet ownership (FEDIAF, 2022), and the legislations we create for animal welfare (Tischler, 2012). Most cat and dog owners consider their pets as part of their family (Cohen, 2002). So, how come people's moral agency regarding animals gets sidetracked when meat is under discussion? This contradiction of values and actions has been termed the "Meat Paradox" (MP), (Loughnan et al., 2010). Many experts have turned to the *Cognitive Dissonance Theory* (CDT) to explain the paradox (Bastian & Loughnan, 2017; Rothgerber, 2019a; TeVelde et al., 2002). The CDT, originally developed by Festinger (1957) explains the emotional arousal that occurs when people become aware of the tension between their morals and actions. In the meat context, the majority of people do not abandon their meat consumption and instead rely on other psychological defenses (Lea et al., 2006; Latvala et al., 2012; Rothgerber, 2020).

#### 1.2 The role of veterinarians

Veterinarians are a fundamental component of the safekeeping of animal welfare and health standards in farms and slaughterhouses (WVA, n.d.). Among other duties, they ensure proper care, handling, and stunning procedures of farmed animals, according to the respective animal welfare legislation of the country (WVA, n.d.). Therefore, veterinarians, as well as veterinary medicine students, are more aware than the general public of the suffering capacities of animals and the reality of meat production. This thesis departs from the notion that veterinary students would be more susceptible to Cognitive Dissonance (CD) due to their frequent encounters with animals, awareness of meat production, and oath to care for these animals. So far, there has been very little research done on the extent of the MP within those occupied with veterinary medicine. More specifically, there has been no research at all within the respective context in Sweden, which holds some of the highest welfare legislations in the world (API, 2020). Therefore, the overarching aim of this thesis is to investigate whether *Meat-Related Cognitive Dissonance (MRCD)* is present among veterinary medicine students in Sweden and if so, what can be done to assist their meat reduction.

Considering that veterinary medicine students are familiar with the practices and legislations of animal farming in Sweden, this thesis will aim to answer the following Research Questions (RQs):

1) To what extent does MRCD exist among veterinary medicine students in Sweden?

2) Is there a common pattern of justifications and/or rationalizations for the consumption of meat?

3) How can we overcome the meat paradox given the current climate threats?

### 2 Background

Most previous research on the topic of MP and meat eating has been focused on the general population. Hence, this section will first outline key findings linked to the psychology behind meat eating and why people choose to abstain from it. When it comes to CD or the MP being directly linked with veterinary medicine, research is very scarce. A few studies have been conducted, however, mostly focused on the attitudes of the students towards animals (Ostović et. al., 2016; Paul & Podberscek, 200; Menor-Campos et al., 2019a; Pirrone et al., 2019; Azahar et al., 2014; Çavuşogluc& Uzabaci, 2021; Ostović et. al., 2017; Serpell, 2005; Izmirli & Philips, 2012; Mariti et al., 2018; Heleski et al., 2005; Balieva, 2021; Degeling et al., 2017; Engel et. al., 2020; Sabuncuoglu & Coban, 2008). Some of the key findings of these will be presented next.

#### 2.1 Meat eating norms in the Western world

While there is scientific evidence proving that meat helped us physically and intellectually evolve (Smil, 2013; Mann, 2007; Ungar & Teaford, 2002; Dominguez-Rodrigo et al., 2012), the main reasons today for why people eat meat are linked to habit and taste (Joy, 2011; Lea & Worsley, 2001). Necessity is another common misbelief in the Western world, where people see meat as an irreplaceable part of healthy nutrition coupled with the idea that Plant-Based (PB) foods are lacking essential nutritional values (Lea & Worsley, 2001). In this context, marketing has been a very effective tool in maintaining the notion that humans need meat to be healthy (Bogueva & Phau, 2016), even when modern medicine agrees that a PB diet can be healthy for most people (Stanton, 2012; Sabaté, 2003; American Diabetic Association, 2003).

Meat is an almost entirely universal symbol of affluence (Smil, 2002). People who want to project a higher social status will choose that over vegetables and fruits (Allen, 2005). Throughout Western history, meat has also been a symbol of patriarchy (Adams, 1990). Many men go so far as to characterize a meal without meat as not "real" food (Sobal, 2005). Furthermore, men who do not eat meat are perceived as less manly (Ruby & Heine, 2011). Manhood is then considered fragile, as it is not something that is biologically given rather than it needs to be socially earned and displayed (Ruby & Heine, 2011; Kimmel, 1996; Gilmore, 1990; Beardsworth & Keil, 1992). Consequently, vegetarianism is linked with femininity (Rogers, 2008; O'Doherty & Holm, 1999) as women generally express more willingness to eat PB meals than men (Ruby, 2012; Beardsworth & Keil, 1991; Rothgerber, 2013; Santos & Booth, 1996).

Many abstainers of meat might also simultaneously identify as feminists, as vegetarianism poses a threat to hegemonic masculinity (Kwan & Roth, 2011). Consumption of meat eating has been shown to be higher in people who are more ideologically inclined towards power, hierarchy, and authoritarianism while those who value equality and social justice are more likely to identify as vegetarians (Allen et al., 2000). It is also argued that in societies with higher gender inequality and authoritarianism, meat consumption will be higher (Rothgerber, 2013). Another moderator of meat consumption is religion as it can shape how humans perceive their hierarchy against animals (Rothgerber, 2020). Higher religiosity in some religions (e.g. Christianity) has been associated with less concern for animal welfare and therefore higher levels of meat consumption (Heleski et al., 2005; Bowd & Bowd, 1989).

Culture also plays a significant part in meat's centrality in the Western diet. It is a deeply rooted social norm on which family gatherings and celebrations are based around (Bogueva & Phau, 2016). In fact,

it is so deeply ingrained that it is considered the norm, whereas refraining from animal products is a behavior that requires justification (Wilson et al., 2004; Bildaru & Opre, 2015). However, as more and more people are becoming aware of the cruel practices of the livestock industry and its effects on the environment, the popularity of organic meat is increasing (Bogueva & Phau, 2016). Small-scale farming is considered by many sustainable and people believe that animals are treated nicely (TeVelde et al., 2002).

#### 2.2 Why do people go vegetarian?

The new millennia has brought meat-eating under the spotlight of criticism (Piazza et al., 2015). Among other reasons (i.e., environmental and health concerns), people mostly reject meat due to moral reasons regarding the treatment of farmed animals (Fessler et al., 2003; Herzog, 2010, Santos & Booth, 1996; Ruby, 2012; Fox & Ward, 2008; Linderman & Väänänen, 2000; Beardsworth & Keil, 1991). In order to reduce the negative emotions associated with CD, some will alter their behavior (Bastian et al., 2012). Those who turn vegetarian for moral reasons tend to find meat more disgusting than those who do it for other reasons (Rozin et al., 1997; Jabs et al., 1998). While it has been said that disgust should be considered the key motive to quit meat (Nabi, 1998; Herzog & Golden, 2009), a study by Fessler et al., (2003) found that disgust is actually a result of their moral beliefs rather than the cause. Regardless, disgusting material has been shown to evoke a sense of a "moral shock" (Jasper & Poulsen, 1995) which can ultimately lead to meat rejection (Wisneski & Skitka, 2017).

Most vegetarians are women (Bildaru & Opre, 2015). This could be due to the fact that meat is tied with masculinity (Ruby & Heine, 2011), and also possibly because men tend to have a less positive stance towards animals (Kavanagh et al., 2013). Research from Ruby and Heine (2011) however, showed that while men who abstain from meat might be perceived as less masculine, they are also simultaneously considered more virtuous than omnivores. This is quite contradictory to other studies showing how vegetarians are actually viewed negatively by meat eaters as they feel morally threatened (Minson & Monin, 2012; Rothgerber, 2014a; Monin et al., 2008; O'Connor & Monin, 2016). The presence of vegetarians puts meat-eating under the spotlight and therefore, omnivores find themselves in situations where they need to justify their meat attachment (Piazza et al., 2015).

#### 2.3 Veterinary medicine and attitudes towards animals

Studies investigating the attitudes of veterinary medicine occupants and students towards animals show several factors that have proven to predict the level of concern they may show. These factors include mostly demographic, personal, and educational characteristics. The only study so far investigating direct linkages between CD and veterinarians is by Engel et. al., (2020) where CD was shown to potentially exist among laboratory veterinarians in the US. The most commonly used coping mechanism was shifting responsibility towards institutional rules, as the devaluation of animals and emotional distancing from the animal patients were not applied by most of the respondents. However, a sense of utilitarianism was identified as there was an overall agreement for an animal to experience poor welfare if it is done for the greater good (Engel et al., 2020).

Several other studies among veterinary students in different countries have identified different attitude predictors towards animal welfare, with gender being the most common (Mariti et al., 2018; Balieva, 2021; Degeling et al., 2017; Paul & Podberscek, 2000; Menor-Camps et al., 2019; Menor-Camps et al., 2019a; Myung-Sun et al., 2009; Pirrone et al., 2019; Sabuncuoglu & Coban, 2008?; Izmirli & Philips, 2012; Heleski et al., 2005; Serpell, 2005; Çavuşogluc& Uzabaci, 2021). Key findings here also showed that females expressed more willingness to pay for higher welfare products (Balieva, 2021; Maria, 2006), and maintained their empathy even in more senior years compared to male participants who decreased it (Paul & Podberscek, 2000; Menor-Campos et al., 2019).

Studies have also demonstrated how veterinary students aiming to work with livestock in the future have a lesser concern about animal welfare (Menor-Campos et al., 2019a; Ostović et. al., 2017), and view these animals as less emotionally capable than pets (Mariti et al., 2018). Another observation was that students in more senior years rated the cognitive capabilities of animals lower than those in earlier years and showed lesser concern for their welfare (Ostović et. al., 2016; Paul & Podberscek, 200; Menor-Campos et al., 2019a; Pirrone et al., 2019; Azahar et al., 2014; Çavuşogluc& Uzabaci, 2021; Ostović et. al., 2017). One possible explanation for this could be compassion fatigue or feelings of helplessness (Thomas et al., 2007), or the cultural background of the academic institute as this would result in promoting animal use according to the cultural values (Menor-Camps et al., 2019a). Only one study in Korea found no impact of the year of study on their attitude (Myung-Sun et al., 2009), while only a study in Malaysia found gender to be neutral (Azahar et al., 2014).

Geographical location was deemed as another possible factor (Pirrone et al., 2019; Serpell, 2005; Izmirli & Philips, 2012). People with rural backgrounds tend to have a more pragmatic and utilitarian view of animals, while those from urban areas are generally considered to be more concerned about animal welfare as animals tend to be viewed mostly as companions (Pirrone et al., 2019; Ostović et. al., 2017).

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Religion also influences the acceptance of certain practices. In most western countries, pre-stunning is obliged by law (Izmirli & Phillips 2012). But a study from Turkey (Sabuncuoglu & Coban, 2008) showed how students are not supportive of this method due to probably the slaughtering requirements of halal meat, where stunning of animals is usually prohibited (Riaz et al., 2021). Religious influences are also confirmed by Heleski et al., (2005) where liberals and less religious students demonstrated higher welfare concerns. Most of the respondents in this study expressed contentment with the use of animals for the greater human good as long as the physiological and behavioral needs of animals are looked after (Heleski et al., 2005). Lastly, past ownership of animals was found possible to predict attitudes as small pets ownership had a more negative attitude towards recreational hunting or live animals in surgery teaching, while food animals owners had more positive attitudes even if they owned dogs or cats at the same time (Serpell, 2005). Serpell (2005) raised concerns over the male gender bias within occupations with farmed animals due to the generally less sympathetic attitude of men towards animals.

The theoretical framework presented in the next chapter gives a supplementary understanding of the psychology behind eating animals and the coping mechanisms people use to fight CD.

## **3** Theoretical Framework

One of the most widespread defenses people use to block CD is the disengagement of the animal origins of meat (Rothgerber, 2020). Hegemonic structures of society established physical distance and lack of transparency in meat production with the purpose of "protecting" the consumers' consciousness (Plous, 1993; Fernández, 2020; Bastian & Loughnan, 2017; Leroy & Degreef, 2015). However, avoiding the linkage between meat and animal is not always possible. Rothgerber (2020) used CDT to explain the emotional arousal that occurs when meat eaters are confronted with the reality of meat production. He developed the *MRCD framework*, based on a narrative literature review, with the purpose of connecting the MP with the CDT. However, it goes one step further by addressing not only animal welfare concerns but the environment and personal health as well. The framework addresses the different defense mechanisms, a concept originally developed by Joy (2011), that individuals use to prevent MRCD framework, which was used to design the survey.

#### 3.1 Triggers of MRCD and prevention mechanisms



**Figure 1.** The triggers of MRCD and the prevention mechanisms. Some people will manage to prevent it while others not. Source: Rothgerber, 2020 and modified by author.

The first level of the framework includes the triggers that provoke CD and the prevention mechanisms that omnivores use to stop it. The first trigger of MRCD occurs when individuals are exposed to relevant information. In order to prevent CD people result in *avoidance* and/or *willful ignorance*. Avoidance is achieved by not thinking about the reality of meat production. The absence of physical contact with animals and the placement of farmed animals in remote hidden places work in favor of the avoidance mechanism (Serpell, 1986). Willful ignorance, on the other hand, entails the on-purpose avoidance of relevant information as individuals are aware that negative emotions will occur (Hestermann et. al., 2018; Knight et. al., 2003; TeVelde et al., 2002).

The second trigger is reminders that meat originates from animals. The prevention mechanism here is called *dissociation* and it entails the delusion that no animal is involved in the food-making process. Even when meat reaches consumers, de-animalization is ensured by packaging the meat in ways that remind nothing of its animal origin (Leroy & Degreef, 2015; Mayfield et al., 2007; Kubberoed et al., 2002). Linguistic manipulation such as bacon, beef, burger. etc., also serve the illusion that no animal

is involved and instead render them as products (Adams, 1990). The less an animal resembles a human the less the need for verbal differentiation. This is why chicken and fish have kept their original names (Serpell, 1986).

The third trigger shifts its focus from the animals to the individual. People tend to convince themselves that they do not actually eat a lot of meat when confronted with the reality of meat consumption (Rothgerber, 2019b). This is called *perceived behavioral change*. Many studies have shown that a lot of people who claim they are vegetarians actually consume some type of meat (Rothgerber, 2014b; Maurer, 2010).

Another trigger concerns the admission that one eats meat from a harmed animal. People will try to prevent MRCD from occurring by claiming that they only consume humanely produced meat. "Conscientious omnivores"<sup>1</sup> use this as a shield (Pollan, 2002), even if the meat has cruel origins.

The final trigger of the framework is attributed to the presence of vegetarians. This automatically puts meat-eating under the spotlight (Rothgerber, 2014a; Joy, 2011). Omnivores in this case will result in the *do-gooder derogation* mechanism. As the moral integrity of meat-eaters is threatened, by denigrating vegetarians and shifting the attention elsewhere, CD is prevented.

## 3.2 MRCD reducing mechanisms

When MRCD is not prevented, people will use other coping mechanisms to reduce it. These are divided between *behavioral change* and *perceptual change* (see Figure 2). Behavioral change is the ideal scenario for preventing climate change where one would reduce or abandon meat consumption. However, most of the time this does not happen (Herzog, 2010; Rothgerber, 2020).

The most common way for people to try to reduce MRCD is through *perceptual change* (Rothgerber, 2020). Meat-eaters will use several justifications or rationalizations for their behavior (Serpell, 1986). These can be divided into three categories depending on the context:

The first category includes the consonant cognitions that are focused on the animals as separate entities from meat. The strategies include *denial of animal mind* and *dichotomization*. By convincing oneself that animals cannot suffer like humans do, guilt is reduced. Studies have shown that meat eaters tend to believe animals possess lesser mental capabilities (Tian et. al., 2016; Loughnan et. al., 2010; Bilewicz et al., 2011). By dichotomizing animals between those we love and those we eat,

<sup>&</sup>lt;sup>1</sup> People who only consume animal products from organic farms.

usually, only those that are meant for consumption are denigrated (Herzog, 2010; Joy, 2011; Serpell, 1986; Ang et al., 2019). Dichotomization varies between cultures and it explains why westerners, for example, are outraged when some Asian cultures consume dog meat (Rothegerber, 2020).

The second category includes justifications and rationalizations that are focused on meat itself. These refer to the three Ns, *natural*, *normal*, *necessary*, by Joy (2011), and the fourth N, *nice*, which was later added by Piazza et al., (2015). The rationalization that meat is *natural* originates from the ideology of human dominance and animal subordination. Social reassurance and the fact that meat is rationalized as the *normal* behavior also works as a way to minimize guilt and dissonance. One of the most widely used justifications for meat-eating is its taste and therefore, that meat is *nice*. Hedonic pleasures make individuals more tolerant of their questionable behavior (Piazza et al., 2015; Rothgerber, 2020).

The final category is denying responsibility for meat-eating. This is done through *third-party blaming* and *moral outrage*. The idea is that meat is *necessary*. Many people today believe that meat is an essential source of nutrients and it is hard to imagine a lifestyle without it (Rothgerber, 2020). This results in higher meat attachment and lesser guilt, as they have no other option but to commit to the behavior (Piazza et. al., 2015; Rothgerber, 2013). In the modern industrialized society, shifting the burden to farmers and slaughterhouse workers (Serpell, 1986), or to the government is another example of this strategy (TeVelde et. al., 2002).



**Figure 2**. The mechanisms used after MRCD is experienced and the different aspects that may predict or influence the perceptual or behavioral change. Source: Author, 2022 from Rothgerber, 2020.

#### 3.3 Predictions of MRCD prevention/reducing mechanisms

Rothegerber (2020) formulated a few categories that help predict the coping mechanisms an individual might use; *the aspect of meat-eating that produces MRCD, individual differences, and culture*.

There are three *aspects that produce MRCD*: animal welfare, environment, and personal health concerns. If someone values at least one of these aspects, then MRCD will probably occur (Rothgerber, 2020). However, it is speculated that MRCD is most likely going to occur due to animal welfare concerns (Rothgerber, 2020). Sedova et.al., (2016) found that even environmental science graduate Czech students were more likely to refer to animal welfare implications, even if the environment was the area of their study.

Depending on the *individual differences*, either prevention or reduction mechanisms will be used. *Gender* is being discussed to be the biggest predictor of the MRCD mechanisms (Gossard & York, 2003; Vollum et al., 2004; Kellert & Berry, 1987). Specifically, women tend to find it more difficult to justify meat consumption, prefer the strategies that prevent MRCD from occurring in the first place (Rothgerber, 2013), and underreport meat consumption when MRCD is anticipated (Rothgerber, 2019b). Men, on the other hand, usually express a stronger speciesism view (Kellert & Berry, 1987) and are less open to going vegetarian (Rosenfeld et al., 2020). Power, dominance, and masculinity are values that men commonly use to justify their meat consumption (Adams, 1990; Rothgerber, 2013). Men prefer to use justification and rationalization techniques (Piazza et al., 2015; Rothgerber, 2013). When it comes to *Values*, the framework hypothesizes that people who politically agree with the right<sup>2</sup> may behave more like men and adopt reduction strategies (Dhont & Hodson, 2014; Dhont et al., 2016; Smith et al., 2017). Finally, *exposure to farm animals* points out how farmers are less likely to attribute lesser minds to animals, unlike slaughterhouse workers or chefs who would presumably find reduction strategies more appealing due to lack of former intimacy. (Serpell, 1986; Peden et. al., 2020)

The framework suggests *culture* as another predictor, as each culture has different tolerance levels and acceptance towards animal exploitation (Joy, 2011). For example, the *dissociation* mechanism depends on how used consumers are to seeing unprocessed meat (Kunst & Haugestad, 2018). A study by Mayfield et al., (2007) showed that Swedes were unbothered by linking meat with its animal origin

<sup>&</sup>lt;sup>2</sup> Right-wing ideology in this context is defined as agreement with political parties who value authority, hierarchy, and tradition, among others.

<sup>&</sup>lt;sup>3</sup> Left-wing ideology is defined as agreement with political parties who value egalitarianism and social equality.

while eating it, in contrast to British and Italians. Religion within cultures is also likely to impact MRCD as it can shape beliefs about God and human hierarchy in relation to animals (Rothgerber, 2020).

#### **Other external factors**

Rothgerber (2020) suggests that perceptions of animals can be influenced and shaped by factors like the cost of meat, the prominence of PB substitutes, and campaigns to increase moral awareness of animal suffering.

When taking into consideration the CDT, it is presumed that the more expensive something is, the more people will try to convince themselves that it is worthy. In the context of meat, this would mean that justifications like taste or protein necessity would encourage strategies like the diminishing of animal minds. However, this hasn't been practically confirmed as few studies have reached different conclusions (Hestermann et al., 2018; Rabin, 1994). These studies found that the more the cost of meat increased, the less omnivores felt like convincing themselves that meat is morally acceptable and thus used less justification strategies.

The framework speculates that the more available PB products become the harder some tactics like dissociation and avoidance will become. Therefore, meat consumption should decrease among those that are already quite ambivalent about meat. Lastly, women, leftists, and those sensitive to animal welfare are more likely to resolve in behavioral change after being encountered by animal rights campaigns and activists. On the other hand, men, rightists, less animal welfare sensitive, and those attached to meat might actually end up consuming more meat due to the increased need of justifying their eating behavior (Bastian, 2019).

# 4 Methodology

#### 4.1 Research design

This study follows a mixed-methods approach, using a deductive theory. A survey was conducted as the core component and Semi-Structured Interviews (SSIs) were added as a complement.

#### 4.2 Philosophy of science

This thesis is based on the notion of critical realism, the idea that reality is objective but perceived differently by social actors due to subjective factors (Bryman, 2012). This study examines the perceptions and justifications around meat eating as they are constructed within a specific context, but the devastating contribution of animal farming to climate change is a scientifically proven fact.

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This respective context is shaped through factors such as gender, culture, religion, education, etc. By investigating and understanding the different perceptions, multiple underlying perceptions may be unwrapped which is crucial in order to understand the situation in depth (Walliman, 2006).

#### 4.3 Literature review

A literature review was conducted mostly on Web of Science with the purpose of identifying what has been known on the psychology behind eating meat, as well as going vegetarian, using the search terms: meat eating, vegetarianism, morality. Another literature review was also conducted to obtain more knowledge on what has been researched on the topic of MP and CD and more specifically among those occupied with veterinary medicine. The search terms used were: meat paradox, cognitive dissonance, attitude towards animals, veterinarians, and veterinary students. The ultimate intention of these reviews was to identify any gaps or controversies within the subject area (Bryman, 2012). A snowballing approach was further used to identify more relevant research.

#### 4.4 Data scope and limitations

The study is focused on veterinary students in Sweden. Sweden was selected as the scope country for two reasons. Firstly, as a student of a Swedish university myself, it would be easier to get in contact and personally visit another Swedish university. Sweden is also one of the countries with the highest welfare standards for farmed animals (API, 2020), therefore, an interesting case to explore. Given that younger generations are more likely to be concerned about animal welfare and adopt meat-free diets (Lentz et. al., 2018), the scope was only limited to students.

Initially, the purpose was to conduct a survey and later extract a focus group of seven to ten people. The last question of the survey was asking the participants whether they would be interested in participating in a discussion regarding meat consumption. A gift card would be given as a token of appreciation. There were 29 positive responses. However, when official invitations were sent out to the interested participants, only two of them positively responded. Therefore, the second part of my research method pivoted to SSIs.

The goal was to visit the respective university in person as this would allow for a better presentation of the topic and personal connection with the students. This could have led to a better understanding of the study's aim and hopefully more interested participants. However, due to the pandemic, it was deemed safer to conduct the survey online. This may have worked as a significant limitation as the anticipated goal of participants for the second part of the study was not reached. Another limitation of the study is the use of quantitative data, as the social world cannot always be measured with natural science tools (Bryman, 2012). With this in mind, several parts of the theory were left out as it was decided that they could not be measured through survey questions.

#### 4.5 Data collection

#### Survey

A survey was conducted online with the purpose of identifying the existence of MRCD and its extent (see Appendix A). After getting in contact with the department's student coordinator, the survey was shared in Uppsala's veterinary students' Facebook group. As Sweden only has one university focusing on this sector, this was the only sampling unit reached out to for this study. The survey remained open for two weeks and received a total of 126 responses. Most respondents were female (118), as it is a female-dominated faculty. Only seven males answered the survey and one non-binary.

The questions of the survey were formed around the different stages of the framework. The first section of the questionnaire included demographic criteria around gender, age, religion, political beliefs, ethnicity, and questions regarding urban or rural heritage, pet ownership, if they grew up exposed to farmed animals, and the type of animals participants would like to work with in the future. According to Rothgerber (2020) and previous studies listed in section 2.3, these are important factors influencing MRCD.

Responses were measured either with a Likert scale from 1 to 8 (1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say) or frequency measuring responses (1 = Every day / 2 = A few times a week / 3 = About once a week / 4 = A few times a month / 5 = Once a month / 6 = Less than once a month / 7 =Never / 8 = Prefer not to say / 9 = Other). Participants who responded with "never" in the question *"I eat meat (including fish)"* were guided to the end of the survey as this thesis examines only those who eat meat.

The next section checked whether participants are concerned about at least one of the aspects that produce MRCD (animal welfare, environment, personal health). Questions were then formed around the triggers and prevention mechanisms.

The final section included statements formed around the reduction mechanisms. Participants were given certain statements regarding the animals as separate entities from meat and statements focused only on the meat itself. The purpose of this was not only to identify if the MRCD reduction mechanisms are being used but also to reveal any other potential justification and rationalizations that the students could be applying. In order to test this, respondents were given the option to insert

their own answer to the statement "I don't think eating meat is bad, because...". Lastly, participants were asked questions regarding traditions and the outside factors listed in section 3.3.

#### **Semi-Structured Interviews**

As mentioned in 3.4, ideally a focus group would have been conducted, however, it was not possible. Therefore, SSIs were conducted instead with the only two available participants (see Appendix B). This qualitative tool has the potential to encourage more in-depth conversations, based on respect and empathy, that may eventually uncover hidden perspectives (Longhurst, 2003). A signed consent form was acquired beforehand by the participants as per research protocol (see Appendix C), (Bryman, 2012). Interviewees were informed they were about to be recorded. Both participants were male and identified as meat-eaters. The total number of questions was ten, however, the discussion was kept open in case an interesting element came up or when the interviewees felt like elaborating more on an answer.

#### 4.6 Sampling

As the aim of my research is to identify whether MRCD exists among veterinary students in Sweden, I did not seek to gather participants randomly. Therefore, I used purposive sampling, as the unit chosen was the one relevant to my research objective (Bryman, 2012). As already mentioned in the introduction section, veterinary medicine students were chosen due to their higher knowledge of the process of meat production. I only focused on students as young people tend to be more open to quit eating meat (Lentz et. al., 2018).

#### 4.7 Data Analysis

As the SSIs were only two, no software was needed to perform the coding. With the framework and RQs in mind, common topics and keywords were identified, which could be further analyzed in-depth. These were then combined into subthemes: a) environmental impacts, slaughtering practices, b) protein, mental health, practicality, c) economic factors, humane, and themes: *knowledge*, *health*, and *animal welfare*.

#### 4.8 Positionality and biases

As critical realism points out, interpretations of reality are socially constructed through context and social interactions (Walliman, 2006). It is therefore important to reflect on my positionality within the context. I am aware that as a vegan myself I have my own interpretation of reality and pre-considered notions towards meat consumption. For that reason, I acknowledge potential biases that could arise

from forming the survey questionnaire and my interpretation of the results. One particular bias could be my expectation of certain results which may influence my interpretation of the data analyzed.

#### 4.9 Ethical considerations

As the topic of this study directly examines and reflects on personal choices, I am aware of the ethical implications that could potentially develop among the participants. Due to the sensitivity of the topic, participants might end up feeling guilty after reflecting on their meat consumption or stir up anxieties linked to discussions about defending their choices. However, respondents were given the option to withdraw from the study at any time or choose more anonymous answers in the survey by answering "Prefer not to say". Anonymity was guaranteed to all in the introduction section of the survey as well as the two SSIs participants by not coding, analyzing, and writing text using anyone's real names.

# **5** Results

This chapter will start by presenting the results from the survey according to the RQs. The results from the two SSIs are presented last.

In total, 126 veterinary medicine students from Uppsala University participated in the survey. However, as the survey aimed to explore meat eating, 29 students were redirected to the end of the survey as they do not eat meat. Hence, only 97 students completed the whole survey. Only questions and demographics that produced interesting findings are presented here.

Original responses in the survey were measured using a Likert scale or frequency measures. However, in hindsight, it was determined that a yes or no response would have been easier to follow. Therefore, responses "Strongly agree", "Agree", and "Somewhat agree", were summed up as a yes, and responses "Somewhat disagree", "Disagree", and "Strongly disagree", were summed up as a no. The "Neutral" answer remained the same. Similarly, frequency measures "Every day", "About once a week", "Once a week", "Few times a month", "Once a month", "Less than once a month", were summed up as yes and "Never" as a no. Every percentage that is presented on demographic and other factors is referring to its own category as a 100 and not the overall number of students.

#### 5.1 To what extent does MRCD exist among veterinary medicine students in Sweden?

This section aims to identify whether MRCD is present among the respective students. In order to answer this question participants were asked whether they love animals and whether they are concerned about at least one of the three MRCD aspects; animal welfare, the environment, and personal health. Intentions of whether they could decrease or eliminate their meat consumption were also considered.



**Figure 3.** Results showing how many participants responded they love animals and/or have concerns about either animal welfare, the environment, or personal health while at the same time, consuming meat or would be willing to quit meat. Source: Author, 2022. Note: The question regarding the three aspects of MRCD allowed multiple answers and so many students chose more than one answer. There was a total of 145 answers. Hence, the percentage is based on 145 as 100%. There are no negative responses, as this question was not based on a Likert scale.

The overwhelming majority of the participants (97%) responded they love animals. Most of the students also expressed concerns about all three MRCD aspects (45%). More specifically, animal welfare concerns received the most responses (24%) compared to the environment (18%) and personal health (13%). Consequently, when summed up, all students care about at least one of the aspects except one who stated they are concerned about none. The greater part of the students (77%) said they eat meat while only a small percentage (23%) does not. When participants were asked whether they could see themselves becoming vegetarian almost half the students responded positively (47%) while 41% responded negatively.



**Figure 4.** Results showing political beliefs in relation to meat consumption and willingness to quit meat. Source: Author, 2022

Most of the students that could go vegetarian politically agree with the left. Out of the total 60 leftwing students, 43% said they could eliminate their meat consumption while another 28% already identify as vegetarian or vegan. Those who agree with the right-wing (17 total students) expressed the least amount of interest in quitting meat (23%) and also contain the least amount of already vegetarian or vegan students (12%) compared to the others.

#### **Measuring dissociation**

This set of questions aimed to explore whether veterinary students use the dissociation mechanism and, if so, linked to what type of animal. Accordingly, the questions aimed to identify what type of animal students consume.



**Figure 5.** Results of meat consumption per species and the level of emotional tension each species cause when linking their meat with the whole animal. Source: Author, 2022.

Fish was chosen as the animal that is eaten by most students (97%), followed by beef (90%), pork (88%), chicken (87%), lamb (63%), and veal (43%). Accordingly, fish also received the least amount of responses (15%) when participants were asked whether they get uncomfortable connecting the meat on their plate with the actual animal. Cows also received a low response rate (16%), followed by pork (18%), chicken (23%), veal (27%), and lamb (27%).

#### Other prevention mechanisms

When participants were asked *"It is important to me that the meat I consume has high welfare standards"* everyone agreed with the statement (100%). Most of the students (88%) also responded that they believe an animal can be killed without suffering. The purpose here was to identify if the trigger regarding the admission that one eats meat from a harmed animal would lead them to identify themselves as "Conscientious omnivores".

Regarding the presence of vegetarians trigger, participants were asked whether they agree with the statement *"Vegetarians think they are morally superior"*. Most of the students responded positively (43%). When asked the same question but in the case of vegans, even more students agreed with the statement (59%).

# 5.2 Is there a common pattern of justifications and/or rationalizations for the consumption of meat?

This section presents the results of the statements used as justifications and rationalizations, based on the MRCD framework.



**Figure 6.** Results showing which justifications or rationalizations of meat consumption are the most agreeable. Source: Author, 2022. Note: Some statements have been shortened to fit the graph. See appendix A for original statements.

#### Most agreeable statements

It is noticeable that most of the students disagreed with each statement. However, out of all the statements, *"Meat is delicious. I could never give it up"* resonated the most with the students (42%), followed by *"Eating meat is natural and is part of the circle of life"* (34%). Almost a quarter of the students also agreed with the statements *"Livestock animals don't suffer the same way humans do"* (24%) and *"Eating dog meat is wrong but eating cows, pigs and chickens is not"* (22%). Meat as a necessary source of protein (20%) and meat as normal (18%) received a few positive responses as well.

#### Least agreeable statements

Not even a single student supported the statement that denigrates the mind of livestock animals compared to pets. Statements regarding fish received the least amount of positive responses by only a couple of students (1% and 2%), followed by *"A man who doesn't eat meat is not manly enough"* (2%).

Participants were further asked in an open question to complete the sentence "I don't think eating meat is bad because...". One of the answers that was agreed upon by many students (19) was that "it provides a lot of jobs for people". A few students (4) also referred to the necessity of meat in relation to environmental reasons like preserving biodiversity, or the unsuitability of Swedish land to grow other crops.

#### **Demographic findings**

Certain statements were found to be correlated with some demographic indications and other factors. These include political ideology, gender, religion, age, and geographical origins.

Political ideology indicated a couple of trends related to MRCD. Specifically, right-wing students agreed the most with *"Livestock animals don't suffer the same way humans do"* (40%) compared to the left (14%) while those who are not interested in politics were somewhere in-between (28%). Most of the right-wing students (60%) agree with *"Meat is delicious. I could never give it up"* compared to the left (30%). Half of the apolitical students also agreed with the statement (50%).

Male students were found to agree the most with the statement *"Livestock animals don't suffer the same way humans do"* (75%) while 73% of females disagreed. However, in the question regarding taste, most males responded negatively (75%) while half of the females said they would not be able to quit meat due to taste (44%).

When students were asked whether *"Meat is a necessary source of protein"*, some with rural background (27%) and/or those who identify as Christians (33%) agreed more than those who are not religious (16%) and/or with urban background (15%). In each case, however, most of the students disagreed with the statement.



5.3 How can we overcome the meat paradox given the current climate threats?

Figure 7. Results showing which external factors could influence the students' meat consumption. Source: Author, 2022

Most of the respondents claimed that a drop in prices and wider availability of PB products could help decrease their meat consumption (68%). Almost half of the students also agreed that when confronted with graphic footage and other information from animal rights campaigns it makes them reconsider decreasing or eliminating meat consumption (47%). An increase in meat prices was additionally agreed upon by many participants to affect consumption (45%).

Political beliefs signified potential patterns as half of the left-winged (49%) responded positively to the statement *"If meat products became more expensive than plant-based substitutes, I could decrease my meat consumption"* compared to those from the right where most of them responded negatively (47%). Students aged 18-24 also agreed the most with the statement (53%) compared to the other age groups where those aged 35-44 mostly disagreed (60%), and those between 25-34 were divided in half.



**Figure 8.** Bar chart showing the indications that were found to be important regarding potential influences from animal rights campaigns. Source: Author, 2022

The survey showed that students who agree politically with the left parties (60%), or are from urban areas (51%), or intend to work with pets (55%) or wild animals (57%) are more likely to be affected by animal rights campaigns. Additionally, females (46%) scored lower than men (63%) as did those aged 25-34 (32%) than those younger (56%) or older (60%).

When participants were asked *"Traditions and religious holidays lead to increased consumption of meat. Do you think maintaining these traditional feasts is essential for the spirit of the holidays?"* most of the students replied negatively (53%). Those who agreed with the statement were mostly right-winged (47%), and/or Christians (42%), and/or mostly aged between 35-44 (80%).

#### 5.3.1 Findings from interviews

The focus of the interviews was to provide more insights into the minds of the students in order to provide answers for the RQs. Firstly, the goal was to identify whether participants possess adequate knowledge regarding the environmental impacts of meat consumption. Then, participants were asked to describe slaughter practices in Sweden and whether they believe these practices are humane. Lastly, the goal was to investigate the reason that prevailed for eliminating their meat consumption. The findings are presented below.



Figure 9. Themes and subthemes that were identified from the interviews. Source: Author, 2022

#### Knowledge

It was observed that the interviewees possessed some knowledge regarding the environmental impacts but not to a sufficient level. Specifically, Participant One (PO) said *"Not completely aware of the total extent but I have some kind of image of the effect....so I don't know the exact number and extent but I do realize that it's a major percentage"* while Participant Two (PT) claimed they probably know more than the average person but still not an expert.

Regarding the knowledge of slaughtering practices, both interviewees attribute the ignorance of the public as one of the reasons why they still consume meat. PO said the number of vegetarians and vegans is generally increasing in more senior years as they don't have that *"blessed ignorance"* anymore.

#### Health

Health appeared to be a significant factor. PO claimed he eats meat mostly due to fitness reasons and the quality and practicality of animal protein compared to plant protein (which he believes is also the case for many other students). PO, however, said that wider availability of PB products would help him decrease but not eliminate meat. PT said that he prefers to listen to his body and that's why he mostly prefers wild meat. PT used to be vegetarian but quit for mental reasons that were not specified in the interview. He also expressed concerns about the quality of PB meat and that he would like to see more natural ingredients being used instead.

#### Animal welfare

Both participants seemed quite satisfied with the conditions that animals (especially cows) are being kept and slaughtered in Sweden. PO had more knowledge regarding the farms and slaughterhouses of Sweden as he was more senior than PT. Both admitted that there is room for improvement even in the case of cows. More particularly, PO said that "Most cows are well and are taken care of when they get issues with teeth, feet, etc., which are the most common ones. Then there is a limited effort most often to fix more serious illnesses because there is always this economic element when it comes to animal health, as they are more or less productive units.". While PO believes the use of bolt gun for cows sedation is satisfactory when asked about pigs he said "It's done with carbon dioxide instead... because of the amount of production needed it is not economically useful to use bolt gun. There has been discussion about carbon dioxide sedation because it is not optimal but nothing has been implemented so far."

Participants were asked to describe the word humane. PO answered "No unnecessary pain or discomfort for the animal. I guess there is always going to be a certain level of stress, like for example in transportation, in any kind of animal. I don't think we can completely eliminate that, and have this unrealistic euphoria". PT doesn't believe the word humane fits the meat industry as it is today, but if everyone ate meat once or twice a month then it could be possible.

# **6** Discussion

In this chapter, the findings will be further discussed and evaluated in relation to previous studies and the overall aim of this thesis which is to investigate whether the MRCD framework is applicable among the respective students. Based on that, solutions to help students transition towards a more sustainable diet are presented.

#### 6.1 Does the dissonance exist?

Based on the combination of the findings in section 5.1 it can be concluded that MRCD does exist to some extent among the veterinary students studied. Almost everyone claimed to love animals and care about at least one of the three MRCD aspects. However, only about a quarter of the students do not eat meat. This is quite a low percentage for such an overwhelming response regarding their love for animals and their well-being, and/or their environmental concerns. The theory states that if an individual is concerned about at least one of these aspects, then MRCD will most likely occur

(Rothgerber, 2020). Additionally, since half of the omnivore students claimed they could become vegetarian, this then implies a certain admission on their behalf that consuming meat is problematic.

Most of the students agree that organic meat is humane. First of all, it is important to define the word humane. Generally, it is defined as "minimizing the inflicted harm" (Mellor & Littin, 2004). The two interviewees also had the same interpretation. But this thesis defines the word from a more philosophical point of view, meaning that no harm at all is inflicted upon the animal. Slaughter can never meet this criterion as an animal is deprived of their life and the opportunity for future pleasurable moments (Browning & Veit, 2020). PO admitted as well that it is an "unrealistic euphoria" to completely eliminate the stress inflicted on animals (see Section 5.3.1). Even in the case of slaughterhouses with stricter welfare regulations, like the Swedish KRAV slaughterhouses, violations of these laws cannot be avoided due to low monitoring and mistreatment either by human error or deliberately (Welty, 2007; Browning & Veit, 2020). KRAV slaughterhouses have been exposed multiple times for inappropriate practices (Hellerud, 2021; Myllynen, 2017).

An example of dissonance is the case of pigs. Most of the students (88%) eat pork. Pigs, however, undergo one of the worst treatments when it comes to their slaughtering (Gustafsson, 2020). Lina Gustaffson, a Swedish veterinarian, described the standard farming and slaughter practices of pig farming in Sweden as horrific (Gustafsson, 2020). According to a study from the Swedish University of Agricultural Sciences (SLU), pigs experience a high level of stress when entering the gas chambers and prior to becoming unconscious (Lindahl et al., 2020). PO also acknowledged in the interview that the slaughtering of pigs with carbon dioxide is not optimal but rather economically beneficial. Even though SLU is currently researching new stunning methods (Lindahl et al., 2020), it is questionable how this constitutes a high welfare standard when the ultimate purpose is to facilitate a profitable slaughter. However, it is not only the welfare aspect that is troubling. A study from Zira et. al. (2021) in Sweden compared the environmental impacts of organic and conventional pork and found that organic pork is actually more harmful when it comes to eutrophication, fossil fuel use, and acidification. It requires more land, resources and causes a greater leakage of nitrogen (Zira et. al., 2021).

It was observed that the MRCD framework is not as applicable to the veterinary students included in this study as for the Swedish general public. The trigger of information exposure was not looked at in depth as it is assumed that the students are already aware of most relevant information about meat production and animal welfare. As expected, the students did not get particularly bothered when linking meat with its animal origin (see Figure 5), due to either their frequent exposure to farmed animals (Serpell, 1986), or due to the Swedish culture (Mayfield et al., 2007). Therefore, this means

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that triggers like *information exposure* or *reminders that meat is from an animal* wouldn't be enough to provoke CD among the students. In this case, *admission that one eats meat from a harmed animal* or *the presence of vegetarians* could be more effective in bringing CD to the surface. As all students claimed they only eat high-welfare meat, it is speculated that they might use this as a shield to prevent CD from further occurring. As most participants are females, it would be in line with the theory's argument about women favoring mostly defensive mechanisms. Additionally, when participants were asked their opinion on *"Vegetarians/Vegans think they are morally superior"* most of the students seemed to agree with the statement (see Section 5.1). Vegans in particular got an even higher agreement rate, consistent with other studies showing the existence of negative presumptions about vegans in society (MacInnis & Hodson, 2017; Rothgerber, 2020). This could indicate a certain sense of moral threat due to the fact that their meat consumption is being scrutinized.

The results showed how most of the students who do not eat meat politically agree more with the left. Additionally, those who are more open to going vegetarian also have similar political views (see Figure 4). This is in line with previous studies showing how those who endorse right-wing ideologies tend to have higher rates of meat consumption or show less support for animal welfare (Dhont & Hodson, 2014; Hoffarth et al., 2019; Allen et al., 2000).

Regarding the reduction mechanisms, it was observed that they are not particularly used by the students (see Figure 6). It cannot be said with certainty whether most students did not agree with the statements because CD did not occur in the first place. All students said they only consume high welfare standards meat, meaning that they self-identify as "Conscientious Omnivores" (Rothgerber, 2020). Therefore, it can be argued that they might have blocked CD. Regardless, the justification that seemed to be the most popular is that of taste, consistent with the framework that also lists it to be one of the most powerful ones. Piazza et al. (2015) emphasized that this justification has not been looked at in depth by the academic society as much as it should have, due to its weak moral nature. Yet, as it was also confirmed in this study, it is perhaps the most threatening one.

Sweden is among the countries with the highest pet ownership (Pet Food Industry, 2016). Therefore, if we were to apply Rothgerber's theory on *Culture* as a predictor of MRCD, we could hypothetically find that the *dichotomization* technique, i.e., only denigrating the mind of edible animals, would be very popular. However, when students were asked if eating dog meat is wrong compared to other western meat, only a fifth of the students agreed. Additionally, not a single student believed that farmed animals have fewer mental capabilities than pets (see Figure 6). This is not surprising as previous studies on human-animal relationships found that farmers and veterinary medicine

occupants are less likely to diminish the mental capabilities of their animals due to their daily contact and higher intimacy (Engel et al., 2020; Peden et al., 2020; Serpell, 1986). Veterinary education is responsible for stressing the importance of safeguarding animal welfare as well as the different needs each species has (WVA, n.d.). Consequently, veterinary students are also less likely to engage in this justification technique. Denial of animal minds in relation to humans was more agreed upon than in relation to pets (see Figure 6). About a fourth of the students questioned the mental capabilities of farmed animals in relation to suffering and emotions. This is in line with the study from Engel et al. (2020) where veterinary professionals expressed utilitarian views towards animals which implies that they agree with animals being treated poorly if it is for the greater good. The MRCD framework mentions Individual differences as predictions of CD reducing mechanisms. Diminishing animal minds is a reducing strategy that the theory suggests is mostly used by men (Piazza et al., 2015; Rothgerber, 2013) and right-wing individuals (Dhont & Hodson, 2014; Dhont et al., 2016; Smith et al., 2017). The predictions were consistent within this study, as the students who attributed lesser minds to animals were mostly right-winged and males (see Section 5.2). Interestingly, both of the two male interviewees stated how they could decrease but not eliminate their meat consumption and it was observed that during the survey they both used this reduction mechanism. Most of the right-wing students (60%) also used taste as a justification for their meat consumption. In this case, however, it was females that agreed the most with this statement contrary to other studies (Piazza et al., 2015; Rothgerber, 2013).

Necessity appeared to be, through the interviews, another important factor (see Section 5.3.1). In the survey, however, only 20% of the students stated they believe meat is a necessary source of protein (see Section 5.3). From those students, it was observed that religion and geographic location might influence their opinion as those who identified as Christians or from rural background agreed more. Previous studies have shown how these factors may influence attitudes towards animals (Pirrone et al., 2019; Serpell, 2005; Izmirli & Philips 2012). However, the difference between urban (15%) and rural (27%) background is quite small and might not provide a solid finding. Regardless, studies have shown that plant protein can be just as effective for the body as animal protein, in addition to lowering risks of chronic and cardiovascular diseases and obesity, and thereby be a healthier protein source (Lynch et al., 2018; Mullins & Arjmandi, 2021).

#### 6.3 How can we move forward?

The framework states that prices of meat and PB products, and campaigns to increase moral awareness of animal suffering could induce behavioral change depending on the individual. In this context, it was identified that a drop in price and further availability of PB products would be the most

effective way to reduce meat consumption (see Figure 7). In Sweden, however, the availability of PB products is already quite vast compared to other countries as it is within the top ten vegan-friendly countries in the world (Chef's Pencil, 2020). Therefore, it is speculated that it is either the perceived high cost of these products that hold back the students or the fact that they may not be aware of the existence of them due to, perhaps, lack of interest. A few of the students (19%) claimed that the availability of meat alternatives would not help them reduce or eliminate their meat consumption. This could be due to lack of familiarity, lower perceived quality, or food neophobia (Onwezen et al., 2021; Apostolidis & McLeay, 2016; Vanhonacker et al., 2013). Regarding the rise of meat prices, Rothgerber (2020) claimed that external factors such as financial incentives could have adverse effects on such individuals, causing them to adopt even more negative attitudes towards animals. In other words, they could result in using other MRCD techniques more like mind diminishing. Right-wing students were the least open to decreasing their meat consumption even if the prices went up. This suggests that they could be more prone to result in higher mind diminishing than they already do. Traditions were also identified as a hindering factor as almost half of the right-wing students, religious students, and almost all aged 35-44 said that meat dishes are essential for traditional celebrations.

Animal rights campaigns and their influence on the respective students ranked second for potentially influencing meat consumption. As per theory and other previous studies (Pirrone et al., 2019; Ostović et. al., 2017), it was identified that students with left political views and from urban areas expressed higher sensitivity (see Figure 8). However, contrary to the theory, males expressed higher sensitivity to these campaigns than females. An interesting finding was that those aged 25-34 responded more negatively than those between 18-24 and 35-44. This could be due to the seniority of the students aged 25-34 compared to those younger as previous studies have shown that the more senior a student gets, compassion fatigue or feelings of helplessness may occur (Thomas et al., 2007; Ostović et. al., 2016; Paul & Podberscek, 200; Menor-Campos et al., 2019a; Pirrone et al., 2019; Azahar et al., 2014; Çavuşogluc & Uzabaci, 2021). The students in this study, however, were not asked their year of study and therefore this causality is based on presumption. Previous studies have also shown how students who aim to work with livestock express less concern about animal welfare (Menor-Campos et al., 2019a; Ostović et. al., 2019a; Ostović et. al., 2017). Here, it was found accordingly that those students expressed less sensitivity towards graphic footages from animal rights campaigns.

In any case, policymakers are the ones who can help decrease meat consumption. Regarding the price issue of meat alternatives, the Swedish government should move away from supporting and promoting animal products and subsidize PB products instead. In a Swedish government bill, the need for increased competitive and sustainable food production is emphasized (GOS, 2016). The strategy

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aims to secure Sweden's contribution to the Sustainable Development Goals (SDGs). It is alarming that within it the government stresses the need to boost Swedish meat production and consumption. While it is understandable how the goal is to promote Swedish meat over imported meat, when put under the emissions perspective, the ideal direction would be to promote a PB diet instead of a heavier meat diet (Poore & Nemeck 2018; Sandström et al., 2018; Chai et al., 2019). An underlying notion of the strategy is that the meat sector can provide more jobs for people (GOS, 2016). In an open question of the survey, the students also raised this point as an excuse (see Section 5.2). Switching to a PB diet, however, does not mean that farmers are to be left unemployed. A study from the Food and Land Use Coalition estimated that more than 1 million dollars are given to global farm subsidies every minute but only one percent of that is used to help the environment (FOLU, 2019; Carrington, 2019), while another UN report found that almost 90 percent of the subsidies given to farmers are harming the environment (FAO, 2021). It is generally estimated that up to almost one trillion dollars of public funding are spent as subsidies globally (Carrington, 2019; Scown et al., 2020). More specifically, in the case of Sweden, farmers in 2019 received around one to two billion euros from the total of 54 billion euros under the Common Agricultural Policy funding (European Parliament [EP], 2021). All this money could be used instead to help farmers transition towards PB agriculture and provide them with the necessary skills and equipment to shift to more sustainable farming practices like agroforestry and regenerative plant farming (FOLU, 2019; Winters 2022), and ultimately achieve the SDGs (Scown et al.,2020). In cases of current animal farmlands that are not arable, the same money can be used to pay farmers to rewild their land, turning them into publicly funded land managers that promote wildlife habitats and biodiversity (Winters, 2022). This has already been done successfully in the past in Costa Rica (Konyn, 2021). While it is true that grazing animals help sequester carbon into the soil and promote biodiversity, only around 20 to 60 percent is actually offset by the emissions that would be produced by grazing these animals (Garnett et al., 2017; Winters, 2022). Additionally, at some point, the soil cannot sequester any more carbon (Garnett et al., 2017). The potential benefits are very low compared to restoring ecosystems in former agricultural lands (Benton et al., 2021; Winters, 2022).

As mentioned in section 5.2, few students brought up the unsuitability of Swedish land to grow crops as a justification for preferring local animal products instead. However, it is only a tiny fraction of the emissions of animal products (e.g. 0.5% in the case of beef) that derives from their transportation (Poore & Nemecek, 2018). In the EU specifically, transportation is only responsible for six percent of the total emissions related to food, meaning that the actual problem is animal farming itself (Sandström et al., 2018). It also should be noted that even in the case of plants, local is not always

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better. A study conducted in Sweden showed how it is actually better to buy imported Spanish tomatoes rather than Swedish as the soil is much more fertile there and requires much less energy input (Carlsson-Kanyama et al., 2003).

Given the catastrophic impacts of animal farming, it is concerning that policymakers make insufficient effort to encourage a more sustainable food system (Apostolidis & McLeay, 2016). It is them who have the power to make drastic changes from top to bottom, i.e. the consumers. Information campaigns as part of a focused strategic approach are one way that could help educate the public (Apostolidis & McLeay, 2016; Dagevos & Voordouw, 2013). According to the findings of this study, the lack of students' knowledge suggests that these campaigns should be focused on the environmental impacts of meat, nutritional facts, and vegetarian and vegan products and recipes. These campaigns are most likely going to be effective for those who are concerned about the environment and their personal well-being (Apostolidis & McLeay, 2016). As most of the students in this study expressed concerns about these aspects, such campaigns at the university of Uppsala could be beneficial. Regarding those who are "taste driven", campaigns highlighting the hedonic pleasures of PB food would be more effective. Additionally, cell-cultured meat could also be a very catalytic solution that policymakers should further fund. It is beneficial to animal welfare, the environment, as well as global health, as it lowers the risks of foodborne diseases and antibiotic use (Bhat et al., 2015). Further research is needed, however, especially in the case of consumer acceptance as the way the product is framed is very important (Bryant & Barnett, 2018).

Lastly, animal rights campaigns could additionally be seen as a helpful tool as they can make individuals aware of their dissonance, considering they were rated as the second most influential factor. Activists can visit the university of Uppsala and engage in discussions with students about the morality of the act of slaughtering and whether it can ever be completely harmless. There are people though, who fundamentally believe that there is nothing wrong with slaughtering an animal if the animal has lived a happy free-range life. In such cases, it should be communicated that the sustainability of such farms to feed the population on a global scale is intangible (Reganold & Wachter, 2016).

#### 6.4 Limitations of the study

There are a few limitations in this study that are necessary to mention. First of all, the gender bias, as most participants were females. Therefore, results concerning gender should be treated with caution. Similarly, very few students are religious and only five students were aged between 35-44, making it also harder to provide solid conclusions in relevant findings. The academic year of study was not

included in the survey, though it was later identified that if included, it would have provided even more interesting results. Additionally, the sampling unit was limited to one institution and therefore the results cannot be generalized to other veterinary students in other countries. Several other characteristics (e.g. ethnicity, pet ownership), although included in the survey, ended up not being used in the analysis as almost all participants belong to one category. Accordingly, some parts of the theory and questions that were originally included in the survey were also left out in the analysis as it was determined that they couldn't be tested through a survey. It should also be noted that results regarding the amount of meat students consume may not represent the truth as, according to the theory, it could be possible that the *perceived behavioral change* mechanism was used (see Section 3.1). In other words, participants may have underreported their meat consumption due to the anticipation of MRCD (Rothgerber, 2020).

Rothgerber's (2020) speculation regarding animal welfare as the strongest influential aspect of MRCD, and personal health the least, was confirmed. The latter was not looked deeper due to the scope and length of this study which aimed to connect the environmental aspect with veterinary students whose profession pledges to protect animals. Regarding the environmental factor, the interviews and the responses from the survey open question suggest that the students are lacking knowledge. However, it cannot be said with confidence that they all lack knowledge. If the initial purpose of this research to conduct a focus group discussion was achieved, then this could have been further investigated.

Initially, the aim was to look deeper into the consumption of fish and other non-meat animal products. In hindsight, however, it was decided that this wasn't tangible considering the length of this thesis and because the sampling unit did not study aquatic medicine. Therefore, many survey questions ended up not being used in the analysis. Some parts of the theory that were considered when forming the survey also ended up not being used as it was determined that they were either too psychological or did not fit the case of the students or were not eventually useful.

The framework states that researchers should be cautious when presenting multiple reduction mechanisms to participants as the order in which they are presented might affect results. If emotional tension occurs then they might choose the first mechanism presented to alleviate discomfort. In this study, however, the most popular argument was not the first presented. Even if taste was concluded to be the most popular reduction mechanism though, it could be argued that if they had to provide their own justifications and rationalizations without having to choose from already written arguments the results could differ. Lastly, it cannot be said with certainty whether MRCD was experienced or not. All conclusions are based on interpretations from a survey asked at one point in time. Results,

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however, showed that it is very possible that the students manage to block MRCD by claiming they only eat humane meat.

# 7 Conclusion

Current and future meat consumption poses a great issue that needs to be urgently addressed if we want to tackle climate change. In the Western world, a shift towards a PB food system can have significant positive impacts. This study departed from the notion that veterinary students would be an interesting group to look at as they are more exposed to several MRCD triggers than most people. Therefore the MRCD framework was used to test whether CD exists among veterinary students in Sweden and what kind of coping mechanisms they may result in.

In general, it was found that MRCD does exist among veterinary students, despite their decision to pursue a career that entails working close to animals and therefore supposedly have a higher degree of awareness about animal welfare than the general public in Sweden. The justification that was agreed upon by most was that of taste. However, almost all students stated they only consume meat of high welfare standards. It is argued that this prevention mechanism might have been used as a shield to stop CD from occurring in the first place. As most participants were female, this would be consistent with the theory stating that women prefer prevention mechanisms. The results regarding political beliefs were also consistent with previous studies as those with left political views were more open to quitting meat, used less reduction mechanisms, and were more sensitive to animal rights campaigns and graphic footages. They also welcomed more positively potential price rises in meat than the right-wing students. Therefore, political beliefs were deemed as the most important MRCD predictor in this study.

This thesis highlights the need for state-funded information campaigns on the negative environmental impacts of meat. This could be very impactful since many students expressed concerns over the environment. As the price and availability of PB products was rated as the most influential, subsiding and introducing the benefits of meat alternatives in combination with tasty recipes could be the most powerful measure. Regarding the "Conscientious omnivores", animal rights activists should visit universities and engage in discussions with veterinary students about the morality of slaughtering an animal and whether that can ever be done without inflicting any harm.

Further research is needed in order to test the outcomes of the suggested measures regarding information campaigns. Future more in-depth qualitative studies could shed more light on the tensions that arise from the MP, especially focusing on the consumption of fish and other non-meat

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animal products as they also pose harm to the environment. Lastly, as the academic year of study was not considered in this study, testing whether the number of vegetarians or vegans increases or decreases in senior years could be included in future research to provide more insights on decisions over time.

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# 9 Appendix

# **Appendix 1. Survey Questions**

Q1: I am a

1= Male / 2= female / 3= prefer not to say / 4= other

Q2: My age group is

1= Under 18 / 2= 18-24 / 3= 25-34 / 4= 35-44 / 5= 45+ / 6=Prefer not say

Q3: I have primarily lived in

1= an urban area / 2= a rural area / 3= Prefer not say / 4= Other

Q4: I am

1= Christian / 2= Muslim / 3= Jew / 4= Hindu / 5= Buddhist / 6=Not religious / 7= Prefer not to say / 8= Atheist / 9= From a religious family but I don't practice it / 10= Other

Q5: Politically I agree with

1= Parties from the left / 2= Parties from the right / 3= I'm not interested in politics / 4= Prefer not to say / 5= Other

Q6: Growing up I was exposed to farmed animals

1 = Every day / 2 = A few times a week / 3 = About once a week / 4 = A few times a month / 5 = Once a month / 6 = Less than once a month / 7 = Never / 8 = Prefer not to say / 9 = Other

Q7: I love animals

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q8: In the future I would like to work with

1 = pets / 2 = livestock / 3 = wild animals / 4 = Prefer not to say / 5 = Other

Q9: I eat meat (including fish)

1 = Every day / 2 = A few times a week / 3 = About once a week / 4 = A few times a month / 5 = Once a month / 6 = Less than once a month / 7 = Never / 8 = Prefer not to say / 9 = Other

Q10: I am generally concerned about

1 = animal welfare / 2 = the environment / 3 = my personal health / 4 = all of the above / 5 = Prefer not to say 6 = None of the above / 7 = Other

Q11: I could see myself going vegetarian

1 = Very likely / 2 = Likely / 3 = Somewhat likely / 4 = Neither likely nor unlikely / 5 = Somewhat unlikely / 6 = Unlikely / 7 = Very unlikely / 8 = Prefer not to say

Q12: Do you ever think of the animal origin of the meat on your plate?

1 = Yes / 2 = No / 3 = Maybe / 4 = Prefer not to say

Q13: It makes me uncomfortable thinking that beef comes from a cow

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q14: It makes me uncomfortable thinking that veal comes from a baby cow

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q15: It makes me uncomfortable thinking that pork comes from a pig

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q16: It makes me uncomfortable thinking that lamb comes from a baby sheep

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q17: It makes me uncomfortable thinking of the origins of a chicken

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q18: It makes me uncomfortable thinking of the origins of a fish

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q19: I eat beef

1 = Every day / 2 = A few times a week / 3 = A bout once a week / 4 = A few times a month / 5 = Once a month / 6 = Less than once a month / 7 = Never / 8 = Prefer not to say / 9 = Other

Q20: I eat pork (bacon, ham, steak, chops, etc.)

1 = Every day / 2 = A few times a week / 3 = About once a week / 4 = A few times a month / 5 = Once a month / 6 = Less than once a month / 7 = Never / 8 = Prefer not to say / 9 = Other

Q21: I eat veal

1 = Every day / 2 = A few times a week / 3 = About once a week / 4 = A few times a month / 5 = Once a month / 6 = Less than once a month / 7 = Never / 8 = Prefer not to say / 9 = Other

Q22: I eat lamb

1 = Every day / 2 = A few times a week / 3 = About once a week / 4= A few times a month / 5= Once a month / 6 = Less than once a month / 7 = Never / 8 = Prefer not to say / 9 = Other

Q23: I eat chicken

1 = Every day / 2 = A few times a week / 3 = About once a week / 4= A few times a month / 5= Once a month / 6 = Less than once a month / 7 = Never / 8 = Prefer not to say / 9 = Other

Q24: I eat fish

1 = Every day / 2 = A few times a week / 3 = About once a week / 4 = A few times a month / 5 = Once a month / 6 = Less than once a month / 7 = Never / 8 = Prefer not to say / 9 = Other

Q25: It is important to me that the meat I consume has high welfare standards

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q26: I only consume meat that was raised and slaughtered in Sweden

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q27: I feel better knowing I consume meat that was humanely produced

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q28: I believe there is a way to kill an animal without them suffering

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q29: Vegetarians think they are morally superior

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q30: Vegans think they are morally superior

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q31: Traditions and religious holidays lead to increased consumption of meat. Do you think maintaining these traditional feasts is essential for the spirit of the holidays?

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q32: Is it the consumption of meat that maintains the spirit of the holidays?

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q33: Livestock animals (cows, pigs, sheep, etc.) don't suffer or think the same way humans do

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q34: Livestock animals are different than pets (dogs, cats, etc.). They don't have the same capabilities and/or emotions

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q35: Fish don't feel pain

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q36: Fish don't suffer like other animals do

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q37: Eating dog meat is wrong but eating cows, pigs, and chickens is not

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q38: A man who doesn't eat meat is not manly enough

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q39: Humans are on top of the food chain. Eating meat is natural and is part of the circle of life. Some animals are meant to be eaten.

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q40: Everyone eats meat. Therefore, eating meat is normal

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q41: Meat is delicious. I could never give it up.

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q42: Meat is a necessary source of protein. Humans need meat in order to survive and be healthy.

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q43: Which of the following resonates with you the most? (you can choose more than one options). "I don't think eating meat is bad because

..animals don't have the capacity to suffer as much as humans do

.. some animals are meant to be eaten.

...meat is a necessary part of our diet. Humans cannot survive or be healthy without meat.

..eating meat is normal. Everyone eats meat.

.. it tastes amazing. I can't imagine my life without it.

..humans have always eaten meat. It is natural and it is the circle of life.

.. if people stopped eating meat, many cultures and traditions would be ruined.

.. it provides a lot of jobs for people

.. Prefer not to say

..None of the above

Other

Q44: When coming across campaigns from animal rights organizations and/or activists (e.g., graphic footages, informations about the impacts of the meat industry on animal welfare, the environment, human health, etc.) it crosses my mind to decrease and/or eliminate my meat consumption.

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q45: If meat products became more expensive than plant-based substitutes I could decrease my meat consumption.

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q46: If plant-based substitutes were more available and cheaper I would consider following a more plant based diet.

1 = Strongly disagree / 2 = Disagree / 3 = Somewhat disagree / 4 = Neutral / 5 = Somewhat

Agree / 6 = Agree / 7 = Strongly agree / 8 = Prefer not to say

Q47: Would you be willing to participate in a short discussion regarding meat consumption with a few other veterinary students and students from the Naturbruksprogrammet over zoom? (a giftcard will be given out in the end as a token of appreciation)

a) Yes

b) No

Q48: If yes, please fill in your email or phone number so I can further contact you

# **Appendix 2. Interview questions**

Q1: What academic year are you currently at?

Q2: Are you familiar with the extent of the environmental impact of the meat industry?

Q3: Have you ever been inside a farm or slaughterhouse?

Q4: What does the word humane mean to you?

Q5: Would you say the slaughtering of animals in Sweden fits the definition of the word humane?

Q6: What if instead of cows/pigs there were dogs and cats? Why do you think society gets so upset about the mistreatment of dogs or cats but when it comes to farmed animals the majority of people look away?

Q7: Have you noticed any changes in the dietary patterns of you and/or other students the longer you've been enrolled in the program?

Q8: What keeps you from stopping eating meat?

Q9: So let's say in a world where plant-based products are everywhere, as well as cheap and full of protein, would that make any difference to you?

Q10: What about your classmates? What is stopping them from not eating meat?

Q11:I noticed most of the participants that responded to the survey were female. Is it because most of the students are in general female in your department?

Q12: Do you have any broad idea regarding the dietary preferences of the rest of the guys in your program?

#### Appendix 3. Consent form



#### CONSENT FORM

Study title: Dietary preferences of veterinary students, Sweden Researcher name: Lydia Soilemezi

Please initial the box(es) if you agree with the statement(s):

I understand the background information pertaining to this research project and have had the opportunity to ask questions.

I agree to take part in this research project, for my voice to be recorded whilst taking part and agree for my data to be anonymously used for the purpose of this study.

I understand my participation is voluntary and I may withdraw myself and any collected data at any time without my legal rights being affected.

I understand that this data is collected for use as part of an academic study which is not commercial. The resulting thesis will be available on a public website managed by Lund University library.

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#### Data Protection

I understand that information collected about me during my participation in this study will be stored on a password protected computer and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

Name of participant (print name).....

Signature of participant.....

Date.....