

# **You Eat What You Are: The Role of Identities and Socioeconomic Factors in Meat Consumption and Acceptance of Protein Alternatives**

By

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## **Abstract**

The consumption of meat has serious implications for environmental issues. It contributes to carbon emissions, soil degradation, and habitation loss. Meat consumption also has negative impacts on health, and animal ethics. Despite these issues, meat is still the preferred source of protein for many, and this reliance on meat will likely lead to food security issues in the future. Meat is not only a source of sustenance for some but is strongly connected to their identity. Due to this connection, meat remains an important part of diet, regardless of price increase and availability of protein alternatives. In order to reduce meat consumption, connections between meat consumption and identity must be understood. Using the Social Identity Theory, this research investigates how identities are connected to meat consumption, how they interact with different motivations for vegetarianism, how they can change to include vegetarianism, and how they resist protein alternatives. One-on-one interviews were conducted with a mixture of vegetarians and omnivores, followed by an online anonymous survey focusing on masculine, ethnic, and socioeconomic identities. Results indicate that these identities interact with both the three core concerns for vegetarianism and the perceptions of protein alternatives in different ways. The implications of this research suggest that identities can assist in efforts to reduce meat consumption, but this depends on the identities.

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## Chapter 1: Impacts of Meat on the World

“Andy: Trust me. They have one that’s called the meat tornado. Literally killed a guy last year.

Ron: You had me at meat tornado” (Hiscock, & Stanzier, 2019, 00:09:22)

### Introduction

The food that we eat and how it is produced is a significant factor influencing climate change (Carlsson-Kanyama, 1998; Food and Agriculture Organization of the United Nations, FAO, 2013; Garnett, 2009). While there is a growing amount of literature regarding the impacts of meat, this topic receives much less attention than other factors such as land transport (Graham, & Abrahamse, 2017; Laestadius, Neff, Barry, & Frattaroli, 2014). Not only is food production having adverse effects on the climate, climate change is having a negative impact on food production capabilities (Springmann et al, 2016). Meat and animal products contribute a disproportionate amount to negative climate change effects, and the production of meat also has negative ethical and health implications (Aveyard et al, 2018).

Animal products, particularly meat, are the main source of protein in the Western Hemisphere and increasingly so in Asian nations (De Boer, Schösler, & Aiking, 2014; De Boer, Schösler, & Aiking, 2017; Grigg, 1995; Schösler, De Boer, & Boersema, 2012). The reliance on animal protein is increasing, especially in developing countries that did not previously rely on animal protein (Sans, & Combris, 2015). Increasing GDP is often associated with increases in meat consumption (Grigg, 1995; Latvala et al, 2012; Sans, & Combris, 2015), as meat, which was previously a luxury item, becomes more affordable. This escalates environmental pressure as meat demand increases. Current estimates suggest that global demand for meat will exceed production capabilities by 2050 (Garnett, 2009; Leahy, Lyons, & Tol, 2011). As meat prices increase, those in lower socioeconomic situations will be impacted more than those who are well-off, creating problems for those with dependencies on animal-based protein (Gregory, Ingram, & Brklacich, 2005; Revell, 2015).

Despite concerns about meat consumption, there is no indication that meat production will decrease, even though alternative protein sources are available (Leahy, Lyons, & Tol, 2010). The awareness of the impacts of meat consumption is increasing, and there are growing trends of vegetarianism, veganism, and other meatless diets in Western countries in efforts to decrease meat consumption (Sans, & Combris, 2015). However, the amount of people becoming veg\*etarian<sup>1</sup> by choice is not making up for the population growth and increased meat consumption in developing nations (Leahy, Lyons, & Tol, 2010; Sans, & Combris, 2015). Companies are investing in meat alternatives, such as lab grown meat or products that simulate meat (Dekkers, Boom, & Van Der Goot, 2018; Hocquette et al. 2015). Sustainable protein sources such as insects are common outside the Western Hemisphere but are yet to be accepted by some Western Hemisphere taste palates (Shelomi, 2016). Another factor that is often overlooked is the protein content of vegetables such as peas and lentils, which contain higher quantities of protein per grams of fat than most types of meat and for only a fraction of the greenhouse gas emissions (Carlsson-Kanyama, 1998). Despite the existence of these alternatives, meat is still the mainstream preferred source of protein.

This chapter will explain the processes by which meat production affects climate change. I will also cover the ethical implications of meat consumption as well as health risks and concerns. These three concerns, which will be referred to in this thesis as the three core factors, are important to this study as they are commonly discussed in literature about meat reduction and veg\*etarianism (Arcari 2017; Aveyard et al, 2018; Clark & Bogdan, 2019; Ruby 2012). Finally, I will look at meat alternatives that already exist and those that are being developed.

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<sup>1</sup> Although vegans, vegetarians, and other groups that restrict red meat consumption form distinct and separate groups, the current research will use the terms “veg\*etarian” and “veg\*etarianism” to refer generally to all of these groups.

## Environmental Impact of meat consumption

The first of the three core factors under discussion in this thesis is the environmental impact of meat consumption, and what is known as the Animal Industrial Complex (AIC). The AIC refers to the industry involved in the raising of and processing of animals for generating products for consumption such as meat, dairy, or clothing (Arcari, 2007).

From the beginning of the agricultural process, the effects of meat production on the environment are immediate. Roughly three quarters of farming land is used for agricultural land and livestock accounts for 20 percent of the current terrestrial biomass (Arcari, 2017). The land used for farming requires large areas of forest to be cleared that could be used for conservation purposes and carbon dioxide sequestration, thus exacerbating the strain on ecosystems and assisting with the endangerment of rare species (Machovina, Feeley, & Ripple, 2015). Land use for raising livestock is also extended by the need to provide feed, often in the form of soy or grain (Elferink, & Nonhebel, 2007). While some livestock are more efficient at converting grain to energy, the amount of energy wasted through energy conversion increases the environmental costs for rearing meat.

Livestock accounts for roughly 18 percent of global greenhouse gas emissions, including carbon dioxide and methane (Garnett, 2009; Montzka, Dlugokencky, & Butler, 2011). Larger animals such as cows and pigs produce greenhouse gases through their regular biological processes such as digestion (Philippe, & Nicks, 2015). Intensification of the AIC means that more of these animals will be bred, increasing the greenhouse gas emissions from livestock. Growing crops instead of meat has several benefits, such as the absorption of greenhouse gases and higher yield of food (Pawłowski, Pawłowska, & Pawłowski, 2017). In terms of protein, Carlsson-Kanyama (1998) showed that many vegetables, such as peas, lentils, and broccoli, can still provide adequate protein.

Beyond land use and livestock greenhouse gas emissions, meat production has a negative impact on waterways. Runoff from animal waste and fertilizers entering streams and rivers, display the negative impact the AIC has had on the waterways in Aotearoa New

Zealand (Smith, Western, & Hannah, 2013). This has gained more attention in media lately as many waterholes in Aotearoa New Zealand are no longer safe to swim in due to the impacts of dairy farming (Smith, Western, & Hannah, 2013; Wiles, 2018).

The environmental impacts of the AIC do not finish at the farm. Garnett (2009) details the greenhouse gas emissions caused by the transportation of livestock, extra storage from freeze works, slaughter process, and waste from shorter shelf life. All factors of the meat production process add up to have significant negative environmental impacts.

### Ethical impact of meat consumption

The ethical impact of meat consumption is another theme which will be discussed throughout this thesis as it is prominent theme in the academic literature. Each year 75 billion animals are killed for meat (Arcari, 2017). This does not account for the conditions these animals live in and the animals that die as an indirect result of products that they or their ecosystems are used for. The ethical considerations of meat consumption in this context refers to the animal welfare and ethics of killing animals for meat or other animal products.

Throughout history, groups have maintained dominance over others using social hierarchies and discourses that justify continued oppression and exploitation. Adams (1991) argues that a similar paradigm can be witnessed regarding the treatment of animals. For example, evolutionary discourses have been used as a justification for meat consumption by suggesting that men have evolved to be hunters and thus require meat (Piazza et al., 2015). Piazza et al. (2015) argue that the same discourses used to justify slavery and sexism are also found in discourses used to justify meat consumption. These same discourses justify women's position in society by suggesting that women have evolved to be carers and gatherers. These discourses rely on ideas of social hierarchies and essentialist thinking as the basis of belief in man's superiority (Dhont, Hodson, & Leite, 2016). This form of thinking ignores the roles of societal norms and pressures that reinforce them.

A lack of measurable intelligence in comparison to humans is another way in which human dominance of animals has been justified. In extreme cases, perceptions of lack of animal intelligence has generated arguments that animals do not feel emotions or even possess sentience, justifying treating them as nothing but food (Piazza et al., 2015). Research in the area of animal intelligence has discredited these arguments as arbitrary positivistic measures, such as the mirror test, where animals are expected to recognise their reflection in a mirror to test sentience (Matzel, & Kolata, 2010; Vint, 2010). Research has shown that some animals have greater memory retention and problem-solving skills than humans (Matzel, & Kolata, 2010). Additionally, evidence that animals display emotions exists - such as anecdotal evidence of dairy cows showing signs of distress as farmers come to collect their calves, and animals displaying long-term psychological effects after being released from factory farming (Anomaly, 2015). To keep up with demands for meat and increase profits, the AIC relies on methods, such as factory farming, which ignore the psychological needs of the animals (Balmford, et al, 2018). The suffering and death of individual animals is a factor in the ethical implications of meat consumption.

The ethical considerations of meat consumption go beyond the death and welfare of individual animals. The land used for agriculture is often land that has replaced forest or other ecosystems (Elferink, & Nonhebel, 2007; Machovina et al., 2015). From a conservation perspective there are large amounts of land that were previously used to support unique creatures and ecosystems that are now dying out. While this could be considered an environmental impact of meat consumption, the focus on conservation is distinguished from the overall environmental impacts. Ethical impacts of meat consumption are not limited to the impacts on animals.

The ethical impacts of meat consumption concerns the use of animals for food and other products. Ethical concerns include not only the death of these animals but also their treatment by the AIC as a commodity, while ignoring the impacts on them as sentient beings.

## Health impact of meat consumption

The third factor that this thesis research focuses on is the health impact of meat consumption, identified by Ruby (2012) as a common theme throughout literature on veg\*etarianism and meat consumption.

There are many health risks associated with eating meat. Many studies have found connections between higher meat consumption and several types of cancer, such as oesophageal cancer and colon cancer (Lippi, Mattiuzzi, & Cervellin, 2015). Red meat is also associated with higher fat content and has been identified as a contributing factor to the rise in obesity in Aotearoa New Zealand (Lal, Moodie, Ashton, Siahpush, & Swinburn, 2012; Wang, & Beydoun, 2009).

From a health perspective, meat offers some benefits and requires some planning to remove entirely (Rogerson, 2017). Meat is a large source of protein and other nutrients such as iron and vitamin B12 (Givens, 2010; Lentz, Connelly, Miroso, & Jowett, 2018; Rogerson, 2017). A study by Bohm, Lindblom, Åbacka, Bengs, and Hörnell, (2016) found that many omnivores were worried about becoming vegetarian due to the concern that they would no longer be able to obtain the necessary nutrition. However, vegetables can provide these nutrients. Carlsson-Kanyama (1998) found that vegetables, such as peas and lentils, provide higher quantities of protein than meat for much less fat. With appropriate education, veg\*etarians can gain all the necessary nutrients in adequate quantities (Bohm et al., 2016; Rogerson, 2017). Whether for basic nutrition or for particular health goals, veg\*etarianism is able to meet requirements.

Another factor to consider when discussing the benefits of meat consumption is the type of meat being consumed. While lean red meat is healthier, it is also rarer and therefore more expensive. This means that the cheaper cuts of meat, which are higher in fat content, are more readily available (Guarnaccia, Vivar, Bellows, & Alcaraz, 2012). For those of lower socioeconomic status (SES) to be able to afford meat-based protein, they must rely on the cheaper cuts of meat, exacerbating health-related issues for this at-risk demographic (Lal et al., 2012). Cheaper cuts of meat are also more likely to be highly

processed or contain added hormones and anti-biotics which are linked to increased health concerns (Anomaly, 2015).

Health in this context extends to physical appearance, since it includes weight and muscle development. As already mentioned, cheaper cuts of meat are higher in fat and contribute to obesity, and weight loss is a common motivator for reducing meat intake (Arcari, 2017). Protein intake through meat consumption is perceived as important for those trying to develop muscle bulk- typically men. Again, the problem is the assumption that meat is the only significant source of protein. Vegan athletes such as Mike Tyson or David Haye show that individuals can achieve desired muscle mass from plant-based diets (Arcari, 2017; Rogerson, 2017). As far back as ancient Rome, athletes such as the gladiators likely had vegetarian diets despite the high energy requirement of their lifestyles (Longo, Spiezia, Maffulli, & Denaro, 2008). With balanced intake, plant-based diets have been shown to effectively provide adequate nutrition without the health risks posed by meat consumption.

### The three core factors

The literature to date indicates that these three core factors (environmental, ethical and health) are important motivations for veg\*etarian diets. Historically, veg\*etarianism has been rooted in ethical concerns (Maurer, 2002; Null, & Feldman, 2011), and these ethical concerns have been a major driver for veg\*etarianism and other animal welfare activism efforts (Vigors, 2018). Recent documentaries such as “Cowspiracy” (Anderson & Kuhn, 2014), while still focusing on ethical concerns, show a greater focus on environmental concerns. Other documentaries such as “The Game Changers” (Cameron et al., 2019) focus almost entirely on health concerns.

There is currently a lack of literature regarding how much overlap or separation there is of these concerns amongst veg\*etarians. While some studies such as Maurer (2002) treat health vegetarians and ethical vegetarians as separate groups, environmental veg\*etarians are not included. The current research will investigate whether these three



core factors are related to separate groups of vegetarians and the relationship between these concerns.

## Protein alternatives

One option to decrease reliance on meat is via an increased consumption of protein alternatives. Protein alternatives, known also as meat alternatives or fake meats, are foods that substitute for meat in meals. There is a variety of options available and more complex options are being developed. Although they address some of the concerns of meat consumption, they are not widely accepted in some societies.

Protein alternatives already exist. As mentioned, many vegetables such as peas and lentils are high in protein content and contain many of the other nutrients required for a healthy diet (Carlsson-Kanyama, 1998). Insects are another source of healthy and sustainable protein, although their consumption does not address ethical issues (Shelomi, 2016). Products such as Quorn and seitan address all three core factors, as well as being appealing in terms of flavour. Previous literature has found that the taste of meat is an important factor that omnivores consider (Piazza et al. 2015; Ruby, 2012), so the taste of meat alternatives must be considered.

Recently the idea of lab grown meat has gained attention (Hocquette et al., 2015; Zaraska, 2013). This is meat that is grown from cell cultures in labs that mimic meat; in theory it can be controlled for nutritional value and will match the taste of meat and texture. This technology is still in early development, but it is close, and once the methods for producing lab grown meats have been perfected it can be produced en masse for a fraction of the cost of meat (Dekkers et al., 2018; Hocquette, et al, 2015; Orzechowski, 2015). Currently the costs associated with lab grown meats are very high, because the technology is still being developed and the infrastructure, such as production space, is not in place. This requires significant investment before mainstream production at a low cost is possible.

Despite the impacts of meat consumption, meat remains a significant source of protein, especially in developed countries. Although protein alternatives address many of

the issues of meat consumption, they are still not readily accepted in the mainstream.

Hocquette et al. (2015), found that although people believed that lab grown meat would be beneficial for the environment, many did not see themselves eating it.

Due to the potential benefits of protein alternatives, understanding their public perception is crucial to understanding the role they will play. Research on how these alternatives are perceived by different groups as well as how they relate to the three core factors is currently lacking. The current research will investigate differences in perceptions of protein alternatives.

## Conclusions

Meat production is a large contributor to climate change. From greenhouse gas emissions to land use, it is a source of environmental concern. Concerns about meat consumption also extend to ethical concerns and health concerns. Even though there are alternatives, meat continues to be the main source of protein for the Western world because meat, and food in general, is more than just sustenance for people. What we eat affects others' perceptions of us and how we perceive ourselves, and it has connections to our identity which will be explored in the next chapter.

## Chapter 2: Social Identity Theory framework and connections to meat

“Narrator: Food has always played a vital role in life's rituals. The breaking of the bread, the last meal of the condemned man, and now...this meal.” (Adler, White, & Sharman, 1975, 01:03:37)

### Introduction

Meat, and food in general, has a strong connection to identity. Different types of food are connected to ethnic identities, gender identities, religious identities, and socioeconomic identities (Ashforth, & Mael, 1989; Fischler, 1988; Ruby, & Heine, 2011). How these identities are formed depends on a large range of factors and people can have multiple identities which overlap and change over time and between contexts. Identities influence our values as well. Our social self and personal self-identity, which impact implicit and explicit beliefs, link identity and behaviour (De Boer et al., 2017).

Identity is therefore an important factor to investigate when looking at environmental behaviours and meat consumption. This chapter will discuss how identities are constructed, how they relate to food and meat consumption, and how meat consumption is policed through social norms and institutions. Finally, we will focus on an Aotearoa New Zealand context.

### Conceptual Framework

This research will be looking at identity through Social Identity Theory (Ashforth, & Mael, 1989; Tajfel, 1979). Social Identity Theory views identity as a result of the groups that people are a part of. The perceived characteristics, such as norms and values, of groups that people subscribe to inform the individual of their identity, which in turn affects self-perceptions of worth. When people see themselves as members of specific groups, this affects their behaviours, as people attempt to adhere to the characteristics of

that group to improve or strengthen their perception of self-worth. A group subscription can be based on anything that distinguishes people, though in some cases hegemonic group identities are enforced upon people, such as gender identities, ethnic groups, or social class.

The Social Identity Theory explains intergroup conflict, as people want to improve their views of self-worth through the groups they affiliate with (Ashforth, & Mael, 1989). Ashforth and Mael argue that conflict occurs due to processes involved with the construction of in-groups, out-groups, and group comparison. Through viewing their own group, the in-group, as superior to another group, the out-group, an individual's perception of self-worth is improved. In cases where other groups conflict with the characteristics of the individual's group, this conflicting identity may be viewed as a threat and treated with hostility (Ashforth, & Mael, 1989).

Individuals belong to multiple groups, giving an individual access to multiple identities that can be used for self-definition (Dowling, & McKinnon, 2014). For example, someone can be a vegan, Pākehā, male, and a Victoria University of Wellington student. People hierarchize their identities according to their perceived importance of that aspect of their overall identity. Depending on the context or perceived importance of their groups, people change which group they identify with most strongly. Yilmaz and Ilhan (2017) found that although Turkish teachers had a multitude of identities to identify with, such as religious or professional, they first and foremost identified with their moral identity - an identity distinguished by having similar moral codes. This was followed by professional identities, political identities, ethnic identities, religious identities and lastly gender identities.

Although people identify with certain identities more strongly than others, the salience of these identities change depending on contexts. In certain situations, such as performing tasks stereotypically associated with certain groups, identities of a lower hierarchy might be drawn to the forefront and made more salient (Pavlova, Weber, Simoes, & Sokolov, 2014; Steele, & Nalini, 2005). Zinn (2017) found that Swiss policies to place students in schools depending on their ethnic heritage reinforced their ethnic

identities. It is also easier to define someone by one aspect of their person at a time (Kertzer, 2017). Immigrants are often seen as their ethnic identity, while children are easier to define as their gender.

By applying the Social Identity Theory to the current research, I will investigate how meat consumption is linked to certain identities and how the processes of identity formation and intergroup conflict explains some of the behaviours that prevent groups from adopting vegetarian diets or protein alternatives. I will also explain differences in the three core factors and how these motivations are linked to different identities.

To distinguish between the terms “group” and “identity” in the current research, group refers to the group itself as defined by a certain characteristic, while identity refers to that group along with its hegemonic ideals, values, and norms.

### Identity as a social construct

Society influences how identities are constructed. While biological or socioeconomic factors impact which groups someone may belong to, societal factors influence how their identities manifest (Dowling, & McKinnon, 2014). The process through which identities are constructed changes how they are interpreted and how members will “do” that identity (Foucault, 1990; Kertzer, 2017; Tarver, 2011). Identities exist within the contexts of the political and societal spheres that create them; hence they are social constructs. These social constructions allow for normalisation of hegemonic ways of “doing” an identity, which is reinforced by the delineation of the groups that make them.

As identities are socially constructed, different interpretations of a group’s identity may exist across different societies (Berkowitz, Manohar, & Tinkler, 2010). For example, some masculine identities focus on physical strength and showing no weakness, whereas others focus on rational behaviour and well-groomed presentation. Foucault’s (1990) work and the rise of post positivism, began to investigate the role of social constructions. Social constructions allowed for understandings of identity as malleable, questioning things like traditional gender roles rather than relying on positivist ideas such as essentialism.

Essentialism ignores societal influences on identities, and instead relies on biological discourses to explain group behaviours. For example, essentialist arguments justify the behaviours of men by suggesting that they evolved to be hunters and rational tactical thinkers as providers, while women evolved to be emotional and nurturing as child bearers (England, 2010). This essentialist framework binds people and animals to a hierarchical structure, limiting any options for mobility or difference. Mandalaywala, Amodio, and Rhodes (2018, p. 461) said the following about essentialism: “We propose that essentialism leads people to believe that social categories reflect objective structures in nature, and thus that observed social hierarchies reflect objective differences in status or value”. To question essentialist arguments thus means questioning social orders and hierarchies. For the social hierarchy to be valid everybody must play their part, and individuals who do not fit in to their role present a threat to these hierarchies.

These essentialist arguments assist in making identities rigid. The norms of groups help create groups’ identities, but essentialist perspectives reinforce these norms as necessary aspects that must be adhered to (Berard, 2008; Mandalaywala et al., 2018). Once a group is distinguished and an identity is established it becomes difficult for individuals to change that identity. Anyone that does not conform to these norms faces pressure from those that perceive non-conformity as a threat to the integrity of the identity. The pressure to conform makes essentialist attitudes a self-fulfilling prophecy. Pressure comes not only from other individuals within the group, but also from members of other groups who feel the need to maintain social hierarchies.

In some cases, identities are created in opposition to other identities, creating the perception that they are dichotomous opposites (Ashforth, & Mael, 1989; Sumpter, 2015). For example, masculine identities are often perceived as a dichotomous opposite of feminine identities. Biological discourses position males and females as opposites, using genitalia as the distinguishing factor to assign a group. Even though behaviour and norms could be practiced by either group, assigning them to one group means that the other group loses access. In some cases, groups are constructed as opposites but because one group is the mainstream and the other is the minority, the mainstream in-group becomes viewed as the default while the out-group becomes abnormal (Pyke, 2000). For example,

omnivores are often perceived as the mainstream and veg\*etarians as a deviance (De Boer et al., 2017). By attaching feelings of self-worth to group identities, individuals strive to avoid doing anything that could be perceived as deviant behaviour.

Dichotomies can be a source of intergroup conflict (Ashforth, & Mael, 1989). By positioning two groups as opposites, positive sentiment towards one group depends on comparison to the opposite group, especially for those who view the world in hierarchical structures (Dhont & Hodson, 2014). Similarly, when one group is perceived to be the norm, it can justify complete disregard of the other group (Pyke, 2000). In-group and out-group comparisons drive intergroup conflicts when an individual attaches perceptions of self-worth to their in-groups.

The processes through which identities are constructed, changed, and maintained are used in the current research to explain meat consumption. Even though omnivores form a group distinguished from veg\*etarians, it is not necessarily viewed as a group which people identify with. Instead, meat consumption has a strong connection with other identities which help maintain it.

## Food and identity

### Ethnicity

Food is an important component of socialising, and across a wide range of cultures the act of eating is often associated with social tradition (Gunkel, 2016). For example, religious events such as Muslim Ramadan is associated with fasting, while Jewish Pesach is associated with abstaining from leavened bread. American Thanksgiving is celebrated with roast turkey and Christmas with roast ham. The importance of food in society goes far beyond mere sustenance, as the act of eating specific foods is linked to our social world and culture (Fischler, 1988). While some foods and meals, such as breakfast, carry much less social weight behind them, others, such as dinner, are often a social affair performed by social groups. The acts of preparing food together and finding time to eat together helps to link food to closer social groups.

Food is also connected to wider social groups and to national, gender, socioeconomic, and cultural identities. Food is strongly connected to cultural or national identities, and most nations have a national dish or style of food. Nationalities can be used to describe a style of food when people are deciding what to eat, such as Italian or Indian (Fischler, 1988). Alternatively, members of nationalities can be referred to by their national dishes, often derogatively, such as calling someone from France a Frog, or from Germany a Kraut (Fischler, 1988; Guarnaccia et al., 2012).

As cultures develop, typical diets develop alongside them. Vegetables and animals that were available more readily became incorporated into national dishes or seasonal dishes. For example, steaks are common with the Gauchos, who are cattle farmers in Argentina (Delessio-Parson, 2017). Similarly, guinea pigs are commonly eaten in Peru where they are native (Prada-Trigo, 2018). As popularity of these dishes increased, infrastructure was established to allow for mass production, cementing the connection between the food and cultural identity (Fischler, 1988). Globalisation has allowed for greater access to wider varieties of foods but despite this, food remains attached to cultures and nations.



People become accustomed to foods, which influences which foods they find acceptable to eat (Shelomi, 2016). For example, while insects are a common food in some parts of the world, the idea of eating insects is unfathomable in others. Pre-existing ideas of what is acceptable can create barriers to trying unfamiliar foods. While these psychological barriers can be overcome and new foods can be introduced, the feelings of repulsion towards unfamiliar foods make this unlikely. Clark and Bogdan (2019) found that a similar process applied to protein alternatives. Initial barriers against alternatives were dropped after tasting them, so participants who had tried them before were more likely to accept them.

In some cases, connections between foods and ethnicities have changed over time. Prior to the arrival of Europeans, many Pacific nations lived on pescatarian diets (Hughes, & Marks, 2010). Europeans brought with them livestock - ironically to maintain connection to their own identities - which then became integral to Pasifika identities (Hughes, & Marks, 2010). In other cases, immigrants have adapted recipes and cooking techniques from their homeland to the foods available in their new homes (Guarnaccia et al., 2012; Tucker, 2013).

The connection between food and cultural identities is reinforced through perceptions of acceptability, learned cooking methods, and availability of foods, but it is also maintained through the same processes of identity construction (Fischler, 1988). In situations where types of food are attached to an identity, maintaining that connection to food becomes part of maintaining that identity. Even though connections between food and ethnicities can change over time, they will likely meet resistance, which has implications for identities that have strong connections to meat.

## Masculinity

Masculine identities have strong connections to meat consumption. Due to this connection and the way in which gender identity pervades many aspects of our lives, these are important identities to consider when researching meat consumption.

As Foucault (1990, p. 156) said, “it is through sex . . . that each individual has to pass in order to have access to his own intelligibility ... to the whole of his body... to his identity”. Whether it is an important part of someone’s identity or something that is forced upon them, gender dominates lives and dictates many values and behaviours (Isacco, 2015). Through feminist, postpositivist, and social constructionist lenses, gender has come to be understood as a social construction, separate from biological imperatives that police it (Foucault, 1990; Isacco, 2015; Mycek, 2018; Ruby, 2012).

As a social construction, gender identities have been created in many variations. The classical Greek idea of male perfection was a well-toned man who pondered the universe, whereas modern day masculinities range from the more traditional rugged untamed man to the well-groomed suit wearer (Willott, & Lyons, 2012). Masculinity is constantly being reinvented. However, because of the perceived inescapability of gender, it is difficult for an individual to escape the pressures of conforming to gender roles (Foucault, 1990). For some men, there is no effort involved in conforming to these gender roles as their masculinity is a source of positive self-perception. Additionally, males typically occupy dominant positions in society (Howson, 2006). Conforming is made easier by the availability of a myriad of different masculine identities. Even though there are multiple masculinities, there are underlying ideals that set the mould; this is hegemonic masculinity.

Masculinity is often constructed as a dichotomous opposite of femininity, which is one of the central aspects of hegemonic masculinity (Oransky, & Marecek, 2009; Sumpter, 2015; Wenzlaff, Briken, & Dekker, 2018). Hegemonic masculinity provides a standard on which other masculinities are based, and although certain aspects may be reinvented, the foundations remain the same. This means that there are some commonalities amongst masculine identities, such as a focus on power and dominance. As the masculinity/femininity dichotomy provides the foundations for hegemonic masculinity, it reinforces essentialist views of gender that ultimately set the standards for which men can measure their success in the gender order (Howson, 2006). Conversely, Willott and Lyons (2012), argue that some masculinities are established in opposition to each other rather than to femininity, yet they are still bound to ideals of hegemonic masculinity. Oransky

and Marecek (2009) and Swenson (2009) argue that these dichotomous views of gender contributes to the gendering of meat consumption.

Multiple authors agree that meat consumption is particularly gendered (Delessio-Parson, 2017; Mycek, 2018; Rimal, 2002; Ruby, 2012; Ruby, & Heine, 2011; Sumpter, 2015). By evoking images of men as hunters and providers alongside women as carers and gatherers, meat becomes more associated with men and salads with women. As masculinity has been reinvented in modernity, images of men hunting, and taming fire has transformed into men adorning work clothes and providing income. Fischler (1988) states that food transposes certain values. Red meat transposes values such as power and dominance, while salads transpose more feminine values. In one study it was found that changing someone's description from omnivore to vegetarian significantly changed perceptions of their masculinity (Sumpter 2015). Conversely, Turner, Ferguson, Craig, Jeffries, and Beaton (2013), offered an explanation that men are defined more by what they eat while women are defined by what they do not eat. Turner et al (2013) explain that women can still maintain connections to meat without losing perceived femininity, yet men cannot avoid being perceived as less masculine when abstaining from meat consumption. Meat consumption remains particularly gendered due to essentialist arguments and social constructions of masculinity.

Other essentialist arguments about meat and nutrition reinforces the connection between meat consumption and masculinity. For example, meat is a major source of protein, which is important for muscle bulk. Ideals of masculinity often put emphasis on the men's role as hunters, providers, or warriors so they require this extra muscle mass. Therefore, men theoretically require more meat than women to fulfil their protein requirements (Piazza et al., 2015). These arguments extend to suggest that men have evolved to be leaders and must appear dominant, which can also be practiced through meat consumption as it shows dominance over other animals. As Carlsson-Kanyama (1998) indicated, many vegetables contain protein and it is possible to fulfil protein requirements from vegetables. Similarly, the AIC ensures that hunting is not a requirement for accessing meat. Many of these essentialised arguments hold little validity once analysed.

As a social construction, masculinity can be redefined to include veg\*etarian diets, however rates of veg\*etarianism are consistently lower amongst men (Delessio-Parson, 2017; Mycek, 2018; Rimal, 2002; Ruby, 2012; Sumpter, 2015). Mycek (2018) and Sumpter (2015) argue that since masculine identities must defend themselves from being perceived as feminine, veg\*etarian men must transform the act of eating vegetables into an act of masculinity. Male interviewees in Mycek's study brought protein alternatives to barbeques so they could still participate in acts of masculinity, such as drinking beer around a fire pit. In other cases, they justified veg\*etarianism with discourses of hegemonic masculinity such as men being the rational minded ones or that men have a duty to lead. Both authors noted that men who redefined masculinity to incorporate veg\*etarianism were often in positions of privilege, such as occupying a higher SES, that allowed them to redefine their masculinity rather than conform to hegemonic ideals. While this shows that masculine identities can incorporate veg\*etarian diets, a mainstream masculine identity that incorporates vegetarianism would be difficult as it is only available to a select few such as those of a higher SES.

### Veg\*etarianism as an identity

By not consuming meat, one becomes a member of a new group - veg\*etarians. Ruby (2012) states that there is some inconsistency with the definitions of vegetarianism when it comes to self-identifying as vegetarian, and sometimes vegetarian can extend to people who only refrain from eating red meat. Although this research uses the single term veg\*etarian to refer to those who abstain from meat consumption, it includes several separate identities including vegans and pescatarians. As conceptualised by Social Identity Theory (Ashforth, & Mael, 1989), veg\*etarians are a distinguishable group that forms a distinct identity.

Globally there are predicted to be about 1.5 billion vegetarians, however only 75 million of these are vegetarian by choice (Leahy et al., 2010). Most veg\*etarians live in developing parts of the world and have no access to meat due to cost or availability, and in these cases veg\*etarianism is less of an identity and more of a result of SES. However,

in the developed world, meat is more affordable and more readily available, meaning that abstaining from its consumption is often a choice (Guarnaccia et al., 2012).

For the 75 million veg\*etarians, three core factors are consistently cited as the motivations for choosing not to eat meat (Ruby, 2012). While there are other motivations for becoming veg\*etarian, such as religion, they are mostly based on ethical, environmental, or health concerns. Ethics is consistently regarded as the main concern (Ruby, 2012) and ethical concerns have historically been the basis for veg\*etarianism in the West (Maurer, 2002). Although these motivations are separate, there is some overlap.

Although initial motivation to become veg\*etarian might be based on one of the three core factors, Ruby (2012) found that over time, concern for the other factors also increased. This convergence is similar to the findings of Evans and Abrahamse (2009), who stated that it is common for people to immerse themselves in sustainable lifestyles and consequently learn more about the benefits of these lifestyles. For example, someone may initially become veg\*etarian for ethical reasons but over time their environmental and health concerns will likely also increase. The processes of Social Identity Theory can be used to explain why veg\*etarians who identify with a veg\*etarian identity will experience a convergence of the three core factors. As veg\*etarians learn more about veg\*etarianism and socialise within these groups, they will interact with the other motivations which will be integrated into their veg\*etarian identity. However, this outcome relies on veg\*etarianism being a single identity, and there is currently little research that investigates veg\*etarianism as either a single identity or three separate identities.

Veg\*etarian identity is dichotomously opposed to mainstream omnivore identities. As De Boer et al. (2017, p. 388) say, 'being a vegetarian is an identity category that is socially marked and evaluated as distinct from conventional behaviour, whereas being a non-vegetarian is unmarked and socially taken for granted'. Because veg\*etarians are an out-group distinct from the mainstream, the veg\*etarian identity is made more salient for veg\*etarians and so becomes a stronger factor of their overall identity (Rosenfeld, & Burrow, 2017). Omnivores still connect meat consumption to their identity, though the

mainstream status of this identity means it may not be as salient. However, veg\*etarianism can be perceived as a threat to mainstream omnivore identities, and therefore must be defended against (Piazza et al, 2015). Again, Social Identity Theory can be used to explain these in-group and out-group behaviours.

### Aotearoa New Zealand identity

Aotearoa New Zealand is a place of interest for studies about veg\*etarianism. Meat consumption in Aotearoa is still relatively high per capita compared to other countries in the Organisation for Economic Co-operation and Development (OECD, 2019). There is a large emphasis on meat in Aotearoa New Zealand's past (Tucker, 2013; Willott, & Lyons, 2012; Woods, 2012) and meat consumption is ingrained in our culture. A recent example of this was deputy Prime minister Winston Peters' response to Air New Zealand offering protein alternative options for in-flight meals (Hutching, 2018). Winston Peters claimed that the airline owes it to the farming industry to promote red meat and that he was "utterly opposed to fake beef". Meat and agriculture are an important part of the economy in Aotearoa New Zealand and the dairy industry holds sway over public opinions, especially during election years (Tucker, 2013). Conversely, Aotearoa New Zealand also has a "clean green" identity (Dew, 1999), which facilitates pro-environmental behaviours and values. A 2015 survey by Roy Morgan (2016) found that 10 percent of respondents in Aotearoa New Zealand identified as vegetarian, increasing from 8 percent in 2011. This increase was particularly prevalent for male respondents. Unfortunately, the author provides no explanation for this increase. The high meat consumption, the role of the AIC, and the increasing rates of veg\*etarianism make Aotearoa New Zealand an ideal place to study veg\*etarianism and identities.

## Conclusion

Ethnicity and masculinity are both identities that have a strong connection to food, and therefore they will feature heavily in the current research. Studies by Mycek (2018) and Sumpter (2015) focus heavily on masculinity and how it could be redefined to incorporate veg\*etarianism. However, they failed to look at the roles other identities play in explaining veg\*etarianism amongst masculine identities. Some authors such as Dowling and McKinnon (2014) argue that we have access to multiple identities at any point. These other identities and group subscriptions can influence dietary choices. For example, despite being a country that maintains traditional ideals of hegemonic masculinity, India has the highest rates of Veg\*etarianism in the world, which can be attributed to the prevalence of religious Hindu identities (Null, & Feldman, 2011).

Another aspect of consideration is the role of the three core factors and how they interact with different identities. Masculinity is positively correlated with anti-environmental factors, such as Social Dominance Orientation, where people see the world in terms of social hierarchies (Milfont, & Sibley, 2016). This relationship could mean that current hegemonic masculinities are unlikely to incorporate vegetarian diets for ethical or environmental reasons, but emphasis on muscle growth could mean that health concerns are a better motivation for veg\*etarianism. Currently there is a lack of research investigating how different identities interact with the different factors that motivate veg\*etarianism and meat reduction. The current research will investigate how key identities, such as masculine identities, relate to the three core factors.

Whether identity is societally mandated or personally constructed, it guides our behaviours and perceptions of those around us. People gain access to multiple identities through group subscription. If a group can be distinguished, an identity can be constructed, meaning that individuals can access multiple identities at any moment. However, these identities are not of equally perceived importance, so they are hierarchically organised. Comparisons between in-groups and out-groups also creates hierarchies that can lead to intergroup conflicts. Since meat consumption is strongly attached to some identities, such as masculinity or ethnicity, these identities will likely resist attempts to reduce meat consumption.

## Chapter 3: Socio-economic status and background.

“... “My mum always told me money can’t buy you happiness, sir”

Yes, Vimes thought, so did my ma, but she was glad enough when I gave her my first wages, because it meant we could have a meal with meat in it, even if we didn’t know what kind of meat it was.” (Pratchett, 2011, p.117).

### Introduction

As the main source of protein for Aotearoa New Zealand, and many other parts of the world, meat is very important with regard to food security. As the price of meat is expected to increase over the coming decades, a major source of protein for many people will become inaccessible. The following chapter will discuss how and why the price of meat is an issue for some, and how protein alternatives could provide a solution. Socioeconomic factors are important to consider in the current research, and this chapter will also cover ways in which identity and SES are connected. Lastly, this chapter will present the research questions that will be investigated in this thesis.

### Meat and SES

While meat might be a luxury in some countries, it is affordable and available in many Western countries. Using techniques like factory farming and meat processing, meat is made available by lowering the quality. To exacerbate this, environmental costs are ignored, and meat prices are kept artificially low (De Boer et al., 2017; Jacob, 2014). However, these costs can only be ignored for so long, and as demand for meat increases and production systems take their toll, supply of meat protein struggles to keep up (Latvala et al, 2012). It is predicted that in 2050 meat demand will surpass production capabilities (Garnett, 2009; Graham, & Abrahamse, 2017; Leahy et al., 2011) and this is already starting to affect some people. Lusk and Tonsor (2016) found that the price of



pork and beef reached an all-time high in 2014, and that these prices have been steadily increasing over the last 60 years.

Despite this, meat consumption is increasing around the world, particularly in developing nations. Poleman and Thomas (1995) found that as countries improved their economy, the starch to meat ratio shifted more towards meat. One country that did not increase their red meat to starch ratio as the economy improved was Japan, and Japanese identities have always had a stronger connection to seafood (Poleman, & Thomas, 1995). Other studies found that people from developing countries purchased an increasing amount of meat as it became more available or when immigrating to countries where meat prices were much lower, because meat was perceived to be a luxury item (Delgado, 2003; Guarnaccia et al., 2012, Schösler, De Boer, Boersema, & Aiking, 2015). Meat can be connected to identities, even when it is not readily available to those identities. Increases in meat consumption globally are mostly happening in these developing countries, and although meat is not already regularly available it is still attached to these identities.

In regions where meat is not readily available or affordable for the general population, meat can be seen as a status symbol. As the price of meat has decreased in these regions, people who were not as wealthy were able to purchase it, gaining access to a commodity previously only available to the wealthy. Historically this has been the case in Europe, as meat was reserved for gentry and upper classes and during war time for the wealthy and for male soldiers (Lentz et al., 2018; Ruby, & Heine, 2011). This is reflected in the English language itself, as many of the words for meat, such as beef and pork, do not reflect the animals itself, such as cow or pig (Heinz, & Lee, 1998). This was due to class differences between the upper class, who could afford to eat meat, and the lower-class, who worked with the animals. In the way that meat can transpose values of power and dominance for men, it can also transpose status as it is only available to the wealthy and those with the means to provide. Even though it is expensive, factors such as the status of meat mean that people will go out of their way to include it in their diet.

Meat consumption is increasing rapidly in developing countries, but it is increasing in developed countries too despite the price increases. The price increases have not

significantly affected the consumption of meat and meat consumption is still higher than it has ever been (Arcari, 2017; De Boer, et al., 2017). The price increases are not enough to deter most who are already eating meat, and while individuals or families may be eating smaller quantities of meat, increased population with access to meat means that overall meat consumption has increased (Lusk & Tonsor, 2016). Other factors exacerbating this is the availability of cheaper, less healthy processed meats, and promotion of cheaper processed meats through the fast-food industry (Gunkel, 2016). In some cases, even fresh vegetables are a more expensive option than cheap meat (De Boer et al., 2017, Guarnaccia et al., 2012). The methods that are used to keep the prices of meat artificially low mean that there are currently options for everybody to regularly eat meat; however, as the price of meat continues to increase, those of a lower SES will be affected disproportionately.

Meat consumption is associated with greater wealth. Yen, Lin, and Davis (2008) found that higher income was associated with higher quantities of meat consumption. People might have access to meat in greater availability, but people with lower SES are less likely to eat larger portions of meat and are more likely to eat processed meats or off-cuts meaning they are more exposed to negative health outcomes. Future projections of meat availability and price indicate that those of lower SES are going to struggle to reach their protein requirements from meat (Dodge, 2013; Gregory, et al., 2005). Even though protein alternatives are available, there are factors which must be addressed to make these a viable option for those with lower SES.

### Protein alternatives and SES

Protein alternatives are available, but many are also expensive. Many of the available protein alternatives, such as in-vitro meats or Quorn, are currently quite expensive (Dekkers et al., 2018; Hocquette et al., 2015; Orzechowski, 2015). When compared to the price of cheap meats, these alternatives are not a viable option. Orzechowski (2015) argues that once the technology has been developed, protein alternatives such as lab-grown meats will be produced for much lower prices. Though

there are different options for the scalability of these products, they will be able to control for nutritional and culinary factors. The marketability and development of these protein alternatives have not yet reached a stage where they can be produced in a cost-reducing way. Once the initial costs of development and creating production systems have been covered, these protein alternatives will become much more readily available. However, this relies on initial investment from those with higher SES to cover the high costs before these products become available to those of a lower SES.

In countries that do not rely on meat as the main protein source, there are already cheaper alternative sources of protein. Insects provide a good source of protein and address some environmental and health concerns (Shelomi, 2016; Verbeke, 2015). Similarly, cereals and vegetables such as rice, peas, and lentils are the main sources of protein in some countries (Griggs, 1995). Normalisation and education about these alternative sources of protein are required before mainstream acceptance by the public (Bohm et al., 2016).

Another important factor to consider would be taste. The enjoyment of the taste of meat is a major deterrent for people to replace it with other options, especially ones that are they are unfamiliar with (Clark & Bogdan, 2019; Gupta, 2011; Ruby, 2012). Piazza et al. (2015) argue that the enjoyment of the culinary experiences of meat is one of the main reasons why people continue to eat meat. Taste is one area where newer protein alternatives have an advantage over vegetables or insects. Protein alternatives have the capabilities to recreate the sensations of meat, a taste palate that most people are familiar with. Although some of these newer protein alternative products almost accurately simulate meat sensations, there is still some room for improvement (Zaraska, 2013). The taste aspects of protein alternatives are an important factor to consider in making these alternatives. Although taste might seem like the most important factor here, perhaps it is expectations of taste that are more important to consider when discussing protein alternatives.

A study by Hocquette et al. (2015), investigated perceptions of protein alternatives. Specifically, Hocquette et al. investigated perceptions of lab grown meat.

Hocquette et al. (2015) found that although respondents believed that lab grown meats were feasible and could help address environmental and ethical issues, only 32 percent believed in vitro meat would be healthy and fewer believed it would be tasty (24 percent). However, the participants in the research by Hocquette et al. represent a sector of the international population from a higher SES, and as such they may be less concerned about the issues of food availability and increasing prices of meat. As a group that will be affected disproportionately by the rising costs of meat, the perspectives of those from a lower SES are also important. Research by Gatersleben, Murtagh and Abrahamse (2014) suggests that when assessing the likelihood of behaviours according to the theory of planned behaviour, identity should be included as an important factor.

While perceptions of protein alternatives are important as they influence purchasing and acceptance of fake meats, there is a lack of research on respondents trying protein alternatives. There is difficulty in studying protein alternatives as many of these alternatives are expensive or unavailable. Other problems involve ethical issues of blind taste testing protein alternatives. The food chain Hell Pizza faced backlash and even threats of legal action when it was revealed that the newly released “Burger Pizza” had protein alternatives on it (Taunton, 2019). One study by Clark and Bogdan (2019) investigated perceptions of protein alternatives by respondents who had tried them. Clark and Bogdan found that people who had tried protein alternatives before were more likely to try more (48 percent compared with 15 percent for respondents who had not tried them). Clark and Bogdan’s sample contained a disproportionate number of respondents who had tried protein alternatives before and there was a relatively small sample size (n=89) of those who had never tried a protein alternative. Many of the respondents were also veg\*etarians rather than omnivores. Veg\*etarians represent a group that already has vested interest in protein alternatives. Clark and Bogdan’s study shows that perceptions on the acceptability of protein alternatives can change, but it does not account for the role of identities in resisting this change. This study, like that of Hocquette et al. also does not focus on socio-economic factors.

Although meat prices are increasing, the prices are still low enough that meat remains the main source of protein in many Western countries (De Boer et al., 2017). As

the price of meat increases it will disproportionately affect those of a lower SES. One solution is protein alternatives that have the capability to be much cheaper. Unfortunately, for these products to become cheaper they must initially receive investment from those of a higher SES. One implication from studies like Hocquette et al. (2015) is that the people who need to invest in protein alternatives to make them more accessible, are those who do not need to do so as they can afford meat, thus probably will not.

## Identity and SES

Because of the socioeconomic issues pertaining to meat consumption, it is important to understand how SES is related to identity for the current study. Not only does SES grant access to resources such as the ability to purchase meat, it is also an important factor in identity construction and group subscription. In some cases, SES can lead to the construction of socioeconomic identities.

SES is not only a measure of income but also of other socioeconomic factors. Even though a university professor may earn less than a blue-collar worker, the social status of a professor is generally thought of as higher than a blue-collar worker (Lubrano, 2004). Becoming a university professor shows that someone has had access to tertiary education. Marks (2011) argues that income only provides a snapshot of SES because income can change regularly and does not account for factors such as access to culturally significant resources or situations where one family member is the sole provider for the family. Marks (2011) suggests that to get a full scope of SES, researchers must investigate multiple socioeconomic factors such as job level, level of education, and parental level of education.

Income, however, is not to be completely disregarded. Since money is used to purchase goods and services, it is a very important aspect of SES to consider (Bottero, 2013). Crothers (2014) argues that neoliberal beliefs are prominent in Aotearoa New Zealand. These neoliberal beliefs give the illusion that SES is very malleable and can change if people work and earn enough money. As people change jobs or get promotions

their income can change, giving them greater access to more resources assisting in maintaining the neoliberal façade that working hard leads to a better life. The neoliberal use of money as the primary form of currency grants wealth significant power.

Because of the power of wealth to provide access to goods and services, it also has an impact on the groups one can access and their ability to redefine identities. Income can influence who an individual socialises with, where they live, what institutions they attend, the activities they do, and their work (Berkman, 2014; Destin, Rheinschmidt-Same, & Richeson, 2017). Income can be used for extracurricular activities and higher education. Mycek (2018) and Sumpter (2015) argue that some men can redefine their masculinity. These men are typically of a higher middle SES allowing them greater freedom to redefine masculinity without fear of isolation, as they have other groups to rely on. Conversely, Ashford (1990) and Berkman (2014) argue that changes in wealth and SES can lead to isolation for some individuals as they can no longer practice some aspects of their identities. Berkman found that people who lost their job or income could no longer participate in some of their previous groups. Without these other sources of identity, people had fewer options to access multiple identities. Wealth can grant access to new identities; it can also grant more options to practice current identities.

SES itself can be part of someone's identity. Social class structures throughout the world can divide people into groups, such as the working class and the upper-class. These social classes have strong connections to SES. They are also unique distinguishable groups with identities (Bottero, 2013; Crothers, 2014). Identities that are linked with SES, such as social classes, are perceived as more malleable than other identities such as gender or ethnic identities (Sanders & Mahalingam, 2012). However, in some places where clearly delineated social class systems exist, social class identities are very rigid. Lubrano (2004), wrote about his personal experience moving from a lower SES to a higher SES in his later life. Despite his income and social groups changing, he still identified with his working-class identity. His working-class identity also made it difficult for him to fit in with members of higher social classes. In Aotearoa New Zealand underpinning neoliberal beliefs help maintain a facade of social mobility meaning that social class is not as prominent as countries where more recognised class structures exist such as India,

America, or the United Kingdom (Bottero, 2013; Crothers, 2014; Willott, & Lyons, 2012). In Aotearoa New Zealand, growing inequality and gaps in wealth distribution create different identities; not necessarily class identities but identities associated with wealth. While social class structures and class identities might not exist in Aotearoa New Zealand, SES in younger years still assist in creating SES based identities.

Rather than discussing social class, some authors refer to socioeconomic background (SEB) (Marks, 2011; Rutkowski & Rutkowski, 2013). Like SES, SEB refers to a culmination of socioeconomic factors such as family income, access to assets, and family education during an individual's younger years. Despite the facade of social mobility offered by neoliberal beliefs, SEB has a strong influence and the connections made linger throughout our lives. The Kernel of Imprinting theory (Kish-Gephart, & Campbell, 2015; Simsek, Fox, & Heavey, 2015) suggests our SEB has long lasting impacts on identity because this occurs during formative years. Many foundations for future identities are based on associations from our youth, and SEB identities persist even in situations of upward social mobility (Kish-Gephart, & Campbell, 2015; Simsek et al., 2015). As with other identities, SEB identities can change. Destin et al., (2017) found that temporary changes in SES can have long-lasting impacts on identity. These long-lasting impacts do not necessarily change every aspect of a person's identity; rather, they add identities to already existing identities. Additionally, as SEB affects access to education which in turn affects access to higher paying jobs, significant changes in SES, even temporary, are difficult to attain (Bottero, 2013). SEB implants deep into the roots of an individual's identity and is difficult to change over time.

### Veg\*etarianism and SES/SEB and meat associated identities

The relationship between SES and veg\*etarianism is not clear cut. Veg\*etarianism is associated with higher SES in developed countries, yet in developing countries it is associated with lower SES (Leahy et al., 2011; Rimal, 2002; Ruby, 2012). High SES is also related to higher consumption of meat in general (Yen et al., 2008). Some studies have investigated factors that relate to both veg\*etarianism and SES. For example, access to

better education is correlated to higher SES, and higher education is also a strong predictor of vegetarianism (Bohm, et al., 2016; Kish-Gephart, & Campbell, 2015; Ruby, 2012). However, these studies do not look at the three major factors that motivate a switch to veg\*etarianism and how they are influenced by SES, SEB, and other meat associated identities.

As mentioned, veg\*etarians have different reasons for abstaining from meat; the three core factors. These three core factors interact in different ways with SES, SEB, and other meat associated identities. For example, as Dolan (2011) discovered, health seeking behaviours amongst men changed according to SEB. Working class men were much less likely to actively engage in beneficial health practices while upper-class men were more likely. Health concerns were much more prominent in people from a higher SEB, possibly meaning that higher SEB relates to higher levels of concern for the health aspects of meat consumption. Higher SES is associated with higher levels of Social Dominance Orientation, egocentric tendencies, and a self-construal definition of identity, while lower SES pays greater attention to external forces (Destin et al., 2017; Sanders, & Mahalingam, 2012). Constructions of masculinity are also related to Social dominance orientation and less environmentally positive behaviours (Graça, Calheiros, Oliveira, & Milfont, 2018; Milfont, & Sibley, 2016). These relationships might make it less likely that high SES and high masculinity will be associated with high ethical concerns for eating meat, but the relationships may be different for health concerns.

SES and SEB are important to consider because of the ramifications that rising meat prices will have on those with lower SES. They are also important when considering the need to improve accessibility to alternative sources of protein, and the role that those with a higher SES have in creating that availability. SES and SEB not only redefine and grant access to other identities; they create them as well. The way they influence other identities relates to the three core factors that motivate veg\*etarianism. Because of the perceived lack of a clear social class system in Aotearoa New Zealand, SEB is perhaps better for concepts of social class for the current research. While SES is not necessarily defined by income, income is important to consider due to the power it has in opening access to resources.



## Research Questions

Having considered the literature, the current research will investigate the following research questions:

R1: Are the three core factors (health, ethics, environment) affected differently by SES, SEB, and identities associated with meat consumption - and if so, how?

As discussed, the three core factors are important motivations for veg\*etarianism. Many studies look at veg\*etarians as a group with a single identity, or multiple identities such as pescatarian or vegan. As health concerns, ethical concerns, and environmental concerns are more salient to those from different SES situations and identities, my hypothesis is that veg\*etarians will have different motivations for abstaining from meat consumption and this will relate to SES, SEB, and other meat associated identities. For example, veg\*etarians with greater health concerns for meat consumption are more likely to be from a higher SEB.

R2: How malleable are identities associated with meat consumption, especially when considering socioeconomic factors?

Previous authors have argued that meat associated identities, such as masculinity, can be redefined to include veg\*etarian diets. This question will use Social Identity theory and concepts of multiple identities to investigate whether the identities change to incorporate veg\*etarian diets or if they incorporate other identities that allow for this. SES will be considered for the role it has in facilitating access to new identities and change in current ones. My hypothesis is that SES will allow for a greater access to more sources of identity, thus freeing individuals from a need to conform to other identities.

R3: What are the barriers/promoters to veg\*etarianism and how are these affected by SES and meat affiliated identities?

Because of the impact meat prices will have on those of a lower SES, it is important to investigate how SES will assist or resist meat reduction. As multiple identities could potentially interact with SES and meat consumption, these must be considered as well. This research question will look at what barriers and promoters exist for identities associated with meat consumption, and how interactions between these groups will affect final outcomes. My hypothesis is that certain barriers and promoters will be attached to specific identities, and identities such as masculine identities will have a greater impact on whether these barriers and promoters manifest.

R4: What is the role of meat alternatives or protein alternatives in reducing meat consumption?

Meat alternatives have potential to replace meat as an adequate source of protein. While there are adequate resources to make these alternatives reality, perceptions of them will affect their role. Using the same groups and SES to investigate the previous questions, this question will seek to answer how groups with connections to meat consumption will perceive these alternatives and how this will assist or resist adopting them into their diets. The research question has two sub questions:

R4.1: How are meat alternatives perceived by those of different SES, SEB, and other meat associated identities?

R4.2: How will these groups assist or resist the adoption of meat alternatives?

My hypothesis is that the same identities that resist veg\*etarianism will also resist protein alternatives. I also predict that people with higher SES will be less willing to adopt protein alternatives because they will have less need to, which will ultimately hinder the initial availability of these alternatives.

## Chapter 4: Methodology

“Eleanor: I’m actually trying to eat vegetarian

Brittany: EWWW WHY!?”

Madison: Is it because you feel bad for all the little animals with their cute little faces because people stuff them in a tiny cage so that we can eat them?” (Schur, 2019, 00:11:55)

### Introduction

In the following chapter I will discuss the epistemological foundations behind the current studies as well as the researcher’s positionality. The ethics application and approval will also be discussed. The chapter will then focus on the design process and recruitment of participants for the qualitative interviews and the analysis of data. Finally, the chapter will cover the development of the online survey, the measurement of key constructs, and the statistical analysis process.

### Epistemology

The current research adopts a mixed methods approach, incorporating aspects of qualitative methods and quantitative methods. While qualitative methods and quantitative methods both have their strengths, they also have weaknesses (Creswell, & Plano Clark, 2011). The topics in this study address social constructions such as identity and other constructions pertaining to individual positionalities; qualitative methods are well suited to understand these deeper processes (Tarver, 2011). Conversely, quantitative methods are suitable for investigating wider, general societal trends (Lach, 2014; Mertens, 2013). When investigating subjects such as rates of veg\*etarianism and examining relationships between identity, SES and veg\*etarianism, quantitative research is a better fit. A factor that influences this research is complication around class and SES in Aotearoa New Zealand. Since there is no straightforward answer about how to measure SES in an

Aotearoa context (Crothers, 2014), qualitative measures are necessary to obtain a deeper understanding of participants' views of SES and SEB.

This research will be conducted through a post-structuralist lens. Post-structuralism acknowledges that knowledge is constructed within political paradigms and that inherent power structures in society influence the construction of knowledge, so knowledge can never be apolitical. At the same time, post-structuralism acknowledges that certain factors, such as climate change, are going to affect people regardless. Although everybody will be affected by environmental changes, individuals' opinions will determine their steps taken in response. Due to social influences of climate change and the effect it will have on all aspects of current society, climate change is an interdisciplinary subject requiring perspectives from both hard sciences and the humanities (Weintrobe, 2013).

Rather than simply being observational, it is my hope that using mixed methods will mean this research will have real world applications. By combining quantitative and qualitative measures, mixed methods can be used to investigate deeper understandings of how something can come to be, the ways they are now, and the ways they can be changed (Mertens, 2013).

### Positionality

As previously mentioned, the post-structuralist view is that knowledge is created within social or cultural contexts, and therefore this knowledge cannot be apolitical (Gregory, Johnston, & Pratt, 2009). The subject of this study investigates identity and socioeconomic factors, and it is important that I address my own positionality as the researcher. There are three main aspects to consider within the research context: how my positionality influences the research design, my relationship with interviewees, and the creation of knowledge overall.

I am a 30-year-old Pākehā male from lower middle SEB but moving into an upper middle SES in recent years. While I have a mixed ethnic heritage, including Scottish, Irish, Danish, Māori, and Portuguese I identify strongly with my Scottish and Irish roots while

being quite distanced from my Māori heritage. Being raised in small town Aotearoa New Zealand was also very influential to the creation of my current positionality and so offers the foundation of my positionality. Despite coming from lower SEB, I would say that my SES has improved over my life being afforded opportunities such as access to higher education and job/income access. I acknowledge the privileges I have had in life that have afforded me these opportunities; something that not everybody has access to in Aotearoa New Zealand. Unfortunately, it is these privileges that cause so many issues concerning socioeconomic situations in Aotearoa New Zealand. This is particularly true in a society that is so strongly rooted in neoliberal beliefs (Crothers, 2014). Because of factors such as implicit bias, these privileges are based in societal structures and often exist at subliminal levels that permeate everyday life (McNutt, 2016). My positionality is ultimately going to influence the power relationships between me as the researcher and the interviewees, the research process and the overall study.

Another aspect of my own identity that will affect this study is my relationship with masculinity. I once again feel privileged here since I do not feel that I have suffered the pressures to conform to particular ideals of masculinity that others may have. However, as Foucault (1990) suggests, it is through sex that our social identity is dictated. While I might not have felt pressures and may not have conformed to more extreme ideals of masculinity myself, I still feel I have inadvertently conformed to masculine ideals to some extent. This is reflective of the Foucauldian views of gender identity that the current research is steeped in. I have witnessed some of the negative aspects of masculine identities that cause some of the societal issues in Aotearoa New Zealand. I am critical of essentialist arguments pertaining to gender and prescribe more to the social-constructionist views because of this.

I am also vegan by choice. This was originally for ethical purposes, though in recent years it has come to be more for environmental reasons. My own veg\*etarianism has had a huge influence on my decision to research this subject. While I was raised eating meat, this does not necessarily mean that I share the same relationship with meat consumption that some respondents to the study will have. To reiterate, post-structuralism suggests that knowledge is created through power dynamics that affect our

day to day lives. My decision to study this topic and my relationship with the subjects has helped influence the lens through which I investigate the topic.

I have tried to only include information about my positionality that might be relevant to the current study. However, as this study looks at identity and socioeconomic factors, it is hard to separate what might be perceived as relevant to identity by me rather than by others. This is something of particular note in regard to the interviews as I specifically investigate what made people uniquely “them”. The relationship between the interviewee and I was also ultimately affected by factors such as rapport.

Another aspect that I became aware of throughout the interviewing process was the potential for perceived power imbalance. For example, when I interviewed male respondents, the power imbalance was different from when I interviewed female respondents. Likewise, the information that people are comfortable sharing might be different depending on power imbalances or rapport. Building rapport with interviewees was important so that interviewees would be more willing to converse openly about deeply personal information. Building rapport and connecting with the subject are explained in the following quote.

“The understanding that subject positions are multiple and that social differences are constructed within relations of power has shifted focus away from binary thinking (i.e. the researcher is the same as or different from those studied) to understanding points of partial connection between researcher and researched, and how difference is constructed, including within the research process” (Gregory, et al., 2009, p.557)

Since this study focuses on the idea that people have multiple identities, it was through shared identities that I as the researcher and interviewer attempted to build rapport and reduce power imbalance.

As we may have shared some social groups or occupied similar spaces, I had interacted with some of the interviewees to some level prior to the interviews. The Wellington region is small and the chances of overlapping social circles were high. However, avoiding interviewing people that I had direct regular prior contact with helped me to avoid introducing biases into the research process such as myself projecting

knowledge from prior interactions on to their responses, or them changing responses to ones they feel better suited my research.

In the case of the online survey, it is very likely that individuals with whom I have closer relationships might have responded. As the focus of the online survey was more quantitative by nature, this does not pose so much of an issue in terms of power imbalance. Instead, my own positionality should be considered during the process of creating the online survey and the decision process for which questions would be asked and how they were asked.

### Ethics approval

Ethical considerations for this study were approved by the Human Ethics Committee of Victoria University on 30/05/19; Application number 0000027582. The main concerns for the ethics committee concerned ensuring the confidentiality of interviewees and the anonymity of survey participants and ensuring the safe storage and destruction of data. Another concern for the ethics committee was ensuring that participants had access to personal well-being resources and were aware that they could refuse to answer any questions they were uncomfortable with. A copy of the ethics approval memo is attached in Appendix A.

### Study 1: Semi-Structured Interviews

This current research was conducted in two parts. The first part consisted of qualitative semi-structured interviews, and the second part was an online quantitative survey. The different techniques were used to answer different parts of the research questions. The qualitative interviews also served as a secondary task to help inform some of the measures in the quantitative survey.

## Interview formation

The main goals of the semi-structured interviews were to investigate how a participant's SES and SEB might change within an Aotearoa New Zealand context, how ethnic and gender identities might change or be navigated, and how this is connected to the participant's meat consumption. Due to the lack of clear social class systems within Aotearoa New Zealand and the complex constructions that create SES, qualitative research methods were employed to get a deeper understanding of the participant's perceptions of their own circumstances and the multiple dimensions of their own identity over the course of their life. This information must also be looked at within the context of the individual's experiences, which was difficult to gain from a survey (Gergen, Josselson, & Freeman, 2015).

Rutkowski and Rutkowski (2013) suggested that when examining SES, researchers must look at multiple factors such as the individual's wealth, their parents' wealth, and their parents' job and level. For the purposes of this study, I am adopting a similar technique to represent the lack of clear social classes in Aotearoa New Zealand. Semi-structured interviews allow for open discussion about other identities, such as manifestations of gender identities, that may be relevant to the participant and to this study. These identities could be overlooked in a quantitative survey.

One-on-one interviews were selected over other types of interviews because I was looking at each individuals' perceptions. The confidentiality of the one-on-one interviews allowed for the participants to be more open and not influenced by social pressures (Ryan, Coughlan, & Cronin, 2009). While there was a guiding questionnaire based on the example of Delessio-Parson (2017) with other questions added to suit the current study, the semi-structured nature of the interviews allowed for reflexive adaptations to the questions being asked. A copy of the interview schedule can be found in Appendix B.

## Finding interviewees

No specific demographic was required for the study. Instead, a wide variety of people from different backgrounds and different identities were sought for interviewing.



The study was focusing on an Aotearoa New Zealand context, so priority was given to voices from this context, including Māori and Pākehā interviewees. The sampling method of snowballing was used (Valentine, 2005), making initial contact with groups that may be interested in the topics of meat consumption, such as restaurant owners, vegan food vendors, and farmers. By using the snowballing method, some details about respondents could be gathered beforehand to screen for factors such as status of vegetarianism and job.

As SES and SEB are complex constructions, especially in an Aotearoa New Zealand context (Crothers, 2014), anything regarding this was not ascertained until after interviewing had begun. Invites were mostly sent via email to businesses or individuals based on possible interest in the subject. Because emails were directed to overall businesses with invitations for anyone in the business to partake, it was hard to calculate any kind of response rate. Responses to invites for interviewing were relatively high and interviewing quotas were quickly filled up. In total 10 respondents were interviewed with interviews lasting between 20 to 60 minutes long. All interviews took place between 19/07/19 and 01/08/19. Prior to taking part in their interviews, all interviewees signed a consent form and were given an information sheet which outlined the purpose of the research and the kind of questions they would be asked. They were given the option to withdraw at any stage and the consent forms contained basic information about myself and what was going to happen to their responses. Their permission to record the interviews was also sought. A copy of the consent form and information sheet can be found in Appendix B.

## Analysis

All interviews were transcribed verbatim by the researcher. To ensure the confidentiality of the interviewees, they were given a pseudonym based on a fictional character. The transcriptions were then attributed to these pseudonyms and any data that could be used to identify them was removed or anonymised. Interviews were analysed using a combination of Thematic analysis and Discourse analysis. Following the directions

provided by Braun and Clarke (2006), a thematic analysis was used to analyse the interviews to look for themes and ideas within the data set. While Braun and Clarke provide greater details of the process, this analysis followed the fifteen steps outlined in their research. Thematic analysis was used prior to the commencement of the second study so that some of the themes from the interviews could be used to inform the creation process of the online survey.

As the epistemological foundation for this study is based on a post-structuralist lens, discourse analysis was used to analyse the content of the interviews after both studies concluded (Aitken & Craine, 2005). The data was analysed from a constructivist approach and thus looked more at underlying and implicit ideas, which is where discourse analysis methods were used following the directions provided by Berg (2009). Rather than investigating themes throughout the interviews, discourse analysis focuses more on the underlying groups of ideas that exist within conversations. The goals for the qualitative interviews were to investigate general discourses across SEBs and how they might change, and ways through which this affects connections between identities and meat.

## Study 2: Survey

### Survey formation

The second study consisted of a quantitative survey. While most of the survey was already produced before the semi structured interviews took place, feedback from the first study was used to influence the wording of some questions and some questions were removed as a result of analysis of the interviews. While the focus of the first study was to focus on the mechanisms of how individuals can form or reject relationships with meat consumption, the second study had more of a focus on wider societal trends. The aspiration to apply this to a more generalised population with broader themes meant that quantitative research methods were employed (Parfitt, 2005).

Where possible, standardised questions or questions that had been asked in other surveys were used for this survey. For example, the ethnicity question used the same answering options as those used by the official census (Stats NZ, 2018). Income brackets were also measured following the example of the official census. Questions that had been used in other surveys on similar topics, including two multiple item scale questionnaires, were also used in this survey. New questions were created when there was no precedent to answer the overall research questions.

Although the goals of using quantitative research methods was to be able to apply the findings to wider societal trends, this was still directed mainly towards Aotearoa New Zealand demographics. This decision was mainly made due to the difficulties associated with measuring income and SES and background across a range of different economies and social class systems (Crothers, 2014). In the case of the income question, only respondents who said they currently lived in Aotearoa New Zealand were able to answer questions regarding their annual income. Income for the last twelve months was used as a measure of their current SES.

Methods for measuring SEB were more complicated and were adapted from results of the qualitative interviews and previous literature (Bibby, 1975; Marks, 2011; Rutkowski, & Rutkowski, 2013). Respondents were asked what their SES was like under the age of 10, during their teens, and now, using a 7-point Likert scale. To avoid difficulties

with gathering accurate information about their parents' income, inflation rates, and other unknown factors, SEB was measured using the respondent's response to the Likert scale for when they were under the age of ten collapsed into low medium and high. Respondents were asked what their parents' jobs and level of education was to get them thinking about their childhood, but this data itself was ignored in the analysis.

The current study treats gender, masculinity, and femininity as social constructions, and used scales from other literature to measure these constructions. Following the examples of Fraser (2018), respondents were asked to self-report their own gender in an open-ended question. This allowed for respondents of othered genders to identify how they felt, which aligned more with the epistemological framework of the research and avoided the restriction of answers to gender binaries. The Traditional Masculinity/Femininity scale (TMF) used by Kachel, Steffens, and Niedlich (2016), a scale to measure respondents' adherence to traditional ideals of hegemonic masculinity or femininity, was also employed. The TMF questionnaire consisted of six items using a seven-point Likert scale ranging from 1, very masculine, to 7, very feminine. The TMF was used to measure how ideals of masculinity related to meat consumption and attachment rather than relying solely on gender identity to measure this. Table 1 below. provides a full list of the items in the TMF scale.

**Table 1**  
Items included in the TMF Scale

I consider myself...
Ideally, I would like to be...
Traditionally, my interests would be regarded as...
Traditionally, my attitudes and beliefs would be regarded as...
Traditionally, my behaviour would be regarded as...
Traditionally, my outer appearance would be regarded as...

Another scale that was used was the Meat Attachment Questionnaire (MAQ) (Graça, Calheiros, & Oliveira, 2015). The questionnaire consisted of 16 statements of

which respondents were asked their level of agreement on a five-point Likert scale used to measure four aspects of meat attachment. Meat hedonism (MAQhed) was a measure of the respondent's enjoyment of meat and included items such as "To eat meat is one of the good pleasures in life". Meat affinity (MAQaff) measured views on the role of meat in their world view and included items like "To eat meat is disrespectful towards life and the environment". Meat dependence (MAQdep) measured perceptions on the necessity of meat and included items such as "If I couldn't eat meat I would feel weak and the right to eat meat". Finally, meat entitlement (MAQent) measured how much respondents felt it was their right to eat meat and included items like "According to our position in the food chain, we have the right to eat meat". The MAQ has previously been used in an Aotearoa New Zealand context and was shown to have good construct validity (Lentz, et al, 2018). From this point, veg\*etarians and omnivores were asked different questions.

Veg\*etarian respondents were asked to rate how important the three core factors were to their decision to not eat meat, and initial reasons for becoming veg\*etarian. Omnivores were asked about their current meat consumption and reasons for changes since their childhood, as well as their likelihood to replace meat with alternatives.

Following the results of preliminary thematic analysis of the qualitative interviews, certain questions were removed from the online survey. For example, following the discussion about the definition of a protein alternative and seeing how subjective it is to many veg\*etarian interviewees, some questions about alternatives were removed for Veg\*etarian respondents. In some cases, whole questions were removed but in other cases the thematic analysis assisted with which options were available in multi-choice questions.

Once the questionnaire was finalised, a functional online version of the survey was created using the online platform Qualtrics. A test version of the survey was then published allowing the researcher, supervisor, and several other masters students to test the functionality and the appearance of the survey on computers and smart phones. In the case of the MAQ, items were randomised to avoid response fatigue (Ben-Nun, 2008).

Test results were also downloaded using an SPSS file format to double check that the survey was functioning correctly.

A copy of the final survey, including the information preamble, is attached in Appendix C.

### Survey application

Data collection for the quantitative survey was conducted between 07/08/19 and 02/09/19 and was open to all respondents over the age of 18. All data was collected using the online survey created on Qualtrics. A compulsory question regarding consent and age verification was added to the start of the survey so as not to include those under the age of 18. A short link to the survey was created using the website [tinyurl.com](http://tinyurl.com) to make access easier. The survey was mainly promoted on social media, namely Facebook, and was mainly promoted throughout community groups. A link to the survey was shared on local community groups for major cities and Aotearoa New Zealand community groups. Vegan and vegetarian groups were also used to promote the survey. Pamphlets and printouts were used with a scannable QR code that directed cell phone users to the survey, though this was not as widely used and seemed to have much less impact on response rates. An image of the pamphlet was used in social media to help promote the link shared through public groups. A copy of the pamphlet can be found in Appendix C.

To encourage response rates, a prize draw consisting of two chances to win a fifty-dollar grocery voucher was offered. To enter the prize draw respondents were required to be currently living in Aotearoa New Zealand. Respondents were asked if they were currently living in Aotearoa New Zealand, and any that selected no to this question were not offered the opportunity to enter the prize draw. To ensure the anonymity, a separate survey was created to gather information for the prize draw. Eligible respondents who completed the survey were redirected to the prize draw survey. The two prize winners were drawn on 05/09/19, after all data had been collected. All respondents who had entered the draw were placed into a spreadsheet and the randomized function was used

to select the two prize winners randomly. The winners were then contacted via email and prizes were sent out via courier.

Throughout the data collection period, data sets were exported after the first day, then again after the first week. Data sets were double checked to ensure that the data collection process was correct and operational. The survey was promoted again on community groups to boost numbers when response rates started to decrease.

## Analysis

A total of 556 responses were recorded to the survey. However, this number was reduced due to some responses being incomplete or missing answers to vital questions. After these responses were removed using syntax, the total number was 510. All data was analysed using IBM SPSS software on Dell Optiplex 7050 running Windows 10.

Syntax was used to create scores for the TMF scale and the MAQ. The MAQ included some items with a reversed scale, something which had to be considered in the final data sets and when creating a final MAQ score, so syntax was used to reverse these scales before creating MAQ scores. These two scales were also tested for significance using a Cronbach's alpha test.

## Conclusion

Two studies were implemented to help answer the research questions of the current research. The first was a qualitative study employing snowballing methods to find interviewees, and then one-on-one interviews. Preliminary thematic analysis was used to assist in finalising the survey for the second study, which was an online anonymous quantitative survey. While the Quantitative survey was active and collecting data online, a discourse analysis of the qualitative results was performed.

## Chapter 5: Results and discussion study 1

“Sometimes I eat KFC  
Other times I give up meat  
And I just eat lentils

I'm a single soul on this big blue ball  
And I am here to sing a song

About the day that I was born  
'Til the day that I'll be gone  
And the song won't last for long  
'Cause we're all just

Protons, Neutrons, Electrons  
That rest on a Sunday  
Work on a Monday”

(Angus, 2005)

### Introduction

In this chapter, I will discuss the findings of the qualitative interviews. While I did use a thematic analysis to briefly analyse the interviews, this was for the purposes of shaping the online survey questions and therefore this analysis will not be discussed in this chapter.

Discourse analysis, following the example of Berg (2009), was the primary means of analysing the qualitative interviews. In total 10 interviewees were interviewed; 5 were veg\*etarian and 5 were omnivores. Table 2, overleaf, provides details for the 10 interviewees.



**Table 2**

Interviewees and their veg\*etarian status, SES and SEB

<b>Name (Pseudonyms)</b>	<b>Veg*etarian status</b>	<b>SES and SEB</b>
Sam	Vegan	Middle upper SEB to Middle Upper SES
Mustrum	Omnivore	Lower SEB to middle SES
Susan	Vegan	Lower SEB to middle SES
Esme	Vegan/pescatarian	Middle SEB to middle SES
Gaspode	Omnivore	Lower SEB to lower middle SES
Lobsang	Omnivore	Middle lower SEB to middle SES
Vetinari	Omnivore	Middle upper SEB to Middle Upper SES
Angua	Vegetarian	Lower SEB to middle upper SES
Dibbler	Omnivore	Middle upper SEB to middle upper SES
Leonard	Vegan	Lower SEB to high SES

The discourse analysis focused on several discourses, or themes, pertaining to main areas of the three core factors identified in the literature (ethics, environment, and health), socioeconomics, protein alternatives, and identity. Another discourse was also identified, which I have put under the heading of ‘Initial Changes’. This discourse investigates the initial stages of becoming veg\*etarian. I will discuss each of these discourses in turn.

### Initial changes

The following section relates to research question 3. In Aotearoa New Zealand and other western countries, switching to veg\*etarianism is a switch from the norm (Food and Agriculture Organization of the United Nations, FAO, 2013; Tucker, 2013). In Aotearoa New Zealand the price of meat is kept artificially low, meaning that meat is a staple in most families and has been normalised as part of an ordinary diet (De Boer et al., 2017). The normalisation of meat consumption is common across the western world, where all the interviewees were from. This research indicates that a switch to veg\*etarianism is often associated with other life changes, such as moving away from a parental home. Without these changes, it seems unlikely that someone would choose veg\*etarianism, regardless of how seemingly small those changes might be. The following section will

investigate how values related to meat consumption are affected by these initial changes and by diets in general.

Respondents fell into two broad categories when it came to the initial changes: those who had pre-existing values conducive to a veg\*etarian diet during the period of their transition and those whose values were changed because of this period of change.

Susan, who was in the first category, said the following:

I guess like I always said I loved animals and I really cared about them and I just felt them. But as I said I couldn't be vegetarian because I didn't eat much fruit or vegetables and what else am I going to eat. But I also have a very strong sense of right and wrong and I don't like being a hypocrite (Susan).

Although her ethical values were present, it was not until moving away from her parental home that Susan made the switch to vegetarianism. Forming new relationships with veg\*etarians acted as a catalyst for pre-existing values to promote the switch for her. Susan was able to learn how she could remove meat from her diet through her new social groups.

Attending university is an example of an external factor that can act as the catalyst for this change. University attendance usually coincides with many changes in an individual's life (Lüdtke, Roberts, Trautwein, & Nagy, 2011). Studies by Bohm et al. (2016) and Rimal (2002) discovered that education is a strong predictor of vegetarianism. Although Susan's education about vegetarianism was based on social groups and relationships rather than formal education, it was at university that she formed these groups and subsequently transitioned to vegetarianism. Of the five veg\*etarians interviewed, four of them mentioned that their change to veg\*etarianism occurred during their years at tertiary education.

Esme had a similar experience in having values that were conducive to veg\*etarianism but requiring circumstantial changes prior to actualising these values. Although Esme's father was vegetarian, which helped bestow her with her values that led to veg\*etarianism, her mother was resistant to her becoming vegetarian.

When I first became vegetarian. When I was 16. My mum was vehemently opposed. And used to do things like when she was driving me places she would make sure the meat shop was on the way and she would buy biltong, because she knew it was my favourite type of meat and then close all the windows of the car and eat it slowly so that it would stink up the whole car and then ask, “do you want some?” (Esme).

This reflects Beardsworth and Keil’s (1991) finding that many vegetarians had to wait until leaving their family homes before they could become vegetarian. Beardsworth and Keil suggest this has a lot to do with the difficulties of cooking separate meals and the time constraints and supply issues; these themes are reflected in the current research. Omnivore interviewees suggested similar reasons for why they could not date a veg\*etarian. For example, Dibbler said.

A few years ago, I dated a vegan girl and me being just a general guy. Every day I was with her it was kinda hard to figure out what we wanted to eat. It was very difficult because she was so different from my diet (Dibbler).

In other situations, this period of change enables the reassessment of values related to meat consumption itself. Sam provides an example of this second group.

I became vegetarian about a year before I became vegan and that was predominantly through a partner who was vegetarian, and I hadn’t really thought about that before then and she opened my eyes up to that kinda thing. And I knew...because I learnt a lot ya know, and it was such a huge time of transition in my life. In so many ways about waking up to all sorts of things about my world (Sam).

It was during this period of change that Sam began to question meat consumption. The change in values still occurred in a period of life associated with change, including moving from parental homes and entering social groups with veg\*etarians.

Changes in dietary norms during periods of change are not restricted to veg\*etarians. Mustrum, who grew up on a limited diet of meat and three veg style meals, says that when he met his spouse, his diet was expanded to include foods that he previously considered too foreign. Mustrum’s introduction to new foods was expressed in the

following statement, “Yeah, my wife took me out for curry, and I was very skeptical but then I really enjoyed it and I have ever since”.

Travelling is another opportunity for people to be introduced to changes in diet, and this applies to both veg\*etarians and omnivores. Lobsang, Angua, and Susan all talked about their travels and how it influenced their diets. For example, Lobsang said the following: “I think with a lot of travelling you do try a lot of local foods and stuff. For example, I went to Paris. I had some escargot or snails. Very garlicky. Italy lot of pizza and pasta.”

Lobsang said that he generally enjoys trying out new meals, though they do need to have meat in them. Although trying new foods while travelling has impacted his diet, he has maintained a meat centric diet. The strong connection between ethnic heritage and food means that travelling often introduces people to new foods (Prada-Trigo, 2018).

These displays of change in diet contrast to other omnivorous interviewees such as Vetinari and Dibbler who have maintained a similar diet throughout their lives. While these respondents have gone through periods of change in their life, including going to university, these changes have not influenced their dietary choices. There are no major barriers involved in continuing in the status quo that is consuming meat, so it comes as no surprise that omnivores do not necessarily have a moment of change that is related to their diet.

None of the interviewees from this study had been raised veg\*etarian themselves, although some of them were raising their children with veg\*etarian diets. Sam said that his children have had a vegan diet in their home but have always had the freedom to make their own choices away from home.

Both of our children eat vegan in the home, and we have always said that we prefer them to make their own choices out of the home, because we can’t control them anyway. It is interesting the way they have taken this identity on them; my son is [in his teens] now and veganism is now part of his identity at high school (Sam).

Some support from family members is required to become veg\*etarian for younger people. While Esme provided an example of how family members can resist the change,

Leonard had the full support from his family to become vegetarian - making his case rather unique. Leonard's decision to become vegetarian put pressure on his mother to provide separate meals for him and his siblings, and his mother respected his decision despite his younger age. It is unusual for parents to respect the decisions of children, especially for pre-adolescents and on topics such as their diet (Wray-Lake, Crouter, & Mchale, 2010). Being a member of a Rudolph Steiner community could explain some of the norm breaking behaviours exhibited by Leonard's family, as Rudolph Steiner schools put more emphasis on childhood development and self-actualisation in pedagogical systems unlike more traditional curricula (Uhrmacher, 1995). Leonard's family moved so that he and his siblings could attend a Rudolph Steiner school, indicating that they shared some of the same values as the Steiner curricula, which could account for his mother's respect of his decision.

## Socioeconomic status (SES) and background (SEB)

The following section relates to all research questions since it is important to understand the context of SES and SEB. Discussions about SES and SEB generally began factually with interviewees talking about their background, with little room for interpretation. More in-depth discussions about SES and SEB arose when it was related to food and meat later in the interviews. SES and SEB influenced identities that were connected with meat consumption.

As Crothers (2014) suggested, discussing class in an Aotearoa New Zealand context created some difficulties. Although the idea of social class system is not as distinct in Aotearoa New Zealand as it is in other countries such as the UK, interviewees were aware of their socio-economic position in relations to others based on multiple factors used by Crothers, such as family income, education, job type etc. Although interviewees were able to describe their relative SES and SEB, the terminology used was not of class descriptions but rather of vague terms or non-descript scales. For example, the following quote was from Mustrum describing his family's socioeconomic situation during his youth: "At dad's house we were sort of at the lower end of the scale. At mum's we were kinda medium to lower". Other terms that were used included terms like "poor", "comfortable", "pretty broke", and "pretty standard in the middle".

The diet for those from lower SEB was a lot more basic than those who were more affluent. Angua, who grew up in a large family from a lower SEB, described her childhood meals as basic 'meat and three veg' type meals or bulk meals that could be conveniently made for her and her siblings. Gaspode describes a similar situation.

My family was on quite a low income. Things like cornflakes noodles. Usually carbs, nothing quite nutritional. Vegetables were in the fridge but there was like a coke bottle. Nah it was canned foods were there I guess the easier the food is to prepare the more likely it was to be bought for the children (Gaspode).

While certain types of meat, such as roast chicken or steak, were associated with special occasions, even those in the lowest SES had meat in most dinners. The meat that was in these dinners, however, was also of a lower standard, including cheap sausages,

off-cuts, and 'chuck steak'. Fruit and vegetables other than potatoes or onions were either absent or a rarity in the diets of those with lower SEB. In comparison, interviewees from more affluent backgrounds claimed that their diets growing up had a lot more variety in them, particularly more vegetables and fruit.

Occupying a higher SES enabled families to try more ingredients and a wider range of ingredients and foods. Lower SEB families did not have the same access to the variety in diet. This might account for why Mustrum still maintains a limited diet even to this day, as he has not been introduced to a wider taste palate. Although some respondents, such as Angua, also had a limited diet during childhood, life changes introduced them to a wider range of flavours later in life.

The omnivores interviewed felt that the price of meat has been increasing. As the literature suggests, the price of meat will inevitably increase with demand and as environmental costs are factored into costs of meat (Dodge, 2013; Tucker, 2013). However, this price increase currently does not faze some omnivores, such as Lobsang, who said the following: "Like if I want to eat something, I am going to pay whatever it is to do that. But I think some people might not be so well off so that might be why they don't purchase that much meat."

With other options available, such as purchasing meat of a lower quality, those who do not see any benefit in removing meat from their diet are unlikely to do so. Lobsang, coming from a migrant background, was raised on what he labelled as "typical Asian cuisine", but due to his family's lower SES, meat was a rarity growing up. He says that nowadays he has meat in every meal because he has control over purchasing it. In a sentiment shared by other omnivore interviewees, if the price of meat becomes too expensive, he still has the option to buy cheaper cuts of meat. Although meat prices are expected to increase, attachment to meat such as that exhibited by Lobsang means that there is still going to be demand for meat. Furthermore, it will be hard to ascertain the point at which it would become too expensive for someone like Lobsang to consider fully removing meat from his diet, as he has not experienced the extremes to which meat prices are expected to climb to.

Lobsang's perspective contrasts with Gaspode's. Gaspode, coming from a lower SEB, had a more pragmatic approach to the cost of meat.

I guess it might be wise or more cost efficient to be vegetarian. The amount of protein you can get from like lentils and beans is a lot cheaper than what you can get out of a 400g steak. For that price anyway (Gaspode).

Gaspode was much more open to the idea of replacing meat in diet with alternatives due to the strain of cost. However, Gaspode and other interviewees generally perceived many of the newer protein alternatives to be expensive, so it would seem replacing meat with alternatives is not a current solution for those who are of a lower SES.

The current study indicates that SES has an important role to play in meat consumption, especially for those in lower SES, but other factors, such as identities, appear to have a larger role. There is an absence of strong class or socioeconomic identities in Aotearoa New Zealand (Crothers, 2014). Rather than creating identities, SES and SEB work in conjunction with identities. SES can create or remove opportunities for identities to be realised more fully.



## Ethics, Environment, and Health

The following section predominantly relates to research question 1, though aspects from other research questions are also covered.

Three core factors consistently appeared in the interviews: ethics, environment and health. Interviewees discussed other factors that contributed to their reasons for and against veg\*etarianism, but these reasons were very specific to an individual, such as religious reasons. The following section will investigate the ways in which participants described the role that these three core factors played in their food choices.

Of the veg\*etarian interviewees, ethics was consistently the primary factor that led to their veg\*etarianism. Sam attributes his initial conversion to vegetarianism to ethical factors.

It was 100 percent the ethical side for me. I mean I don't really know if people were talking about the environmental aspects of it at that time. And certainly very few people were talking about the health aspects other than ya know, "health nuts", who seemed really extreme at the time, and yeah, I think you'll find a lot of people who are older vegans would have [come] around to it from an ethical perspective (Sam).

As Sam says, environmental concerns were not as widely acknowledged back when he first became vegetarian 40 years ago. Vegetarianism and veganism are originally rooted in ethical roots (Null, & Feldman, 2011). It is only in the last couple of decades that the environmental impacts and the health impacts have been investigated. The current study suggests that ethical and environmental impacts are intertwined, especially as veg\*etarians delve further into veg\*etarianism. As awareness of the ethical impacts of environmental degradation increase, interviewees stated they found it harder to think of one but not the other since the environmental degradation inevitably had ethical implications. The creation of a veg\*etarian identity also assists in this cross-contamination of environmental, ethical and, to some extent, health reasons. Susan sums this up in the following:

Becoming vegan sort of made me engage with political issues and social justice issues. Like the circle of people I engaged with [after] moving from [redacted] to London made me think about

other issues a lot more. So now it's about animal welfare and rights but also about environmental issues as well and to a certain extent about health but I mean, I ate pizza three times in a row this week. So, it's mainly about the animals and the environment (Susan).

As indicated by Sam, the environmental issues involved in mass meat consumption have only been investigated recently, which may explain why some of the older veg\*etarians expressed less concern for the environmental issues until much later in their veg\*etarianism. Susan, who was under the age of 25, had similar stages of progression through vegetarianism and then to veganism. Converting to vegetarianism for ethical reasons initially, Susan now says that her veganism is equally ethical and environmental. Leonard, also a younger vegan, stated that his reasons for becoming vegan were primarily environmental rather than ethical or health based.

One perspective that does differ from this considerably is the perspective of omnivorous hunter Vetinari. Vetinari's ethical perspective encapsulates the difficulties of understanding ethics from a single perspective: "I guess food is important to me. I mean we all need to eat. I mean I think to me not so much the meat is important but the idea of being self-sufficient and being able to harvest wild game."

Vetinari discussed the sustainability of hunting, using the whole animal with little waste, seasonal approaches, and having a greater awareness of where the meat is coming from. He also expressed concern for the systems in which meat is mass produced. Vetinari's perspective is reminiscent of discourses about working with nature found in the perspectives of indigenous peoples from the Amazon (Constantino, Benchimol, & Antunes, 2018; Shepard, Levi, Neves, Peres, & Yu, 2012). Hunting practices in the Amazon have been around for centuries and by following rules such as taking only what is needed and showing respect for nature, these practices have been shown to be a sustainable part of the ecosystems. Vetinari's perspective also relates to other discourses that are prevalent in Aotearoa New Zealand regarding the concept of pests and invasive species and a need to control their populations through culling and trapping (Brenton-Rule, Frankel, & Lester, 2016). The Department of Conservation regularly culls species such as wild goats and deer, contracting to hunters such as Vetinari (Figgins, & Holland, 2012). Due to the impact that some species have on our taonga species, these culls are perceived

to be an important strategy in conservation efforts. Many of the environmentally detrimental aspects of meat consumption come from the production systems used by the AIC, as opposed to hunting. The environmental issues with meat stem from providing meat in the quantities that it is being demanded at. While hunting can be sustainable practice for smaller communities, supplying meat for larger populations is not achievable through hunting and has historically led to the extinction of species (Bar-Oz & Nadel, 2013; Thomas, 2017). Vetinari goes on to say: “If I wasn’t a hunter or a fisherman, I would probably still eat meat, but I would be very conscious of how much I’m eating.”

The relationship Vetinari had with meat was very different from that of the other omnivores. For example, when asked for possible reasons for why vegetarians do not eat meat, the ethical arguments were not even considered by respondents like Mustrum, Lobsang, and Dibbler. Gaspode said that he believes that there is no humane way to kill an animal and he will support the ethical treatment of animals where he can, although he is hindered by availability, costs, and family and cultural obligations, such as tangi.

While ethical and environmental concerns of meat consumption overlapped in discussions, health was treated quite separately. Both veg\*etarians and omnivores were reluctant to openly say that health had any influence over what they ate, or they actively suggested that they cared very little about health concerns. Interestingly, the same respondents would go into great detail about the health aspects of their food or, especially for the omnivores, discuss the health risks of not eating meat.

The two who were most interested in health concerns were Sam and Vetinari, both of whom came from middle upper SEB, and had worked in or were close to someone who worked in healthcare. Sam, being a vegan, was particularly concerned with the statistics concerning men’s health and meat consumption.

I think a lot of that [statistics about female and male veg\*etarians] ties into the toxic masculinities which are the roots of a lot of issues for the men in our country. And it was driving a lot of men to not look at alternatives [to meat] despite heart disease being the number one killer of men in New Zealand. And they just blindly ignore that (Sam).

Vetinari, conversely, suggests that health problems stemming from preservatives used in some popular processed meats is negatively impacting perceptions of meat.

So yeah, I think nitrates probably is one of the things that are contributing to the whole like “meat is bad for you”. Cause a lot of people eat that pretty processed stuff and all of those preservatives that are skewing the studies. Other than that. I think I am supposedly quite healthy, and I eat a lot of meat so yeah (Vetinari).

It may be that the health concerns of Sam and Vetinari are more prominent than those of other interviewees because health issues are a salient issue to them, Sam having worked in health services and Vetinari being in a relationship with someone working in health services.

Esme expressed health concerns as well. When asked what influenced her decision to transition to veg\*etarianism Esme said the following:

Ethics and also nutrition. I probably sway in between. I find it quite hard to stick in one path. I’m also exploring the idea of intuitive eating. I think it’s a lot more healthy. And so, if I feel like today is the day I need fish, I’m not going to stick to an ideology rigidly (Esme).

While Esme works a sedentary office job, her hobbies and activities outside of work tend to be high energy and rigorous activities such as long-distance biking, kayaking and other physical activities. These activities have high demands on the body and require greater attention to nutrition. This contributes to Esme’s concern about the health aspects of eating meat. These active health concerns are paired with healthy lifestyles extending beyond just diet. A higher SES gives people access to resources that can assist in making better choices related to their overall health (Pinto Pereira, Li, & Power, 2015). Similar to the findings of Dolan (2011), health practices varied greatly between higher SEB and lower SEB interviewees.

Other interviewees provided contrasting perspectives on health concerns and meat consumption, such as Susan. Leonard provides a much more pessimistic view of health concerns regarding meat consumption.

I know meat is very unhealthy, but also I don’t consider myself a healthy person. Like I eat what I feel like and how much I feel like and there is that one day every month where I am like

“I am going to get in shape and get fit” it still happens. So yeah for the most part I am not the most-healthy. Like I would not consider myself health conscious. But just through being part of vegan society, you hear all the propaganda about how bad meat is in every single way (Leonard).

Both Leonard and Susan stated that health concerns do not influence their dietary decisions in any way. However, both acknowledged the importance of having balanced diets and checking where they get nutrition from. They were aware of the health benefits of consuming less meat but treated it as “an added bonus” rather than a motivation.

Omnivores with low health concern had a similar attitude to Susan and Leonard. Dibbler explains his relationship with healthy eating in the following quote.

I do a lot of things in my own life that are detrimental to my health. Like I smoke and I drink. I just eat mainly for convenience and sometimes I splurge and eat for pleasure and when I say that I mean fast-food (Dibbler).

Omnivores with low health concerns for their diet did not consider the health aspects of meat consumption. The topic in which health concerns seem to matter most for both veg\*etarians and omnivores is when discussing protein alternatives.

## Protein alternatives

The following section relates to research question 4. All interviewees were asked questions about their opinions on protein alternatives. Overall impressions of protein alternatives were mixed for the interviewees, and in some cases, interviewees had conflicting views on meat alternatives.

For omnivores, the main ideas that surfaced regarding meat alternatives related to questioning why they were necessary. This sentiment was summed up by Mustrum, “I’m just sceptical really. Like I enjoy the real thing, so I wouldn’t need to find an alternative”.

For omnivore interviewees that had no intention of reducing meat consumption, the idea of meat alternatives was quite unusual. As the three key factors did not seem to influence their food choices, it is perhaps no surprise that they saw little value in meat alternatives. The current costs of these alternatives are relatively high, making them largely unavailable, while meat is available with cheaper options. For example, Vetinari who sourced most of his meat from hunting had the following to say:

At the end of the day I'll still probably rather go out [to hunt] and ya know maybe in time if there are decent alternatives and they actually taste as good as what meat does. Cause meat does taste good. If they are a solid alternative, then maybe some of my bought meat will be replaced, I'm not sure yet (Vetinari).

With less financial pressure to find alternatives, Vetinari can wait for meat alternatives to improve, and even if this does not happen it will not be an issue for him. Lobsang similarly stated that he would just spend the extra money required to have meat in his diet, although he understood that price could affect those less affluent than himself.

The flavour of the alternatives was a main consideration for Vetinari, who stated that he has tried several meat alternatives but was so far unimpressed, finding that they lack the culinary benefits of real meat. Although taste palates are affected by what foods we are familiar with (Fischler, 1988), the flavour of meat is a source of enjoyment for many. Recreating the culinary aspects of meat is a major goal for producers of alternatives.

Vetinari also had serious doubts about the health aspects of alternatives. He said that he did not have enough information about alternatives yet to have an informed opinion.

He stated that he was unsure of what chemicals they were using to create them and that the potential risks were too much for him to ignore. Concern for the health aspects of alternatives was shared between other omnivores.

Omnivores' perspectives on meat alternatives were not all negative. While Mustrum was "sceptical" of these alternatives, he had tried jackfruit based 'pulled pork' and gave it a positive review. Other omnivores were more willing to try these alternatives, and many had. Dibbler stated that he was interested in some of these alternatives, particularly lab grown meat: "To be fair I am all for it. Because being from a science background, if you can do it and it works and it is practical for the environment and it works. Then that is my opinion."

Not only does Dibbler's comment suggest willingness to try alternatives to meat, he also acknowledges possible environmental benefits to meat alternatives. Other omnivores acknowledged the benefits of meat alternatives, such as alleviating environmental and ethical concerns. Gaspode stated that he would rather eat something that tasted like meat because it would reduce the death and suffering of animals. If alternatives were cheaper and more readily available, Gaspode claimed that he would have no issue with eating them in place of meat since he currently tried to eat things that tasted like meat rather than actual meat because of the price.

The perspectives of Vetinari, Lobsang and Gaspode relate to the hypothesis that transition to meat alternatives will be hindered due to socioeconomic reasons. Those who can afford protein alternatives will not generally accept them and so will not allow for production to make them economically viable for those who would rely on them. Although Gaspode sees the merit in meat alternatives, they are so far not a viable option given his current SES, while Vetinari has no need for them and can wait until they reach a status that he is satisfied with. Similarly, Lobsang claims that he would increase spending on meat before considering meat alternatives. While these perspectives might give some indication of how meat alternatives might be accepted, it is difficult to gauge accurately how individuals will behave without them having experienced the predicted price increases of meat. Without the investment from those who can afford them, the

development of newer protein alternatives is going to be delayed, thus delaying normalisation for those who cannot afford them currently.

Even though some of omnivore interviewees acknowledged the negative impacts of meat consumption, they are not in positions where they view these factors as important enough to warrant a change in diet. Due to these reasons and the higher costs associated with current meat alternatives, they are generally not accepted.

For veg\*etarian respondents, different discourses were more prevalent. While veg\*etarian interviewees were more in favour of alternatives, there was still resistance to the ideas, particularly for environmental reasons and health reasons. Susan said the following regarding most mock meats.

A lot of the Asian mock meats, while they are tasty, a lot of them are heavily packaged in plastic which kinda contradicts one of the reasons I am vegan in the first place. So yeah that kinda conflicts my environmental identity (Susan).

Susan's sentiment was shared among other veg\*etarians, who also acknowledged the heavy packaging used by most brands of meat alternatives. Susan and Sam both stated that they happily make their own mock meats, such as seitan, using traditional methods which avoid heavy packaging.

Like the omnivores, veg\*etarians also expressed concern about the health aspects of these products. For example, Leonard said the following, "I don't think they are a health alternative. You do need to pay that little bit extra attention to get your protein from those. So yeah, I wouldn't consider them to be a health alternative.". As demonstrated by Vetinari, there is general mistrust of the chemicals used to create the flavours and textures of some fake meats. The perspectives on the health aspects of protein alternatives were less positive.

From an ethical perspective, protein alternatives were more positively received by the veg\*etarian interviewees. This perception was based on the reasoning that if these alternatives meant animals were not being killed then participants felt they were making a positive impact. Even in cases where the interviewee themselves did not eat the alternatives, they generally shared this sentiment.



Some veg\*etarian interviewees were disturbed by newer alternatives such as the “Impossible Burger” that uses a combination of vegetable-based oils and proteins to recreate the culinary sensation of meat (Wiles, 2018). This was more of an issue for interviewees like Susan who were disgusted by the idea of eating animals.

I went to the whole foods store in New York and they were doing examples of the Beyond Meat burgers and I don’t think the samples guy has never seen someone so excited. But yeah it was kinda weird they put like beetroot juice in it to make it look like pink, so this was kinda weird for me because it was something I never enjoyed before (Susan).

This criticism only focuses on a very small portion of the available meat alternatives. The context for these alternatives already matters greatly in this regard; if the alternatives are being created to appeal to the environmentally minded but not so much ethically minded, it makes sense for the producers to try to recreate the sensations of meat as closely as possible especially if the goal is to appeal to current omnivores.

The perceived health risks, high costs and environmental impacts of alternatives are some of the barriers to fake meats being incorporated into veg\*etarian diets in the same way that meat is included into typical omnivore diets (Arcari, 2017). Rather, these alternatives are considered as special treats. Leonard’s attitude towards fake meats is summarised as such.

They are not part of my regular diet. But every time I discover a new one. I will try that. Just a couple of times just to experience it. But for the most part I stick with my veges except things like I have got like textured vegetable protein (TVP) in my cupboard (Leonard).

Susan originally had a similar view on meat alternatives.

I’ve tried a lot. The year before I came to New Zealand I went on a lot of short of trips and my approach to vegan food at that stage was kinda like Pokémon, where you have to catch them all (Susan).

Susan’s opinion of fake meats has changed in recent years and she is less reliant on them to fulfil the role they had when she was first becoming vegan.

Veg\*etarians who had been veg\*etarian for longer were less enthused about alternatives. Having been used to cooking veg\*etarian foods without need for alternatives, both Sam and Angua were more apathetic towards fake meats, keeping them around for convenience items for children but otherwise relying on familiar meals cooked from base ingredients such as vegetables.

Veg\*etarian interviewees' discussions regarding foods such as TVP distinguish a barrier between the more widely accepted protein alternatives and newer ones like the Quorn range or Impossible Burger. TVP, while still a protein alternative, is not seen as a fake meat like the other ones. Leonard made a distinction between more recent meat analogues and these older more accepted ones by using words such as "normal" or "typical". Similar discourses were used to describe foods like seitan and tofu by other respondents, indicating greater social acceptance of these alternatives that have been around for longer (Asgar, Fazilah, Huda, Bhat, & Karim, 2010). Seitan and tofu are both regular food stuffs in many Asian cultures (Asgar et al., 2010; Nath, & Prideaux, 2011). Omnivore interviewee Lobsang commented on the perception of tofu and seitan as alternatives saying the following, "It's like a side dish. It is very common in the Asian countries. Like it is not really an alternative." Foods like seitan and tofu have had time to enter a state of normalisation in parts of Asia, and the current interviews indicate that they are entering a state of normalisation here as well.

Sam also commented on another aspect of the normalisation of these substitutes in Asian cuisine. Like Lobsang's comment that substitutes are not meat alternatives but instead considered food in their own right, Sam said the following:

They have existed in a variety of cultures for a variety of times. I think part of the reason why they are called fake meat in New Zealand and western cultures is because of this bizarre focus around meat having to be the centre piece (Sam).

Considering that every interviewee, apart from Susan, mentioned the term "meat and three veg", the idea of veg\*etarian meals would be hard to fathom for people who are raised viewing meat as the centre piece of a meal. Sam continued to discuss the politics behind the naming of fake meats or mock meats.

One thing I do find funny is how defensive people who make meat or make money from meat get about the labels of fake meat, and I think they are more concerned than anyone else I know of. One of the states in America has now said that you can't call a vegetarian hotdog a hotdog apart from the irony that it contains zero dog (Sam).

While Sam finds it weird that there is a need to name protein alternatives fake meats, he also questions the motivations behind the resistance to naming them as fake meat. The social acceptance of food is a crucial part of the normalisation (Robinson, Tobias, Shaw, Freeman, & Higgs, 2011). While the older substitutes appear to be more normalised, it is the newer protein alternative products which still have some way to go before they are accepted into mainstream diet.

Protein alternatives or meat analogues still have a way to go, both in their development and in their acceptance. The current availability of meat is one such barrier, but in the way that cultural cuisines can adapt and change over time, there is evidence to suggest that protein alternatives are currently changing their position in our society. The role of meat alternatives could possibly play a bigger part in the future of veg\*etarian cuisine as well. While the older veg\*etarians have developed food styles with a lack of these options, the role that they are playing in the conversion of newer veg\*etarians could mean they become more normalised rather than the token position they have now, especially considering the growing awareness of meat impacts other than ethical.

## Identity

The following section focuses on research question 2, though it can be related to most other research questions as it deals with identity and the social identity theory.

Interviewees were asked to discuss their own identities. This was open to interpretation by the interviewee. Specific questions were asked to gain insight into their perceptions on topics such as gender and ethnic backgrounds. Any discussion was linked back to topics about food and meat consumption. Veg\*etarian interviewees were also asked whether they identified with a veg\*etarian identity and how that manifested itself.

Of the five veg\*etarian respondents, two identified as male - Sam and Leonard. Leonard's own masculinity did not appear to be a huge influence on his identity. When asked about his own masculinity, Leonard claimed that he was a "relatively normal middle-class white male" and had very little to add to this. Leonard did not indicate that he participated in many activities that would indicate him as being particularly masculine. Sam on the other hand was very critical of masculinity. He quickly linked masculinity to meat consumption.

There is so much more there to do with masculinity. Around the world in general but in New Zealand specifically and there is a reason that suicide rates are so high among middle aged men. And I think that has the same roots as why there are so few vegan men (Sam).

Sam made links between the processes of masculinity in Aotearoa New Zealand and men subduing emotional availability. This emotional availability, Sam argued, was crucial to finding empathy that would be conducive to ethical concerns of veg\*etarianism. Much like what Dolan (2011) found, health seeking behaviours in men was very low as well; a result of masculine ideals combined with a need to suppress displays of emotionality. Having a background in men's healthcare, Sam has redefined, or at least distanced himself from hegemonic masculinity - although he struggles with some of the issues caused by toxic masculinity culture in Aotearoa New Zealand. His perspective on the negative impacts of masculinity assisted with this realisation. Furthermore, Sam's perspective on masculinity is integral to his perspectives on social justice issues and veganism. Sam's social circles from the moment of his time of change to veganism have had a strong focus

on social justice issues, including issues related to gender and masculinity. Not only has Sam had social space to redefine his own masculinity, he understands why he had to, a perspective some omnivore interviewees did not have.

Female veg\*etarian interviewees did not have as much to discuss about topics of gender and masculinity, mostly relating it to facts about veg\*etarianism being heavily female dominated.

All five omnivore interviewees identified as male. All of them also displayed examples of strong connections between masculinity and meat consumption at some point - from discourses about primal instincts and cooking food with a BBQ to explicit links with sexuality. For example, Lobsang had the following to say when asked if he felt there were more female or male vegetarians “Definitely more female. It is trending more towards like more female. Like they can do more alternatives while meat is more for like men.”. Comments like Lobsang’s show the strong connection between meat consumption and masculinity and acceptance of gender norms.

Throughout the interview Lobsang displayed examples of traditional and hegemonic masculinity, showing that masculine ideals were a strong source of identity for him. As social identity theory suggests, individuals gain a sense of belonging from their perceived social groups (Ashforth, & Mael, 1989). When asked if he was a typical Kiwi male, Lobsang was quick to acknowledge that although he “didn’t look like one”, a reference to his Asian heritage, he was “definitely a Kiwi male”. Lobsang used phrases like this or other phrases of othering to distance himself from his Asian heritage in favour of masculine identities, indicating that his masculinity was a greater source for group subscription for him. This could also explain why he did not question the masculine ideals as much as Sam, as his masculine ideals have a positive impact on his self-image and group subscription - therefore questioning his meat consumption rather than accepting it as a norm would cause severance from a source of self-confidence.

Gaspode was more questioning of the norms associated with masculinity and meat consumption when asked if his identity as a male influenced his diet.

I don't think sex has a lot to do with diet at all. I don't know if that is true or not. But for me personally sex is not a factor in what you eat. Obviously nutritionally yeah but other than that don't think it would change what you have in your fridge. That is all being pushed on to you. Like if you don't eat seafood chances are your parents didn't love seafood (Gaspode).

While Gaspode acknowledged that foods can be gendered, he attributed this more to social influences than to gender essentialist arguments. Even though Gaspode portrayed several discourses that could be considered traditionally masculine, he also questioned his masculinity. Gaspode had group subscriptions beyond his gender that were sources of identity for him, such as ethnic group subscriptions. These other sources of identity offered Gaspode an option to adhere to hegemonic masculine ideals to a lesser degree and question them. Gaspode does not outright reject meat consumption but acknowledges the ethical issues of it and expresses a desire to consume less meat but finds alternatives too expensive. Gaspode is not bound by masculine attachments to meat; rather his lower SES restricts his options.

The hypothesis argues that higher SES would create more opportunities for individuals to gain other sources of identity, freeing them from pressure to conform to pre-existing identities such as masculine identities. Some interviewees indicated they had sources of identity outside of gender, enabling them to question gender norms more freely. While Sam portrayed an example of this, he also had reason to question masculinity. Gaspode was also questioning these gender norms, but it was not through SES that other opportunities became available to him. For others, like Lobsang, there may have been opportunities to question aspects of masculinity but in the same way that he did not see the need for alternatives when real meat was good enough, there was no need to question masculinity when it worked well for him.

Other identities were identified throughout interviewees, such a green identity or a veg\*etarian identity. One identity that consistently had a large influence over diet was ethnic background. Ethnicity was an important factor in terms of what food interviewees grew up eating. With interviewees like Mustrum this was perhaps more significant, since he did not branch out into other foods beyond his own culture as much as others had.

When asked about their identity and background, almost all interviewees provided details about their ethnicity and cultural backgrounds. Some exceptions to this were Pākehā interviewees such as Mustrum and Leonard who would use language like “standard kiwi male” to describe themselves. When interviewees more strongly identified with their ethnic heritage, they were more likely to connect food to their ethnicity, or cultural background, than to their gender. For example, Vetinari said the following when asked what kind of meals he had growing up, “I mean yeah, we varied from anything from Mexican to Italian, quite a lot of Italian because my family is Italian. Pasta bolognaise, spaghetti bolognaise. But yeah. Like ya know roasts just kind of stock standard stuff really.”. Similarly, Dibbler spoke about how his mum would cook traditional Filipino dishes, which are now a comfort food for him. Although interviewees mentioned that their cultural background influenced what meals they grew up with, this was not necessarily an everyday occurrence.

For some interviewees, their ability to practice their ethnic identity through food was hindered by socioeconomic factors. Gaspode mentioned that for special occasions such as Tangi and weddings, there would be a hāngi or food that had greater links to his cultural background, however these events did not happen very often. Gaspode’s SEB meant that the standard everyday meal was a lot different. He mentioned that his household growing up was more likely to have convenient foods with no nutritional value. Canned foods and fizzy drinks were common while vegetables were rare. Gaspode’s ability to practice his cultural identity through food was limited due to socioeconomic factors; instead Gaspode’s family relied on foods that were heavily promoted by market forces (Abbasi, 2017).

Foods like the ones that Gaspode described are becoming the new culturally accepted foods and norm. Gaspode’s experience is not unique - cheap convenient meals or junk food have become staples for those who occupy a lower SES (Abbasi, 2017). When Angua described the foods that she ate in her childhood home as being cheap meals, she described different types of meals.

I do remember having a lot of quite simple meals. We would have canned spaghetti, and baked beans. That would be a meal. Maybe I just remember those ones because they were quite boring. But I think maybe the blended family and having five kids, financially it was quite difficult. What else did we used to have? Ohh curried sausages. Mince and French toast we had it for like dinner sometimes (Angua).

Although these different descriptions of cheap meals have some aspects in common, such as the canned foods, it shows how perceptions of cheap meals have changed from the 60s in Angua's childhood to the 90s in Gaspode's childhood. Food availability has changed, as has food costs, although the cost of meat has been kept artificially low. In other cases, certain industries have been able to hold sway over the public to promote foods, such as fizzy drink companies that have been influential enough to replace free water as a staple in households such as Gaspode's (Abbasi, 2017). Sam argues that the meat industry uses these methods to promote meat as a staple. This process that normalises meat consumption is assisted by the same processes that give us the "standard three veg and meat" meal.

When Mustrum and Leonard used phrases such as "standard middle-class white male" to describe themselves they demonstrated views of majority as normal. This perception is a result of the same processes described by Pyke (2000), whereby the mainstream is perceived to be "normal", and it ignores the cultural baggage of Aotearoa's colonial past and the role that English culture played in influencing diets across the empire. As Junor (2016) argues, the idea of the "meat and three veg" meal was inherited from English colonial powers and had such a strong impact on the colony of Australia that to this day it is still seen as "your standard meal". The current study suggests that Junor's argument applies to Aotearoa New Zealand as well, as most interviewees mentioned the meat and three veg meal. Junor also argues that meat and three veg approaches towards food are hugely influential in promoting meat as the centre of any meal, thus promoting the necessity of meat itself. Due to these meat centric views, it is unlikely that a major switch to veg\*etarian diets in Aotearoa New Zealand will be possible without the availability of protein alternatives - yet at the same time, these meat centric views demote the acceptability of protein alternatives.



Links between food and cultural identities are strong, as previous literature has indicated, and persist intergenerationally. The role of meat and three veg meals are culturally connected to colonial heritage and despite the existence of a new Aotearoa New Zealand identity with eroding connections to English identity, the meat and three veg meal remains. Cultures can adapt to new foods over time; for example, Italian cuisine nowadays heavily relies on tomatoes, a fruit native to South America, and Pacific island foods now include red meat whereas prior to colonisation they were mainly pescatarian (Hughes, & Marks, 2010). Change and normalisation to cultures and food linger across generations, so these changes do not occur quickly. This is shown in the example of Dibbler and his fondness for Filipino dishes. Dibbler's mother and grandmother had been removed from their Filipino and Spanish roots for most of their lives, yet they still maintained connections to these roots through food. It was also this food that was Dibbler's only connection to this side of his heritage. Despite changes in the circumstances that established meat and three veg as "the standard" meal, the meal still exists and is still considered "the standard". Almost every interviewee talking about the meat and three veg meal, but those with connections to other cultural identities were more likely to mention eating a variety of meals growing up which also assisted some with having less meat centric views on meals.

Given Aotearoa New Zealand's history of colonisation, interviewees often stated they had ancestors from a variety of heritages, but typically they would identify with one or a few that were more important to them. For example, Esme stated that her family was both Jewish and South African, though the South African side had much less impact.

I think the Jewish part is quite the central part of my identity. The people I know are Jewish, but also because my values are Jewish. And I think values define who you are as a person. South African not so much because my parents left South Africa for a variety of reasons. They grew up in apartheid South Africa and absolutely hated and vehemently opposed to apartheid, so they didn't really teach us about South Africa (Esme).

Although Esme and her family did not fully identify with her South African roots, South African food was still a part of their diets when they immigrated to Aotearoa New Zealand - as seen through her fondness for foods such as biltong. In Esme's case she also had her

Jewish heritage which she could align herself with, and this helped provide options that were not so meat orientated. While South African culture is heavily meat orientated (Jankielsohn, 2015), Esme aligned more with her Jewish identity which had a less meat centric view on meals due to factors such as following the laws of kashrut and providing vegan options for others in the community (Graham, 2018).

Having access to multiple identities provides options. Whether these are based on ethnic/cultural heritage or masculinities, the interactions between these and an individual's personal connection to them influences their food preferences and diet. While socioeconomic factors will inevitably impact those in lower positions, such as Gaspode's family, the negotiation between these multiple identities and values has more influence over meat consumption as a choice.

## Chapter 6: Results study 2

“Charles: SHE’S A VEGAN!!

Rosa: What is going on?

Charles: You’re right. I couldn’t help myself. I wanted to know about her. And I got what I deserved – A vegan! A gluten-free vegan!” (Tredici & Scanlon, 2015, 00:14:38)

### Introduction

The following chapter will discuss the results of the quantitative online survey. In total 510 respondents fully completed the survey. Omnivores and Veg\*etarian respondents were asked different questions - due to this they were analysed separately.

At a glance, the demographics are not representative of Aotearoa’s population as a whole. While it is common to have higher female respondents in online surveys, this appears to be exacerbated by the higher quantity of veg\*etarian respondents, a predominantly female demographic (Branley, Covey, & Hardey, 2014; Ruby, 2012). Similarly, it is not surprising that younger demographics are overrepresented in the data due to the use of online recruitment methodologies as younger demographics tend to be online and connected through social media more so than older demographics (Branley et al., 2014). Table 3, overleaf, provides a breakdown of the demographics of the sample.

**Table 3**  
Demographics

	Total (N=510)		ANZ population**	Omnivores (n=167)		Veg*etarians (n=343)	
	#	%	%	#	%	#	%
<b>Gender</b>							
Female	428	84.1	51	124	74.3*	304	88.6*
Male	73	14.3	49	37	22.2*	36	10.5*
Non-binary	8	1.6	ND	6	3.6	2	0.6
<b>Age</b>							
18-24	195	38.2	16.4***	51	30.5*	144	42*
25-34	154	30.2	17.6	60	35.9*	94	27.4*
35-44	63	12.4	15.3	20	12	43	12.5
45-54	60	11.8	16.5	22	13.2	38	11.1
55+	38	7.5	34.1	14	8.4	24	7
<b>Ethnicity</b>							
Pākehā/NZ European	432	84.7	70	144	86.2	288	84.0
Māori	37	7.3	17	10	6	27	7.9
Pasifika	8	1.6	8	1	.6	7	2.0
Asian	36	7.1	15	10	6	26	7.6
Other	65	12.7	1	17	10.2	48	14.0
<b>Veg* status</b>							
Vegan	229	44.9	ND	0	0	229	66.8
Vegetarian	82	16.1	ND	0	0	82	23.9
Pescatarian	32	6.3	ND	0	0	32	9.3
Omnivore/ meat eater	167	32.7	ND	167	100	0	0

\*Denotes a significant difference between Omnivores and Veg\*etarians.

\*\*Based on results of the 2018 New Zealand Census (Stats NZ, 2018)

\*\*\*Percentage of those between the ages of 15-24.

Although this study focuses on masculinity as opposed to gender identity, the overrepresentation of female respondents is something to consider when interpreting results. Ethnicity and cultural backgrounds were identified as a major influence on diet in the qualitative results. Unfortunately, due to the over representation of Pākehā respondents and small sample sizes of other demographics, ethnicity was not used in further analysis.

A Cronbach's Alpha test or reliability was used to measure the internal reliability of the two scales, TMF and MAQ, used in the current study. The TMF scale consisted of 6 items and was found to be highly reliable ( $\alpha=.90$ ).

The MAQ scale overall had a low alpha (16 items,  $\alpha= .65$ ). As the MAQ scale consists of four subscales, this low alpha is not surprising. As the emphasis of the MAQ is on the four subscales, this low alpha does not have any repercussions on the analysis. The MAQhed subscale consisted of 4 items ( $\alpha=.92$ ), the MAQaff subscale consisted of 4 items ( $\alpha=.88$ ), the MAQent scale consisted of 3 items ( $\alpha=.88$ ), and the MAQdep subscale consisted of 5 items ( $\alpha=.88$ ). All of the subscales exceeded the accepted level of ( $\alpha=.70$ ) and as such are considered reliable.

A Pearson correlation test was used to measure the correlation coefficient between three demographic variables (TMF, income from previous 12 months, and SEB) and the MAQ subscales. There was a negative correlation between TMF and every MAQ subscale. The strongest relationship was between TMF and MAQhed,  $r=-.213$ ,  $p \leq .001$ , which indicates that the more traditionally feminine a respondent is on the TMF scale, the lower they will likely score on the MAQhed scale. The second strongest relationship was between TMF and MAQdep,  $r=-.172$ ,  $p \leq .001$ . This indicates that feminine identities are less likely to suggest they feel the need for meat, while masculine identities are more likely. The relationships with MAQaff,  $r=-.158$ ,  $p \leq .001$  and MAQent  $r=-.127$ ,  $p = .004$ , were lower but still significant.

Income from the last 12 months was positively correlated with MAQaff,  $r=.108$ ,  $p=.016$ , and MAQhed  $r=.092$ ,  $p=.039$ , suggesting that higher income was associated with enjoyment of meat and overlooking the impact of meat. These findings offer insight into research questions 2 and 3, confirming that masculine identities are linked to meat consumption, particularly enjoyment of meat, so this will create barriers as well. SES as measured by income for the last twelve months correlating to both hedonism and affinity is conducive to other results, suggesting that more expensive cuts of meat are more desirable.

SEB had no significant correlations with any MAQ subscale. See Table 4, below, for more details.

**Table 4**  
TMF, income, and SEB correlated with MAQ subscales

		<b>MAQhed</b>	<b>MAQaff</b>	<b>MAQent</b>	<b>MAQdep</b>
<b>TMF</b>	Pearson Correlation	-.213**	-.158**	-.127**	-.172**
	Sig. (2-tailed)	0.000	0.000	0.004	0.000
	N	509	509	509	509
<b>income from last 12 months</b>	Pearson Correlation	.092*	.108*	0.059	0.084
	Sig. (2-tailed)	0.039	0.016	0.187	0.060
	N	502	502	502	502
<b>Family situation under the age of 10</b>	Pearson Correlation	0.058	0.008	0.022	0.025
	Sig. (2-tailed)	0.189	0.857	0.620	0.576
	N	508	508	508	508

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Because omnivores and veg\*etarians were asked different sets of questions, the remaining data for omnivores and veg\*etarians was analysed separately.

## Omnivores

### Descriptive statistics

There were 167 respondents who described themselves as omnivores. As seen in Table 3, most omnivores in the study identified as female (74.3 percent, compared to 22.2 percent as male, and 3.6 as non-binary). Despite this, the mean score on the TMF scale was relatively central ( $M=4.50$ ,  $SD=1.30$ ). The TMF scale went from those identifying as highly traditionally feminine (1), to highly traditionally masculine (7). The average age of omnivore respondents was 33 ( $M=33$ ,  $SD=14$ ). Most omnivores stated they earned less than 40,000 NZD per year (56 percent) with only 9.6 stating they earned 80,001 NZD or more per year. Roughly two-thirds of omnivores (66.3 percent) stated they were from a medium SEB, while 15.7 stated being from a low SEB and 18.1 percent stated they came from a high SEB.

The MAQ was measured on a scale from 1, representing low meat attachment, to 5, representing high meat attachment. The mean score for the MAQ for omnivores was 3.1677 ( $SD=.82$ ). Of the subscales, MAQaff was ranked the highest for omnivores ( $M=3.89$ ,  $SD=.89$ ), followed by MAQhed ( $M=3.43$ ,  $SD=.95$ ), MAQent ( $M=2.95$ ,  $SD=1.18$ ) and lastly MAQdep ( $M=2.51$ ,  $SD=1.04$ ).

When asked if they ate more or less meat now than when they were younger, 50 percent stated that they ate less, while 13 percent stated that they ate more. Respondents who stated they ate less meat now ( $n=80$ ) were asked to describe reasons for this, and responses were coded into several categories including health reasons and ethical reasons. The most stated reason for eating less meat now (35.9 percent) was related to the increased cost of meat. Environmental concerns were the second most stated reason at 34.6 percent, followed by health concerns (19.2 percent), and ethical concerns and general statements about having more freedom to choose what they wanted to eat (17.9 percent).

Omnivores were also asked how likely, on a scale of 1 being highly unlikely, to 5 being highly likely, they were to replace some or all of their meat consumption if alternatives could match the flavour and texture of real meat, or the health benefits of real meat.

Health aspects of meat alternatives ranked slightly higher than taste ( $M=3.49$ ,  $SD=1.35$  for health benefits compared to  $M=3.32$ ,  $SD=1.49$ ).

## Correlations

A series of Pearson Correlation tests were conducted using SPSS to examine correlations between key variables in this sample.

For omnivore responses, the main variables used to analyse data were the TMF scale, income from the last 12 months, and SEB. Because of the overrepresentation of Pākehā respondents and underrepresentation of other ethnic groups, it was not possible to do analysis by ethnicity.

A Pearson correlation test was used to investigate the relationship between “likelihood of replacing meat with meat substitutes” and masculinity, income, and SEB. Whether or not meat consumption had been reduced or increased in recent years was also analysed by these demographic variables. There was a negative correlation between income from the last twelve months and likelihood to replace meat based on health issues,  $r=.224$ ,  $p = .005$ . This indicates that people from a higher income are less likely to replace meat with substitutes even if it can replicate the health aspects of meat. There were no other significant correlations between demographic variables and likelihood to replace meat variables. This relates to research question 4, indicating that meat substitutes may play a role in replacing meat for those who are less well-off financially. The overall unwillingness to replace meat with meat substitutes is also reflected in the qualitative results.

TMF and quantity of meat eaten compared to when participants were younger had a negative correlation,  $r=-.318$ ,  $p \leq .001$ . Respondents who scored higher (i.e., more traditionally feminine) on the TMF scale were more likely to say they also ate less meat now, meaning that higher traditional masculinity was correlated with eating more meat. This relates to research question 3 and reflects what is generally observed in the current literature. Masculinity and masculine identities are linked to meat consumption, while



feminine identities do not have this attachment. This suggests that masculinity may be a barrier to meat reduction. See Table 5, below, for more details.

**Table 5**

TMF, income, and SEB correlated with likelihood of consuming meat alternatives and meat reduction

		If meat substitutes could be made that tasted and felt like real meat	If meat substitutes could provide the same health benefits of real meat	In terms of overall quantity, would you say you eat more or less meat than when you were under eighteen?
<b>TMF</b>	Pearson Correlation	-0.086	-0.024	-.318**
	Sig. (2-tailed)	0.276	0.763	0.00
	N	163	163	160
<b>income from last 12 months</b>	Pearson Correlation	-0.112	-.224**	0.108
	Sig. (2-tailed)	0.160	0.005	0.178
	N	159	159	157
<b>Family situation under the age of 10</b>	Pearson Correlation	0.090	0.055	-0.043
	Sig. (2-tailed)	0.254	0.489	0.591
	N	163	163	160

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

To further investigate research question 4, a Pearson correlation test was performed to measure the same questions regarding meat alternatives against the MAQ subscales. MAQ was negatively correlated with likelihood to replace meat with alternatives if health aspects could be replicated,  $r=-.517$ ,  $p\leq.001$ , and to a lesser degree if taste could be replicated,  $r=-.403$ ,  $p\leq.001$ . The health question was consistently more strongly related with all the MAQ subscales compared with the taste question. The biggest difference was recorded for MAQhed, where the correlation between the health question was  $r=-.388$ ,  $p\leq.001$ , compared with  $r=-.201$ ,  $p\leq.01$  for taste. MAQdep had the strongest correlation with both questions ( $r=-.445$ ,  $p\leq.001$ , for health and  $r=-.410$ ,  $p\leq.001$ , for taste), and in comparison, MAQhed, while still significant, had the weakest correlation ( $r=-.388$ ,  $p\leq.001$ ,

for health and  $r = -.201$ ,  $p \leq .001$ , for taste). This suggests that higher meat attachment for any subscale is associated with less acceptance of meat substitutes, and this is particularly the case for the meat dependence subscale. See Table 6, below, for more details.

**Table 6**

MAQ subscales correlated with likelihood of consuming meat alternatives and meat reduction

		If meat substitutes could be made that tasted and felt like real meat	If meat substitutes could provide the same health benefits of real meat	In terms of overall quantity, would you say you eat more or less meat than when you were under eighteen?
<b>MAQhed</b>	Pearson Correlation	-.201*	-.388**	.246**
	Sig. (2-tailed)	0.010	0.000	0.002
	N	163	163	160
<b>MAQaff</b>	Pearson Correlation	-.327**	-.432**	.193*
	Sig. (2-tailed)	0.000	0.000	0.014
	N	163	163	160
<b>MAQent</b>	Pearson Correlation	-.339**	-.404**	.210**
	Sig. (2-tailed)	0.000	0.000	0.008
	N	163	163	160
<b>MAQdep</b>	Pearson Correlation	-.410**	-.445**	.356**
	Sig. (2-tailed)	0.000	0.000	0.000
	N	163	163	160
<b>MAQ</b>	Pearson Correlation	-.403**	-.517**	.323**
	Sig. (2-tailed)	0.000	0.000	0.000
	N	163	163	160

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

There was a positive correlation between MAQ and reported quantity of meat consumption changes from youth,  $r = .323$ ,  $p \leq .001$ . Respondents with a higher MAQ score were also more likely to say that they ate more meat now than when they were younger. MAQdep had the highest correlation with reported increased meat consumption,  $r = .356$ ,  $p \leq .001$ , followed by MAQhed,  $r = .246$ ,  $p = .002$ , MAQent,  $r = .210$ ,  $p \leq .001$ , and MAQaff,

$r=.193$ ,  $p=.014$ . Despite MAQdep scoring the lowest of the subscales for omnivores, it had the strongest relationship with increases of meat consumption.

### Regressions

Due to the small sample size for omnivores, especially for those who ate less meat ( $n=80$ ), no regression analysis was performed.

## Veg\*etarians

### Descriptive statistics

In total there were 343 veg\*etarian respondents to the survey. From this sample, 229 identified as vegan, 82 as vegetarian, and 32 as pescatarian. Following the current examples in this literature, vegans, vegetarians, and pescatarians will be analysed under the unified term of veg\*etarian.

Like omnivores, the majority of veg\*etarians identified as female (88.6 percent, compared to 10.5 percent as male, 0.6 as non-binary). The mean score on the TMF scale was slightly higher (towards traditional femininity) than that of omnivores ( $M=4.83$ ,  $SD=.97$ ). The TMF scale went from those identifying as highly traditionally feminine (1), to highly traditionally masculine (7). Veg\*etarian respondents were, on average, slightly younger than omnivore respondents with an average age of 31 ( $M=31$ ,  $SD=13$ ). The Majority of veg\*etarian respondents stated they earned less than 40,000 NZD per year (62.9 percent) with only 9.1 stating they earned 80,001 NZD or more per year. Similar to omnivore respondents, two thirds of veg\*etarians (67.8 percent) stated they were from a medium SEB, while 15.5 replied as being from a low SEB and 16.7 percent stated they came from a high SEB.

All respondents were asked the questions for the MAQ, and not surprisingly, meat attachment was low for veg\*etarian respondents. The mean score for the MAQ for veg\*etarians was 1.42 (.45), less than half of the average for omnivore respondents ( $M=3.17$ ,  $SD=.82$ ). Of the subscales, MAQaff was ranked the highest for veg\*etarians ( $M=1.88$ ,  $SD=.87$ ), followed by MAQent ( $M=1.46$ ,  $SD=.65$ ), MAQhed ( $M=1.28$ ,  $SD=.56$ ), and lastly MAQdep ( $M=1.15$ ,  $SD=.37$ ). As one would expect, veg\*etarians scored much lower on the four subscales than omnivores. Given that veg\*etarians do not eat red meat it is not surprising that dependence is the lowest.

When asked how long respondents had been veg\*etarian for, 12 percent stated they had been veg\*etarian for less than a year, a further 62.6 percent stated they had been veg\*etarian for 1 to 5 years, and 25.3 percent stated they had been veg\*etarian for longer than 5 years.

Veg\*etarians were asked what their initial reasons were for giving up meat consumption and what barriers they faced. This was an open-ended question where respondents had the opportunity to type in answers. The open-ended nature of this response required responses to be analysed and categorised. A code frame was developed for these responses, and two peers with prior experience - one a researcher, and the other also a student of the environmental studies program - were asked to use the code frame to categorise the responses to ensure the reliability of the code frames. In cases where there was disagreement in the correct code to use, discussion was had until there was unilateral agreement. The most common response was related to ethics, with 54.4 percent of respondents stating something related to this reason. Environmental concerns were mentioned by 26.8 percent of veg\*etarian respondents, followed by health concerns (18.5 percent). In terms of barriers to reducing meat consumption 29.5 percent of veg\*etarian respondents mentioned that social pressure from peers was a barrier, and 28.9 mentioned that social pressure from their direct family was a barrier. Other barriers mentioned included statements about a lack of tasty alternative options for eating (19.9 percent), comments regarding a lack of education about diet and veg\*etarian food (16.1 percent), and concerns about the health risks (8 percent). 15.8 percent felt that there were no barriers.

Veg\*etarian respondents were also asked on a five-point Likert scale, with 1 being not at all and five being a lot, how much different factors affected their current reasons for not eating meat. The highest rated reason for the current sample was ethical animal treatment ( $M=4.6$ ,  $SD=.85$ ), followed by environmental impacts ( $M=4.4$ ,  $SD=1.02$ ), and health ( $M=3.53$ ,  $SD=1.38$ ). A Cronbach's Alpha reliability test was performed on the three concerns scales to see if there was multi-collinearity and if these scales were measuring a single phenomenon but at  $\alpha=.27$ , this was low enough to not be an issue.

## Correlations

Pearson correlation tests were performed with the veg\*etarian responses to examine how much the three core factors were associated with reasons for not consuming red meat, which was a part of investigating research question 1. As hypothesized, there was little to no relationship between health concerns and ethical animal treatment concerns,  $r=-0.094$ ,  $p=.082$ , while there was a significant positive relationship between ethical concerns and environmental concerns,  $r=.182$ ,  $p=.001$ . Contrary to what was hypothesized, the strongest relationship was a positive relationship between health concerns and environmental concerns ( $r=.250$ ,  $p\leq.01$ ), suggesting that participants who expressed strong health concerns as a reason for not eating meat were also more likely to express higher levels of concerns for the environmental impacts of consuming meat. See Table 7, below, for more details.

**Table 7**  
The three core factors correlations

		Health	Environmental impacts	Ethical Animal Treatment
<b>Health</b>	Pearson Correlation	1	.250**	-0.094
	Sig. (2-tailed)		0.000	0.082
	N	342	340	341
<b>Environmental impacts</b>	Pearson Correlation	.250**	1	.182**
	Sig. (2-tailed)	0.000		0.001
	N	340	341	340
<b>Ethical Animal Treatment</b>	Pearson Correlation	-0.094	.182**	1
	Sig. (2-tailed)	0.082	0.001	
	N	341	340	342

\*\* . Correlation is significant at the 0.01 level (2-tailed).

To further investigate research question 1, relationships were examined between income, SEB, TMF scale, and time as a veg\*etarian on the one hand, and the three core factors (health, environmental impacts, and ethical concerns) on the other. Income from the last twelve months was not significantly correlated with health concerns ( $r=-0.003$ ,

$p=.951$ ), or ethical concerns ( $r=-0.008$ ,  $p=.888$ ). Income was negatively related to environmental concerns however ( $r=-0.123$ ,  $p=.023$ ), suggesting that increases in income are related to less concern for the environmental impacts of meat consumption.

The relationship between the three core factors and SEB differed from that of the three core factors and income. While there was no correlation found between SEB and ethical concerns ( $r=-0.016$ ,  $p=.770$ ), there was also no correlation with environmental concerns ( $r=-0.060$ ,  $p=.270$ ). A positive correlation was found with health concerns ( $r=0.116$ ,  $p\leq.033$ ) suggesting that increases in SEB are associated with increases in health concerns about eating meat, as hypothesized.

Time as a veg\*etarian also had no significant relationship with ethical concerns ( $r=0.073$ ,  $p=.175$ ). Time as a veg\*etarian was negatively correlated with environmental concerns ( $r=-0.189$ ,  $p\leq.001$ ) and health concerns ( $r=-0.150$ ,  $p=.005$ ). Respondents who became veg\*etarian earlier were less likely to rate health concerns or environmental impacts highly, while newer veg\*etarians were more likely. Ethics was rated quite highly overall for Veg\*etarian respondents. This could account for why there is no relationship between ethical concerns and time as a veg\*etarian, as ethics has always been an important factor in abstaining from meat and continues to be so.

The TMF scale was positively correlated with the three core factors. The strongest relationship was with ethical concerns ( $r=0.170$ ,  $p\leq.002$ ), followed by environmental concerns ( $r=0.127$ ,  $p=.019$ ), and health concerns ( $r=0.126$ ,  $p=.019$ ). Higher reported rates of traditional femininity were related with higher concerns for the three core factors, though ethical concern was the highest. See Table 8, overleaf, for more details.

**Table 8**

Income, SEB, time as a veg\*etarian, and TMF correlated with the three core factors

		Health	Environmental impacts	Ethical Animal Treatment
<b>income from last 12 months</b>	Pearson Correlation	-0.003	-.123*	0.008
	Sig. (2-tailed)	0.951	0.023	0.888
	N	339	338	339
<b>Family situation under the age of 10</b>	Pearson Correlation	.116*	0.060	0.016
	Sig. (2-tailed)	0.033	0.270	0.770
	N	341	340	341
<b>Time as a Veg*etarian</b>	Pearson Correlation	-.150**	-.189**	0.073
	Sig. (2-tailed)	0.005	0.000	0.175
	N	342	341	342
<b>TMF</b>	Pearson Correlation	.126*	.127*	.170**
	Sig. (2-tailed)	0.019	0.019	0.002
	N	342	341	342

\*\*, Correlation is significant at the 0.01 level (2-tailed).

\*, Correlation is significant at the 0.05 level (2-tailed).

Despite the relatively low MAQ scores for veg\*etarian respondents, fluctuations in the subscales indicated differences in relationships with meat, in the same way that there were differences in the three core factors. A Pearson correlation test was used to test the MAQ subscales against the three core factors. Ethical concern was negatively correlated with all the MAQ subscales (MAQaff,  $r=-0.467$ ,  $p\leq.001$ , MAQhed  $r=-0.365$ ,  $p\leq.001$ , MAQent,  $r=-0.327$ ,  $p\leq.001$ , and MAQdep,  $r=-0.306$ ,  $p\leq.001$ ). It comes as no surprise that the strongest relationship was with MAQaff, meaning that higher ethical concern was related to being less likely to overlook broader impacts that meat causes. MAQaff had the strongest relationship with the other two factors as well (Environmental impacts,  $r=-0.225$ ,  $p\leq.001$ , and Health,  $r=-0.164$ ,  $p=.002$ ); in fact, it was the only significant correlation with Health concern. There was no significant correlation between Health concern and MAQdep ( $r=0.002$ ,  $p=.972$ ), nor between Environmental concerns and MAQent ( $r=-0.087$ ,  $p=.110$ ). These two results are surprising because these are factors which could be expected to have been paired. See Table 9, overleaf, for more details.



**Table 9**

MAQ subscales correlated with the three core factors

		Health	Environmental impacts	Ethical Animal Treatment
<b>MAQhed</b>	Pearson			
	Correlation	-0.064	-.142**	-.365**
	Sig. (2-tailed)	0.236	0.009	0.000
	N	342	341	342
<b>MAQaff</b>	Pearson			
	Correlation	-.164**	-.225**	-.467**
	Sig. (2-tailed)	0.002	0.000	0.000
	N	342	341	342
<b>MAQent</b>	Pearson			
	Correlation	-0.035	-0.087	-.327**
	Sig. (2-tailed)	0.514	0.110	0.000
	N	342	341	342
<b>MAQdep</b>	Pearson			
	Correlation	0.002	-.185**	-.306**
	Sig. (2-tailed)	0.972	0.001	0.000
	N	342	341	342

\*\*. Correlation is significant at the 0.01 level (2-tailed).

## Regressions

A series of cumulative odds ordinal logistic regressions with proportional odds were run to determine the relationships between the TMF scale, income from the last 12 months, time as a veg\*etarian, and SEB, against the level of concern for the three core factors.

### Health concern

The first ordinal logistic regression was performed on health concern as a factor for not eating meat. The Pearson goodness-of-fit test indicated that the model was a good fit to the observed data,  $\chi^2(1041) = 1062.522$ ,  $p=.315$ , but most cells were sparse with zero frequencies in 76.2% of cells. However, the final model statistically significantly predicted the dependent variable over and above the intercept-only model,  $\chi^2(11) = 21.997$ ,  $p=.024$ .

In regard to independent variables, masculinity-femininity was a significant predictor of health concern,  $\chi^2(1) = 5.501$ ,  $p=.019$ . This means that for a one unit increase in the MF

scale (towards femininity), the odds of having high levels of health concern for eating meat was 1.275 times higher (95% CI, 1.041 to 1.562). In other words, respondents with higher levels of traditional femininity were more likely to have higher levels of health concern for eating meat.

Income for the last 12 months was not a significant predictor for health concern in the model. Those who were in the lowest income bracket in the last 12 months,  $\chi^2(1) = 0.420$ ,  $p = .517$ , second lowest,  $\chi^2(1) = 0.311$ ,  $p = .577$ , medium,  $\chi^2(1) = .287$ ,  $p = .592$ , and higher,  $\chi^2(1) = .964$ ,  $p = .326$ , were not significantly different from those in the highest income.

As expected, SEB at younger ages was also a predictor of health concerns. For those with a low SEB as a child, the odds of having high levels of health concern for eating meat was 0.497 times those with a high SEB as a child (95% CI, 1.251 to 0.986),  $\chi^2(1) = 4.000$ ,  $p = .046$ . This means that respondents with the lowest SEB as a child were less likely to have higher levels of health concerns about eating meat compared to those with the highest SEB.

Time as a veg\*etarian also was a significant predictor in the current model for health concerns. For respondents who had been veg\*etarian for one year or less, the odds of having high levels of health concern for meat consumption were 2.504 times those that had been veg\*etarian for more than 10 years (95% CI, 1.169 to 5.366),  $\chi^2(1) = 5.574$ ,  $p = .018$ . Similarly, for those who had been veg\*etarian for one to two years the odds of having high levels of health concern for meat consumption were 2.344 times those that had been veg\*etarian for more than 10 years (95% CI, 1.252 to 4.389),  $\chi^2(1) = 7.087$ ,  $p = .008$ . This means that respondents who have given up meat in the last two years are more likely to have higher health concerns than those who had been veg\*etarian for longer periods.

### **Environmental concern**

Another ordinal logistic regression was performed for environmental concerns as a reason for not consuming meat. The Pearson goodness-of-fit test indicated that the model was a good fit to the observed data,  $\chi^2(1033) = 931.072$ ,  $p = .989$ , but, once again, most

cells were sparse with zero frequencies in 77.3% of cells. Despite this, the final model statistically significantly predicted the dependent variable over and above the intercept-only model,  $\chi^2(11) = 21.612$ ,  $p = .028$ .

Although the model was significant, the only significant independent variable in the model was time as a veg\*etarian. Masculinity-femininity was not a significant predictor of environmental concern, although it was approaching significance,  $\chi^2(1) = 3.764$ ,  $p = .052$ .

Income for the last 12 months was also not a significant predictor for environmental concern in the model. Those who were in the lowest income bracket in the last 12 months,  $\chi^2(1) = 0.095$ ,  $p = .758$ , second lowest,  $\chi^2(1) = 0.004$ ,  $p = .947$ , medium,  $\chi^2(1) = .760$ ,  $p = .383$ , and higher,  $\chi^2(1) = .027$ ,  $p = .870$ , were not significantly different from those in the highest income. Similarly, SEB was not significant in the current model as those who rated their SEB as low,  $\chi^2(1) = .978$ ,  $p = .323$ , and medium,  $\chi^2(1) = .590$ ,  $p = .442$ , were not significantly different from those in the highest category.

Time as a veg\*etarian was a significant predictor of environmental concerns for meat consumption in the current model. For respondents who had been veg\*etarian for one to two years, the odds of having high levels of environmental concern for meat consumption were 3.222 times those that had been veg\*etarian for more than ten years (95% CI, 1.582 to 6.560),  $\chi^2(1) = 10.4703$ ,  $p = .001$ . Similarly, for those who had been veg\*etarian for three to five years the odds of having high levels of health concern for meat consumption were 2.614 times those that had been veg\*etarian for more than ten years (95% CI, 1.344 to 5.078),  $\chi^2(1) = 8.020$ ,  $p = .005$ . This means that people who have given up meat between one and five years ago are likely to rate environmental concerns more highly than those who have been veg\*etarian for longer than ten years.

### **Ethical concern**

A final ordinal logistic regression was performed for ethical concerns as a reason for not consuming meat. The Pearson goodness-of-fit test did not indicate that the model was a good fit to the observed data,  $\chi^2(1041) = 1198.554$ ,  $p = .000$ , and most cells were sparse with zero frequencies in 78.4 percent of cells. One possible explanation for this outcome

was the high percentage (89.4 percent) of respondents stating that ethical concerns were a large part of their reason for not eating meat. This high percentage meant that it was easier for the model to just predict a high outcome on the dependent variables. However, the final model statistically significantly predicted the dependent variable over and above the intercept-only model,  $\chi^2(11) = 24.717$ ,  $p = .010$ .

With regard to independent variables, masculinity-femininity was a significant predictor of ethical concern,  $\chi^2(1) = 11.715$ ,  $p = .001$ . For a one unit increase in the TMF scale (towards femininity), the odds of having high levels of ethical concern for eating meat was 1.594 times higher (95% CI, 1.220 to 2.079). In other words, respondents with higher levels of traditional femininity were more likely to have higher levels of ethical concern for eating meat.

Income for the last 12 months was also not a significant predictor for ethical concern in the model. Those who were in the lowest income bracket in the last 12 months,  $\chi^2(1) = 0.645$ ,  $p = .422$ , second lowest,  $\chi^2(1) = 1.307$ ,  $p = .253$ , medium,  $\chi^2(1) = 1.485$ ,  $p = .223$ , and higher,  $\chi^2(1) = 0.039$ ,  $p = .844$ , were not significantly different from those in the highest income. Similarly, SEB was not significant in the current model as those who rated their SEB as low,  $\chi^2(1) = 0.105$ ,  $p = .746$ , and medium,  $\chi^2(1) = 0.464$ ,  $p = .496$ , were not significantly different from those in the highest category.

Time as a veg\*etarian was a significant predictor of ethical concerns for meat consumption in the current model. For respondents who had been veg\*etarian for one year or less, the odds of having high levels of ethical concern for meat consumption were 0.323 times those that had been veg\*etarian for more than ten years (95% CI, 0.124 to 0.839). This means that people who have given up meat in the last year are less likely to rate ethical concerns more highly than those who have been veg\*etarian for longer than ten years.

## Chapter 7: Discussion

“Sokka: Okay? That's all I got. Pretty much my whole identity: Sokka the meat and sarcasm guy. But I'm willing to be Sokka, the veggies and straight talk fellow. Deal?” (Ehasz, & Spaulding, 2006, 00:16:05)

### Introduction

In this chapter I will discuss the results of the quantitative study combined with the discussion for the qualitative study, and what this means for the research questions. I will also discuss the implications and applications of the results. Finally, I will discuss the limitations of these studies and provide some recommendations for future research.

### The Research Questions

**R1: Are the three core factors (health, ethics, environment) affected by SES, SEB and identities associated with meat consumption - and if so, how?**

An important consideration for this research question was whether the three core factors were separate concerns for people in their food choices. While the qualitative research indicated most veg\*etarians were concerned about the three core factors on some level, they were distinct concerns that related to people differently. The quantitative data showed a similar result; even though there were some correlations between them, the three core factors were measurably different concerns. For example, despite a correlation between ethical concerns and environmental concerns the multicollinearity test and the regressions showed that these concerns were different items. In the case of the qualitative research, discussions about ethical concerns and environmental concerns overlapped. In the quantitative research however, while there was a correlation between ethical and environmental concerns, the strongest correlation was between health concerns and environmental concerns. One interviewee stated that environmental and health concerns are relatively new concerns which could explain why these two concerns had such a strong positive correlation. This correlation could be related to the awareness of these issues amongst newer veg\*etarians. The logistic regressions would also indicate

this as “time as a veg\*etarian” consistently remained significant once other variables were controlled for.

The qualitative research indicated the possible convergence of these concerns over time as veg\*etarians reinforce and secure their veg\*etarian identity. A similar phenomenon was described by Fox and Ward (2008) whereby initial motivations for becoming veg\*etarian eventually led to the reinforcement of other concerns. Although awareness of the three concerns was present for veg\*etarian interviewees over time, they were not necessarily concerned by all of them. In general, people indicated that their concerns about all three factors increased and, while in a few cases the main motivation for not eating meat changed, these remained separate concerns.

Results from both the qualitative and quantitative research provide evidence that the three core factors relate differently to SES, SEB, and identities associated with meat consumption. SES, as measured by income from the last twelve months, was shown to have a significant negative correlation with environmental concerns for meat consumption. However, when this relationship was analysed using an ordinal logistic regression, it disappeared, suggesting that other variables accounted for the relationship between income and environmental concerns. As indicated in the qualitative study, SES itself was not enough to influence the three core factors but instead provided access to resources.

Health concerns had clearer relationships with the independent variables. Veg\*etarian respondents who stated they were from a higher SEB under the age of ten were more likely to have higher health concerns about meat consumption. Lower scores on the TMF scale, indicating more traditional masculinity, were also associated with lower health concerns. These relationships remained when a regression was performed. Previous literature found that health seeking behaviours were less common amongst those in the working class, and particularly males (Dolan, 2011). Pressures of masculinity to be tough and show no weakness, as well as differing values for health outcomes between men and women, are possible explanations for the link between health concerns and TMF. Access

to health care and education around better health practices at a younger age could possibly explain the relationship between health concerns and SEB.

Ethical concerns had a different relationship with the independent variables. The logistic ordinal regression produced significant results for both the TMF scale as well as 'time as a veg\*etarian'. Higher rates of traditional femininity were associated with higher ethical concerns. Traditional femininity carries expectations to be caring and connected to others, including nature (Graça et al., 2018; Newman, Fogarty, Makoe, & Reavely, 2011). Conversely, expectations around masculinity, such as a need to show dominance over others, position it in opposition to these ethical concerns.

As one participant stated in the qualitative research, it is only in recent decades that awareness of the environmental and health concerns of meat consumption have increased (Maurer, 2002; Ruby 2012; Sanchez-Sabate, & Sabaté, 2019). Regressions showed that respondents who had been veg\*etarian for a shorter time were more likely to have higher health and environmental concerns but were less likely to have higher ethical concerns. The growth in veg\*etarianism could be attributed to these new concerns.

## R2: How malleable are identities associated with meat consumption, especially when considering socioeconomic factors?

Perceptions of groups and associated identities have changed over time. For example, masculine identities have changed many times throughout history and culture (Willott, & Lyons, 2012). Testing the malleability of socially constructed identities was difficult using the current quantitative measures. To measure malleability would have required measuring identity at multiple times, and even then, some of the more nuanced aspects of defining identity and its changes could have been missed. Because of this, qualitative data was more useful to answer this research question, although some quantitative data still assisted in providing answers.

The results from the previous research question indicate a change to the veg\*etarian identity. As described by Rosenfeld and Burrow (2017), veg\*etarians form a group identity around their shared abstinence from meat consumption. Several interviewees referred to their own veg\*etarian identity and their social groups that revolved around veg\*etarianism. Although there was overlap of the three core factors for individuals, the three core factors did not necessarily impact all veg\*etarians in the same way. Previous research has treated ethical veg\*etarians and health veg\*etarians as different groups (Hoffman, Stallings, Bessinger, & Brooks, 2013). This could indicate that there are several veg\*etarian identities, rather than a single veg\*etarian identity that is changing.

Ethnic heritage was one of the identities that had strong connections to meat consumption. For example, participants talked about their heritage (South African, South American, Māori, and Pasifika) and how this influenced their meat consumption ('meat-centric culture', 'meat and three veg meals'). Some interviewees also suggested that the connection between food and ethnic heritage persisted throughout generations and when other connections to heritage were lost.

Ethnic identities were very rigid. While some identities, such as veg\*etarian identities, were open to interpretation by the individual, ethnic identities were much harder to redefine because the group subscription and identity performance were very clear. Instead of redefining their ethnic identities to incorporate veg\*etarian diets, interviewees



attached themselves to other groups they were a part of. While there are examples of cultures changing norms over time, such as Pasifika nations normalising beef consumption after colonialization (Hughes, & Marks, 2010), even this displays the complex positioning of imposed identities leading to changes in an identity or group. Ethnic identities that are associated with meat consumption did not appear to be malleable in the ways that masculinity or gender identities were.

Hegemonic masculine ideals were present in the current study and though there were opportunities to change, these were not necessarily taken. In her research, Mycek (2018) argues that men redefined masculinity to incorporate veg\*etarian diets. The current research argues that it is through access to other identities that individuals can maintain a veg\*etarian diet alongside hegemonic masculine ideals. Some interviewees, while not fully disconnecting from their masculine identities, were in positions where they could critically assess these identities and did not have to fully conform to masculine ideals such as consuming meat. Conversely, for others masculinity was a source of identity and positive self-perception so they had no reasons to question its ideals. Omnivore interviewees made both direct and passive connections between their masculinity and meat consumption. In the quantitative research, masculinity was strongly related with the MAQ scale.

SES and SEB are noteworthy but not crucial influences on the relationship between meat and subscribed identities. Socio-economic factors are important and affect habits pertaining to food. At a base level, they determine what an individual can afford, and the study results indicated a perception that meat prices are increasing. Socio-economic factors also give people access to other things that can influence their connections to meat consumption, such as social groups stemming from new hobbies, higher education, or travelling experiences. While SES and SEB may not directly assist in changing identities or groups themselves, they can affect the groups people have access to, which in turn affects perceived pressure to conform to an identity.

Identities and groups change over time. The current research using social identity theory suggests that individuals use connections to other identities to alter dietary choices

which then feed back into other identities, accounting for the slow processes that causes change in identities at a societal level. SES and SEB play a minor role by increasing opportunities to join new groups and gain access to new identities, but this is not crucial.

### R3: What are the barriers/promoters to veg\*etarianism and how are these affected by SES and meat affiliated identities?

#### **Barriers**

Identities, or group subscriptions, and socioeconomic situations provided barriers to veg\*etarianism and meat reduction. As expected, traditional masculinity was a barrier to meat reduction. Omnivores who reported higher levels of traditional masculinity were more likely to have increased meat consumption in recent years compared to those with higher levels of traditional femininity. Traditional masculinity also had strong connections to all subscales of the MAQ, which has strong predictive ability for meat reduction (Graça et al., 2015). The TMF scale consistently linked meat consumption to masculinity in the quantitative study.

Pressure to conform to masculine ideals was also present in the qualitative research. Research by Sumpter (2015) showed that masculinity was often defined in opposition to femininity, so to confirm one's masculinity an individual must reject perceived feminine threats. Several male interviewees exhibited this behaviour. The social identity theory can be used to explain this behaviour, as members of a group will try to protect the ideals of their perceived ingroup as a way of increasing positive self-perceptions (Ashforth & Mael, 1989).

These defensive characteristics were also exhibited in the responses to the online survey on social media - not just regarding masculinity, but other group identities as well. When links to the survey were posted in social media group pages, these posts received many comments by people vocalising their opposition to veg\*etarianism. Similarly, in the comments section at the end of the survey, some respondents took this opportunity to criticise veg\*etarianism, equating it to other groups they perceived as opposing their own groups. The online response was to be expected, and again provided an opportunity to explain this behaviour using the social identity theory. Social media provides a platform for people to announce their meat consumption regularly (Minson & Monin, 2011). In some cases, these respondents displayed their group subscriptions and perceived threats that veg\*etarianism confronted them with. For example, some posts online referred to

left leaning politics they associated with veg\*etarianism, while others felt that the survey was an attack on farmers and their livelihood. Although this aspect of the online response was not measured in the quantitative research, it displays some barriers to veg\*etarianism in social norms.

Barriers to veg\*etarianism were created not just by masculine identities, but by other group subscriptions as well. This was very clear in the qualitative data, even though response rates for non-Pākehā were too low for statistical analysis in the quantitative survey. Ethnicity and ethnic heritage were strongly connected to the food that people ate, persisting inter-generationally. Similar to the findings by Guarnaccia et al. (2012), migrants to Aotearoa New Zealand still cooked food they were familiar with, transferring these recipes and taste palates to subsequent generations. In other cases, cultural heritage was practiced through food at family events or wider cultural events, such as weddings or celebrations of national holidays and ceremonies. Because meat was served at, and sometimes central to, these events it prevented some interviewees from being able to fully separate from meat consumption without risking disconnection from the cultural aspects as well.

SES was also a barrier to veg\*etarianism in some cases. Income for the last 12 months was positively correlated with MAQ subscales, MAQhed and MAQaff, but this required analysing the qualitative data to give some context. The qualitative data suggests that it was the opportunities SES provided a person with that created barriers. Occupying a higher SES mean that people could afford better tastier cuts of meat which could explain how MAQhed and income were related, since MAQhed refers to the general enjoyment received from consuming meat. With the ability to purchase more expensive meats, omnivores still had the options to buy cheaper cuts of meat if prices went up. Occupying a higher SES meant that individuals could still afford to take pleasure from meat without being subject to the financial pressures.

Veg\*etarians perceived social aspects as the largest barriers to their change of diet. About one-third of veg\*etarian respondents, when asked, attributed pressures from social peers (29.5 percent) or family (28.9 percent) as the main barriers to becoming

veg\*etarian. Again, the qualitative data can provide an explanation for this as well as previous literature to contextualise these results (Beardsworth & Keil, 1991). There were barriers involved in moving away from the family home, as parents who are not veg\*etarian themselves hindered conversion to veg\*etarianism. Fifteen percent of Veg\*etarian respondents felt that there were no barriers to becoming veg\*etarian.

## **Promoters**

In the way that some identities provided barriers to veg\*etarianism and meat reduction, other identities were promoters. While traditional masculinity was a barrier, traditional femininity was associated with less meat consumption for omnivore respondents. In the qualitative data, meat associated cultures such as South African and South American hindered attempts to eat less meat, while others such as Jewish identities provided less meat centric meal alternatives. Where living with omnivorous parents was a barrier, leaving home and connecting to new social groups with shared values was a promoter. Some promoters were direct opposites to barriers, but there were also ways that promoters were different.

The three core factors were important promoters for veg\*etarianism. Ethical concerns were mentioned as the main reason for becoming veg\*etarian by 54 percent of respondents, while environmental (26.8 percent) and health (18.5 percent) was mentioned by fewer respondents.

The high cost of meat was also a promoter for meat reduction for omnivore respondents. Over one-third (35.9 percent) of omnivores who ate less meat nowadays stated that this was due to the high cost of meat. Although many of the omnivore interviewees mentioned that they would simply buy cheaper meat to maintain meat consumption, some acknowledged that this might not be an option for those in poorer circumstances who already felt economic pressures.

Social identity theory can help explain how identities are connected to meat consumption and provide some insight into the barriers and promoters of veg\*etarianism.

In many cases, if something is a barrier to vegetarianism, then an opposing positioned identity is a promoter; for example, masculinity and femininity. The biggest promoters tend to be related to the three core factors. SES and SEB are important factors but in some cases, they promote or resist meat reduction indirectly.

#### R4: What is the role of meat alternatives or protein alternatives in reducing meat consumption?

Opinions about meat and protein alternatives were investigated in both the qualitative and quantitative studies. There was some contention about what a meat alternative was and what it was not, particularly amongst veg\*etarians who ate some of them regularly. Meat alternatives have existed for many years, but in recent years there has been an influx of new products. According to the qualitative results, the newer products are seen as meat alternatives; however, some of the more traditional products, such as seitan and TVP, are not considered meat alternatives by some veg\*etarian interviewees. The more acceptable alternatives were viewed simply as food products, and some veg\*etarian interviewees were contentious about the need to attach comparisons of meat to them. Because of the contention by veg\*etarian respondents, as well as the range of available alternatives, data for veg\*etarian respondents was unreliable at best particularly when considering the price differences between some of the new products and more mainstream products such as tofu.

Omnivores were clearer about meat alternatives, with a few exceptions related to differing cultural perspectives. Some interviewees viewed foods such as tofu as side dishes rather than meat alternatives or replacements, since these foods can be served alongside meat in some dishes. For the most part, however, anything that was a protein was viewed as a meat alternative. This is possibly because of the meat centric ideals found in Aotearoa New Zealand as described by Junor (2016).

##### **R4.1: How are meat alternatives perceived by those of different SES, SEB, and other meat associated identities?**

Another factor to consider regarding how these alternatives influence diet is how they are perceived by different groups. Perceptions of protein alternatives differed depending on ethnic and cultural attachments, as they were normalised in some cultures. This does not necessarily apply to newer products. Unfortunately, this was not measured in quantitative data due to low response rates of non-Pākehā.

Omnivore respondents in the online survey were asked whether they would replace regular meat consumption with meat alternatives, if these alternatives could match the health or taste benefits of meat. Health aspects were ranked slightly higher than taste aspects, although average responses for both were close to the centre of the scale. Aside from health benefits and income, there were no other significant correlations between demographic variables and likelihood to replace meat with alternatives.

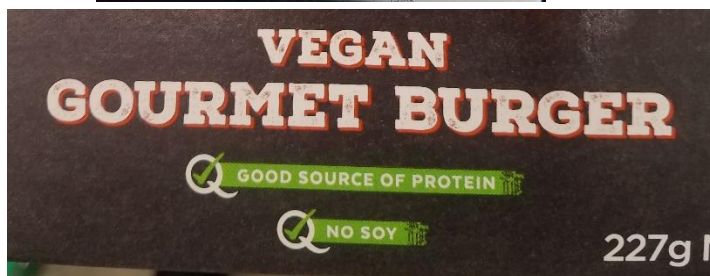
While some omnivores were curious about meat alternatives in the interviews, they did not see the point when they ate meat anyway. Even though they acknowledged the increasing prices of meat, the solution was to simply purchase cheaper cuts of meat, especially when considering that the perceptions of alternatives was that they were quite expensive.

In the qualitative interviews, both omnivores and veg\*etarians expressed concern over the health aspects of meat alternatives. Despite contradictions to previous statements where the interviewees expressed having no concerns regarding their health, when it came to protein alternatives health was a much more important consideration. Omnivore interviewees in particular expressed more doubt about the health aspects of protein alternatives. Even though many of the newer protein alternative brands promote the health aspects of their products, such as those in Figure 1 overleaf, these messages do not seem to have had an impact on the interviewees of this study. Veg\*etarian interviewees also expressed concern over the environmental aspects (from packaging) but praised them for their role in reducing animal deaths.



**Figure 1**

Protein alternative packaging examples



Left: Examples of protein alternatives currently available in supermarkets. Many reference their protein content and other healthy aspects. Right: Example of meat packaging, still mentioning healthy aspects but no references of protein content.

Veg\*etarian respondents were asked if they had tried meat alternatives and were given examples such as tofu or Quorn. All veg\*etarian respondents stated that they had tried an alternative, which made analysis difficult considering definitions of what was and what was not a protein alternative was very subjective according to the qualitative research. Veg\*etarian respondents also used the open-ended comments section at the end of the survey to say that there was a huge gap in availability of some alternatives, such as tofu, compared to other newer products.

#### **R4.2: How will these groups assist or resist the adoption of meat alternatives?**

The perceptions of different groups are crucial to understanding how the adoption of meat alternatives will be resisted or assisted. As seen with the omnivore participants, the costs of alternatives can be a deterrent, especially when cheaper meat is available. Those in stable socioeconomic positions would rather decrease the quality of the meat they are purchasing to maintain meat in their diet. Some interviewees were also in a position where they did not need to rely on alternatives at all so could wait until protein alternatives were improved to a level that they deemed acceptable before considering replacing their current meat intake with the alternatives.

The cost of meat is increasing, according to omnivore participants. The price of meat is felt by those in lower SES or SEB and the price of meat was an influential factor driving omnivore participants to reduce their meat consumption in the quantitative research. Unfortunately, the current high price of meat alternatives does not assist in a transition to alternatives for those affected by socioeconomic factors and those unaffected are more likely to avoid them anyway.

Veg\*etarian participants were more accepting of alternatives, especially during early stages. The price of newer products is still a deterrent, and interviewees who had been veg\*etarian for longer had adapted to a veg\*etarian diet without the newer alternatives. However, some products had become mainstream for veg\*etarians and these products were cheaper and more available.

The role of meat alternatives appears to be more important for newer veg\*etarians in the transition to a plant-based diet. Due to the high costs of some of the newer alternatives, they were often described as treats that would eventually be replaced by older alternatives as the individual explores veg\*etarian foods. In the case of products like seitan, TVP, or tofu, these foods are accepted more widely and are more readily available, meaning there is more opportunity to include them as a regular part of the diet.

There is an opportunity here for normalisation of meat alternatives, especially as new veg\*etarians have a greater focus on health or environmental concerns. Meat attachment will create a barrier to adoption of meat alternatives, but the increase in cost of meat is inevitable and the potential to lower the costs of alternatives is available. It is a slow process to normalise products and mainstream changes to diets, but this has happened with foods such as tofu already. Unfortunately, the high prices of the newer products create a barrier for those of a lower SES and because those who occupy a higher SES can wait until the taste and health aspects of protein alternatives are improved to what they consider acceptable levels, they are unlikely to purchase them. Without the investment from those who can afford them, development of the infrastructure to mass produce protein alternatives at a lower cost is likely to be delayed for those who will ultimately rely on them.

## Implication and applications

The current research contributes to current understandings of meat consumption and changes in dietary choices in Aotearoa New Zealand. By using Social Identity Theory (Tajfel, 1979) as a basis for understanding group identities and how meat consumption can be linked, meat consumption can be viewed as an important aspect of some group identities. There is evidence here to suggest that the social identity perspective provides a valid lens to investigate these relationships and how this might impact on meat-eating behaviours in the future.

The social identity theory can explain the barriers to veg\*etarianism and meat reduction behaviours, and it can also be used to find possible promoters. As meat consumption is linked to certain identities and groups, this can explain reactions to veg\*etarian ideologies such as those exhibited online. Defending your own group's ideals and behaviours from perceived threats, such as the ideals of outgroups, is a process explained further by social identity theory. The implications of this research are that there are opposing identities that can circumvent the opposition to meat consumption. Similarly, the current research suggests that veg\*etarian values are changing. Although there appears to be a veg\*etarian identity, the three core factors are associated with different groups of people. This suggests that while some groups might be attracted to the ethical arguments for veg\*etarianism, others might be attracted to the environmental concerns. While previous studies have investigated veg\*etarianism from a theory of planned behaviour perspective focusing on these values (Gatersleben et al., 2014), taking identities into account can provide greater context for the relationships between meat and social groups.

Aotearoa New Zealand has a history of meat consumption, from colonial roots to current farming industry (Tucker, 2013; Willott, & Lyons, 2012; Woods, 2012). Meat consumption has a strong connection to identities here, but veg\*etarianism is also on the increase, possibly as a result of competing identities such as the “clean green” identity that is sometimes portrayed (Dew, 1999). Social identities and group ideals change over time, but the current research suggests that changing to a veg\*etarian diet relies on having access to other groups subscriptions. The existence of multiple identities in

Aotearoa New Zealand provides an opportunity to promote veg\*etarian diets, focusing on different values of the three core factors. Advertising currently capitalises on the connections between identities by targeting meat products at groups such as men (Swenson, 2009).

The current research also suggests that meat alternatives or protein alternatives have an opportunity to be taken up more widely. While established veg\*etarians and those wealthy enough to continue consuming meat might not find them necessary, people who are becoming veg\*etarian and still hold some meat centric values find them more useful. The current costs exclude these alternatives from becoming more mainstream, but acceptance of alternatives in other cultures and increase in meat prices also provide an opportunity for alternatives to become more widely accepted – insofar as price issues are addressed so that these alternatives become as widely available as meat.

## Limitations

There are some limitations to the approaches taken in both the qualitative and quantitative component of this research. In the survey, respondents from certain demographics were underrepresented. Male identifying respondents and non-Pākehā respondents were noticeably underrepresented. This is not uncommon for survey research – the topic of the survey may have encouraged certain groups of participants to complete it. The majority of veg\*etarians are female (Ruby, 2012), and online surveys typically attract more female respondents (Branley et al., 2014). However, as there was a strong focus on the role of masculinity in this study, more emphasis could have been placed on recruiting participants from these underrepresented groups. However, time and resource constraints made this difficult. The focus on masculinity, as measured through the TMF scale, meant that gender was not strictly crucial to the study design, but more representative data would have been better. It would have also resulted in more data through which to explore masculine identities.

The low number of responses from non-Pākehā respondents meant that data was not analysed by ethnicity. Considering that the literature and results of the qualitative data suggest that ethnicity plays an important role in dietary choices (Schösler et al., 2015), greater representation of non-Pākehā would have been greatly beneficial. While recruiting respondents through social media has benefits, it is difficult to control the demographics that will respond (Branley et al., 2014).

Much of the recruitment was done through social media pages, particularly pages directed towards veg\*etarians. Data for veg\*etarians and omnivores was analysed separately, meaning that the disproportionate response of omnivores was not an issue for what was being analysed. Unfortunately, the low number of responses for omnivores meant that certain questions could not be investigated. For example, the number of omnivores who stated they had increased meat consumption was too low to produce statistically significant results.

The survey design also had some issues such as the measurement of SEB, SES, and TMF. Following the example of Crothers (2014), questions pertaining to respondents' SES

were asked including questions about their jobs and education. Preliminary data showed statistical correlation between many of these questions. Unfortunately, there was no example on how to use these factors to create a single score to use for SES and SEB. It was also complicated by open responses that could not be accurately placed into any score, such as students and retirees. Data was analysed by income from the last twelve months and a subjective Likert scale regarding SEB under the age of 10, which also relied on respondents' memories. As Marks (2011) pointed out, using factors like income does not fully encapsulate SES and rather looks at a single snapshot. For this purpose, the qualitative data provided a more complex investigation of SES and SEB, while the measures used in the online survey were checked against other variables for consistency.

Similarly, measuring masculinity and femininity on the TMF scale gives a basic view of these scales but again fails to fully encapsulate the more nuanced details of these identities. The TMF assumes that masculinity and femininity are dichotomous opposites, however Sumpter (2015) argues that there are many masculinities created in opposition to each other rather than femininity. Quantitative methods rely on things being quantified, and as such the TMF scale was a good scale to use. The TMF scale has been tested before, and the emphasis on traditional masculinity and femininity was useful for the current study investigating hegemonic understandings of masculinity. Using the TMF scale in the quantitative research was another example of how the qualitative interviews complemented the quantitative survey.

The qualitative interviews were used to gain greater insight into certain identities and SES/SEB, though it was difficult to ascertain these before the interview began. Using a snowballing method was helpful to recruit people and control for factors like veg\*etarian status, however SES and SEB was not easily assessed until the interviews were underway.

Concern for the three core factors was also difficult to ascertain prior to commencing the interview. This means that the study missed out on the perspective of veg\*etarians who refrained from meat consumption primarily due to health concerns. Other veg\*etarians expressed some health concerns regarding meat consumption, but this was not the primary motivation for any interviewees.

The low response rate from certain demographics was a limitation for the current study, as were some of the scales used to measure variables. Missing out on responses from crucial demographics created problems for the current study that had to be solved through the absence of statistical analysis. While efforts were made to circumvent these limitations, they must still be considered when interpreting results from the current study and conducting future research on similar topics.

### Future research

The current research could be improved upon in future studies to expand knowledge in this field. There are identities that are connected to meat consumption but also identities that oppose it. Understanding these identities and groups subscriptions would be beneficial. Investigating the three core factors and different ways they are influenced would also be beneficial to find alternative avenues to promote meat reduction. The role of alternatives is also a field that is evolving.

The current research shows that social identity theory can be used to explain some of the behaviours surrounding meat attachment. Tajfel's Social Identity Theory (1979) has practical uses in understanding in-group and outgroup behaviours, and by applying his theory to future research we can gain a deeper understanding of attachments to meat and how identities and groups will drive meat attachment and resist perceived attempts to reduce it. Researchers could also look at the different identities that could resist or promote veg\*etarianism and how multiple identities interact on values, as well as whether these values drive or are driven by identities and group subscriptions.

Further identities would need to be explored. The survey had limited focus for identities or groups besides the TMF. As masculinity, gender and ethnicity had such a strong connection to meat consumption (Ruby, 2012), it was decided to focus on these. This meant that other identities such as political leanings and religious affiliations were ignored in the quantitative study. The "clean green" image associated with Aotearoa New Zealand is also an important value for some Identities (Dew, 1999), as is the farming industry (Tucker, 2013). These two groups form important identities that require further



investigation in Aotearoa New Zealand. For practical reasons, questions about these subjects were not included as the survey was already long enough. Future research could focus on these.

The decision to treat veg\*etarians as a single group was tenuous. The majority of veg\*etarians in this study identified as vegans. Vegetarians, vegans, and pescatarians were analysed together as veg\*etarians. Because these three groups are distinct and have differing values and positions, it could be beneficial in the future to investigate differences for these groups and look at how they perceive each other. Additionally, researchers could look at the changes of these groups as it was indicated that vegan interviewees and respondents often began as vegetarians and, in some cases, vegan respondents sometimes reverted to identifying as vegetarian or omnivorous.

Future research could further explore the three core factors as well. The current research provided some limited understanding of how the three core factors differ and what influences them. The extent to how these three core factors differ and the groups they relate to is yet to be explored.

The topic of protein alternatives is changing dramatically as newer products are released and opinions of them change. Throughout the course of the current research, several large fast food chains released vegan menus that included protein alternatives (Rutledge, 2019; Taunton, 2019). These actions have been met with hostility from some groups and praise from others. The changing position and possible acceptance of protein alternatives creates opportunities to investigate more, whether using social identity theory or other theories such as the theory of planned behaviour.

Future research should improve upon the current research in multiple ways – firstly, by expanding the use of the social identity theory to investigate a wider range of groups and identities to understand how meat attachment changes for individuals and seeing possible changes in Aotearoa New Zealand. Additionally, more needs to be understood about the three core factors of veg\*etarianism and how much they differ. Lastly, the current changes in access to protein alternatives will affect their position in mainstream

diets, meaning there will be plenty to investigate regarding their changing position in society.

## Conclusion

In conclusion, I have investigated the three core factors that contribute to veg\*etarianism and meat reduction and analysed how they are affected by different identities. The current thesis investigated how different identities can contribute to or resist reductions in meat consumption through attachments to meat, particularly focusing on masculine identities and ethnic identities. For this purpose, I used the Social Identity Theory framework for understanding groups and identities. Another important aspect to consider was the role of socioeconomic factors and how they influence the relationship between identity and meat consumption. Lastly, protein alternatives were investigated using the same framework due to the possible role they will fill in the future.

There is an increasing quantity of literature in the study of veg\*etarianism and reducing meat consumption. This applies not only to fields of environmental studies, but also to other fields such as health. With the predicted trajectory of supply and demand for meat and other animal products over the next thirty years, studies regarding meat consumption will become increasingly contentious as the impacts become more severe. As Ruby (2012) suggests, vegetarianism is a blossoming field of study.

Results from the interviews and survey suggest that the three core factors are related to different groups and the relationship between them can change. Socioeconomic factors relate to this paradigm as well: sometimes directly as with health concerns, and sometimes indirectly as with environmental concerns. The current research also suggests that access to multiple identities grants opportunities to detach from meat consumption. The current state of meat alternatives is changing, but the meat centric views and culture we live in suggest they will be beneficial, though this will take time.

In order to solve a problem, I feel that there is great benefit at looking deeply at the underlying causes. That is what I had hoped to investigate with this thesis, to provide more information that could assist in reducing meat consumption in the future.

The study has limitations and many issues need to be addressed to advance knowledge on this topic, but together, the quantitative and qualitative approach taken in this research provide some initial evidence that can be built upon in future research. There is still plenty to be investigated about the relationship between meat consumption and identity, especially in an Aotearoa New Zealand context.

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## Appendix A



VICTORIA UNIVERSITY OF  
**WELLINGTON**  
TE HERENGA WAKA

Phone 0-4-463 6028  
Email [judith.loveridge@vuw.ac.nz](mailto:judith.loveridge@vuw.ac.nz)

TO	Aaron Keri McKay-Valentine
FROM	Associate Professor Judith Loveridge, Convenor, Human Ethics Committee
DATE	30 May 2019
PAGES	1
SUBJECT	<b>Ethics Approval</b> <b>Number:</b> 27582 <b>Title:</b> From Rags to Riches and Steaks to Salads. Income as a factor influencing identities associated with meat consumption

Thank you for your application for ethical approval, which has now been considered by the Human Ethics Committee.

Your application has been approved from the above date and this approval is valid for three years. If your data collection is not completed by this date you should apply to the Human Ethics Committee for an extension to this approval.

Best wishes with the research.

Kind regards,

A handwritten signature in dark ink, appearing to read 'J. A. Loveridge'.

Judith Loveridge

Convenor, Victoria University of Wellington Human Ethics Committee

## Appendix B



### *Meat, Identity, and Income Study*

#### CONSENT TO INTERVIEW

This consent form will be held for a minimum of five years.

Researcher: Aaron McKay-Valentine, School of Geography, Environment and Earth Sciences  
Victoria University of Wellington.

- I have read the Information Sheet and the project has been explained to me. My questions have been answered to my satisfaction. I understand that I can ask further questions at any time.
- I agree to take part in an audio recorded interview.

I understand that:

- I may withdraw from this study at any point before 01/09/19, and any information that I have provided will be returned to me or destroyed.
- The identifiable information I have provided will be destroyed on 1/03/2020.
- Any information I provide will be kept confidential to the researcher and the supervisor.
- I understand that the findings may be used for a Masters thesis and for academic publications or presented to conferences.
- I understand that the recordings will be kept confidential to the researcher and the supervisor.
- My name will not be used in reports and utmost care will be taken not to disclose any information that would identify me.

- |   |                              |                             |
|---|------------------------------|-----------------------------|
| • I would like a copy of the recording of my interview:                                     | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| • I would like a copy of the transcript of my interview                                     | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| • I would like a summary of my interview:   | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| • I would like to receive a copy of the final report and have added my email address below. | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

Signature of participant: \_\_\_\_\_

Name of participant: \_\_\_\_\_

Date: \_\_\_\_\_

Contact details: \_\_\_\_\_



## Interview schedule

**Demographic details.** These can be easily established even before the interview has begun.

Age?

Ethnicity?

Weekly income?

Job?

Level of education?

Urbanicity?

**Background family** Reflections on background and growing up.

I would like to start off this interview with a few questions about your background.

What did your parents/ Guardians do for a living?

What was their level of education?

Where did you grow up?

Would you say that you are from a lower/middle/upper class family?

And do you feel you are more or less well-off now? In which ways?

To the best of your knowledge do you believe you eat more meat now than when you were growing up?

**Identity** Looking at their views of masculinity and their own masculinity.

Would you say that you are a typical [kiwi] male/female?

In what ways are you similar/different?

What was it like for you to grow up in your area [insert what they answered earlier on] of New Zealand? What things / hobbies / sports did you do as a child?

Possible prompt: was there anything specific about growing up as a man that has stuck with you?  
Were there times that you were judged or treated differently because you are a man?

What did a typical meal look like when you were growing up? How often was meat a part of the meal growing up?

And what kind of meat would you most typically eat growing up?

Is this the kind of meal you have now?

## **Vegetarianism** general opinions on veg\*etarians

Do you currently eat meat?

And what do you think about people who don't eat meat?

Do you think there are more male or female vegetarians? Why?

Do you think these views are shared by others?

Do you think it is more or less expensive to eat a vegetarian diet compared to a meat-based diet?

Why?

## **Meat consumption**

### **Omnivores**

Why do you think people become vegetarian?

Why is meat important to you personally?

Is the price of meat a deterrent for you to purchase it?

And if the price of meat was to increase would it?

What if cheaper alternatives became available such as lab grown meat?

What are your thoughts on meat alternatives, such as tofu? Have you tried any?

And what is the reason for this do you think?

What is it about meat that you couldn't give up?

What would make you give up meat?

Have you heard about lab grown meat?

What do you think about this lab grown meat?

Would you eat/buy lab grown meat?

Why/ not?

### **Veg\*etarians**

How long have you been a vegetarian (or a vegan)?

What does 'vegetarianism' or 'veganism' mean to you?

Could you tell me a bit more about your decision to become a vegetarian?

What were your main motivations to become vegetarian (or vegan)?

What were the barriers for you to become vegetarian or vegan?

Was there anyone who influenced your decision to become a vegetarian?

Were there any significant changes in your life that facilitated this?

What was the process of become vegetarian like?

Do you ever feel like eating meat?

What are your views on meat alternatives?

What kind of meat alternatives do you eat?

In your opinion, are these meat alternatives affordable?

## Appendix C

### *Meat, Identity, and Income Survey*

#### INFORMATION FOR PARTICIPANTS

You are invited to take part in this research. Regardless of your diet, your views are important. Please read this information before deciding whether or not to take part. If you decide to participate, thank you. If you decide not to participate, thank you for considering this request.

#### **Who am I?**

My name is Aaron McKay-Valentine and I am a Masters student in environmental studies at Victoria University of Wellington. This research project is work towards my thesis.

#### **What is the aim of the project?**

This project will look at the relationship between identity and meat consumption with a focus on economic factors. Your participation will support this research by adding to the current literature around food choices in a changing climate.

#### **How can you help?**

We are looking for the views and opinions of people over the age of 18 from a wide variety of backgrounds. If you agree to take part, you will complete a survey. The survey will ask you questions about identity, food and income. The survey will take you about 15 minutes to complete.

#### **What will happen to the information you give?**

This research is anonymous. This means that nobody, including the researchers will be aware of your identity. By answering it, you are giving consent for us to use your responses in this research. Your answers will remain completely anonymous and unidentifiable. Once you submit the survey, it will be impossible to retract your answer. Please do not include any personal identifiable information in your responses. All data from this survey will be destroyed on 1/03/2020.

Personal details will be collected only for those who wish to enter the prize draw or request a copy of the final report. All personal details will be received separately from the survey data and will be held in confidence. This ensures that your answers to the survey questions will not be linked to your identity.

### **What will the project produce?**

The information from my research will be used in my Masters dissertation and for academic publications or conferences.

### **If you have any questions or problems, who can you contact?**

If you have any questions, either now or in the future, please feel free to contact either:

#### **Student:**

Name: Aaron McKay-Valentine

University email address:

[Aaron.mckayvalentine@vuw.ac.nz](mailto:Aaron.mckayvalentine@vuw.ac.nz)

#### **Student:**

Name: Aaron McKay-Valentine

University email address:

[Aaron.mckayvalentine@vuw.ac.nz](mailto:Aaron.mckayvalentine@vuw.ac.nz)

#### **Supervisor:**

Name: Wokje Abrahamse

Role: Senior Lecturer

School: School of Geography, Environment and Earth Sciences

Phone: 04 463 5217

[Wokje.abrahamse@vuw.ac.nz](mailto:Wokje.abrahamse@vuw.ac.nz)

### **Human Ethics Committee information**

This research has been approved by the Victoria University of Wellington Human Ethics Committee. Ethics committee reference #0000027582. If you have any concerns about the

ethical conduct of the research you may contact the Victoria University HEC Convenor: Dr Judith Loveridge. Email [hec@vuw.ac.nz](mailto:hec@vuw.ac.nz) or telephone +64-4-463 6028.

### Food insecurity

We understand that food insecurity is a growing issue for many New Zealanders. If you or anyone you know is affected by issues related to food insecurity please visit [www.foodbank.co.nz](http://www.foodbank.co.nz) for information.

### Prize draw

While this survey is open to all participants over the age of 18, only participants currently living in New Zealand are eligible to enter the prize draw. Those who fill out the survey will go in the draw to win one of two \$50 grocery vouchers. This prize will be drawn at the end of October 2019.

Do you confirm you are at least 18 years of age and do you agree to give your consent to take part in this research.

Yes

No [Skip to end of survey](#)

## Demographics

Firstly, we would like to know a bit more about you. Please answer the following questions about yourself.

Disclaimer: This information is used for basic demographic information. Only aggregate results will be reported and individual responses will be not identifiable.

1. What is your age in years?
  - a. Open Specify
2. What is your gender identity?
  - a. Open Specify
3. What is your ethnicity? **M**
  - a. Pākehā/New Zealand European
  - b. Māori
  - c. Samoan
  - d. Cook Island Māori
  - e. Tongan
  - f. Niuean
  - g. Chinese
  - h. Indian
  - i. Other (such as Dutch, Japanese, Tokelauan) Please Specify ----Specify
4. Which of the following would best describe your current living situation?
  - a. Living alone
  - b. Living with parents or caretakers
  - c. Living with flat mates
  - d. Living with a partner (including partner by marriage, or de facto)
  - e. Living with a partner and dependents (e.g. children, siblings etc.)
  - f. Other ----Specify
5. Do you currently live in New Zealand?
  - a. Yes
  - b. No
6. If Q5=a How long have you lived in New Zealand?
  - a. Years ----Specify
  - b. Months ----Specify

7. Do you currently live in a rural or an urban area?
- a. Rural
  - b. Urban
  - c. Other ----specify

8. What is your current employment status? **M**
- a. Employed - Full-time
  - b. Employed - Part-time
  - c. Unemployed
  - d. Student
  - e. Retired
  - f. Other ----specify

9. If Q8=a or b What is your current occupation? Specify

10. If Q5=a How much did you earn in the past 12 months before tax?

Please answer in terms of NZD

- a. Less than \$20,000
  - b. \$20,001 - \$30,000
  - c. \$30,001 - \$40,000
  - d. \$40,001 - \$50,000
  - e. \$50,001 - \$60,000
  - f. \$60,001 - \$70,000
  - g. \$70,001 - \$80,000
  - h. \$80,001 - \$90,000
  - i. \$90,001 - \$100,000
  - j. \$100,001 and over
11. What is the highest qualification you have gained?
- a. No formal qualification
  - b. Secondary school qualification
  - c. Occupational certificate or diploma
  - d. Bachelor's degree
  - e. Postgraduate degree

The next few questions focus on your family situation while you were growing up.



12. What was the highest qualification gained by your parents/caregivers?

*In this case choose whoever had the highest*

- a. No formal qualification
- b. Secondary school qualification
- c. Occupational certificate or diploma
- d. Bachelor's degree
- e. Postgraduate degree

13. What were your parents'/guardians' occupations? Specify

14. Did you and your family grow up in an urban setting or a rural setting?

- a. Urban
- b. Rural
- c. Other ----specify

15. Using a scale from 1 to 7, where 1 = "low socio-economic status" and 7 = "high socio-economic status", how would you describe your socio-economic status during the following states of your life:.

	1 low socio- economic status	2	3	4	5	6	7 high socio- economic status
Your family's situation when you were under the age of 10							
Your family's situation during your teens							
Your current situation							

The next section of questions are about how you view yourself and your diet.

16. Using a scale of 1 to 7 with 1 being very masculine and 7 being very feminine, rate where you fit in to each of the following categories.

	Very masculine						Very feminine
	1	2	3	4	5	6	7
I consider myself...							
Ideally, I would like to be...							
Traditionally, my interests would be regarded as...							
Traditionally, my attitudes and beliefs would be regarded as...							
Traditionally, my behaviour would be regarded as...							
Traditionally, my outer appearance would be regarded as...							

17. Using a scale of 1 to 5 with 1 being strongly disagree and 5 being strongly agree, please tell us how much you agree with each of the following statements.

	1. Strongly disagree	2.	3.	4.	5. Strongly agree
To eat meat is one of the good pleasures in life					
I love meals with meat.					
I'm a big fan of meat.					
A good steak is without comparison.					
By eating meat I'm reminded of the death and suffering of animals.*					
To eat meat is disrespectful towards life and the environment.*					
I feel bad when I think of eating meat.*					
Meat reminds me of diseases.*					
To eat meat is an unquestionable right of every person.					
According to our position in the food chain, we have the right to eat meat.					
Eating meat is a natural and undisputable practice.					
I don't picture myself without eating meat regularly.					
If I couldn't eat meat I would feel weak.					
I would feel fine with a meatless diet.*					
If I was forced to stop eating meat I would feel sad.					
Meat is irreplaceable in my diet.					

## Diet

The next few questions are related to your diet and eating habits.

18. In an average week, how many days of the week do you eat the following?

	0	1	2	3	4	5	6	7
Meat (not including fish)								
Fish/seaf ood								
Vegetabl es								
Fruit								
Dairy								

19. If possible, think back to when you were younger (i.e. living in your childhood home under 18 etc.). In an average week, how many days of the week do you eat the following during your childhood

	0	1	2	3	4	5	6	7	Don't know
Meat (not includin g fish)									
Fish/sea food									
Vegetab les									
Fruit									
Dairy									

20. Which of the following best describes you?

- Meat eater/Omnivorous
- Pescatarian ----> go to Q31
- Vegetarian ----> go to Q31
- Vegan ----> go to Q31

## Meat consumption

This section focuses on your eating habits with a greater focus on meat consumption

21. Using the scale from 1 to 5 with 1 being not at all and 5 being a lot. How much do the following influence your reasons for eating meat?

	1. Not influential at all	2.	3.	4.	5. Extremely influential
Health					
Cost					
Taste					
Environmental impacts					
Ethical Animal Treatment					
It is a part of who I am (my religion, culture, gender, etc.)					

22. Using the same scale. How much do you believe the following influence a vegetarian's decision not to eat meat?

	1. Not influential at all	2.	3.	4.	5. Extremely influential	Don't know
Health						
Cost						
Taste						
Environmental impacts						
Ethical Animal Treatment						
It is a part of who they are (their religion, culture, gender, etc.)						

23. In terms of overall quantity, would you say you eat more or less meat than when you were under eighteen?
- a. More
  - b. About the same
  - c. Less
  - d. Don't know
24. What do you think the reasons are for this? [Open Specify](#)

### **Meat consumption-Meat substitutes and alternatives**

Finally, we would like to know a bit more about your opinions regarding meat substitutes and alternatives.

25. Have you tried any meat substitutes or alternatives?
- a. Yes
  - b. No
  - c. Don't know
26. If Q25=1 Which ones? Tick all that apply. **M**
- a. Quorn
  - b. Seitan
  - c. Tofu
  - d. Tempeh
  - e. Textured Vegetable Protein (TVP)
  - f. Other [-specify](#)
27. If Q25=1 On a scale of 1 to 5 with 1 being not at all affordable to 5 being more affordable, how affordable do you think meat alternatives are, in general?
- a. 1. Not affordable
  - b. 2
  - c. 3
  - d. 4
  - e. 5. Very Affordable
  - f. Don't know

28. Using a scale of 1 to 5 with 1 being highly unlikely and 5 being highly likely, how likely would you replace some of your meat consumption with meat alternatives in the following situations:

	1. Highly unlikely	2.	3.	4.	5. Highly likely
If meat substitutes could be made that tasted and felt like real meat					
If meat substitutes could provide the same health benefits of real meat					

Go to prize draw questions..

## Pescatarians, Vegetarians, and Vegans

This section focuses on your eating habits with a greater focus on **pescatarianism/vegetarianism/veganism**

29. How long have you been **pescatarian/vegetarian/vegan** for? **Specify**
- a. I have always been **vegetarian/pescatarian/vegan**
  - b. Less than a year
  - c. 1 to 2 years
  - d. 3 to 5 years
  - e. 6 to 10 years
  - f. More than 10 years

30. Using the scale from 1 to 5 with 1 being not at all and 5 being a lot, how much do the following influence your reasons for not eating meat?

	1. Not at all	2.	3.	4.	5. A lot	Don't know
Health						
Cost						
Taste						
Environmental impacts						
Ethical Animal Treatment						
It is a part of who you are (your religion, culture, gender, etc.)						



31. Using the same scale, how much do you believe the following influence an omnivore's decision to eat meat?

	1. Not at all	2.	3.	4.	5. A lot	Don't know
Health						
Cost						
Taste						
Environmental impacts						
Ethical Animal Treatment						
It is a part of who they are (their religion, culture, gender, etc.)						

32. What was influential in prompting your initial decision to stop eating meat? **Specify**

33. What were the main barriers involved in this process? **Specify**

## Pescatarians, Vegetarians, and Vegans- Meat substitutes and alternatives

Finally, we would like to know a bit more about your opinions regarding meat substitutes and alternatives

34. Have you tried any fake meat alternatives?

- a. Yes
- b. No
- c. Don't know

35. If Q34=a Which ones? **M**

- a. Quorn
- b. Seitan
- c. Tofu
- d. Tempeh
- e. Textured Vegetable Protein (TVP)
- f. Other —**specify**

36. If Q34=a How regularly do you eat these alternatives?

- a. Once a month or less
- b. More than once a month but not every week
- c. Once a week
- d. 2 to 6 times a week
- e. Every day
- f. Don't know

37. If Q34=b Which of the following are reasons for why you have not tried any meat alternatives? **M**

- a. Health concerns
- b. Costs
- c. The idea of meat alternatives reminds me too much of real meat
- d. No desire/ do not see the point
- e. Unaware of their existence
- f. No availability

38. On a scale of 1 to 5 with 1 being not at all affordable to 5 being more affordable, how affordable do you think these alternatives are in general?

- a. 1. Not affordable
- b. 2
- c. 3
- d. 4
- e. 5. Very Affordable
- f. Don't know

39. On a scale of 1 to 5 with 1 being not at all affordable to 5 being more affordable, how affordable do you think vegetarianism/veganism is in comparison to being omnivorous overall?

- a. 1. Not affordable
- b. 2
- c. 3
- d. 4
- e. 5. Very Affordable
- f. Don't know

40. If you have any further comments about the subjects in this survey, please use the following space to do so now.
- 

You have now come to the end of the survey. Thank you very much for participating! If you know anybody else that would be keen to complete this survey, you can share the following link to them XXXXXX.

If you would like to request a summary of the findings of this research, please email me at [aaron.mckayvalentine@vuw.ac.nz](mailto:aaron.mckayvalentine@vuw.ac.nz). This summary will be available at some point after 01/11/19.

41. **If Q5=a** If you would like to go in the draw to win one of two \$50 grocery vouchers, please follow this link to enter your name and email address.

This will be drawn during October and winners will be notified via email.



# **Tell us your thoughts**

**about meat, your identity and income**  
**and go in the**  
**prize draw to win**  
**one of two \$50 grocery vouchers**

**If you are over the age of 18 and live in New Zealand we would like to hear your thoughts on:**

- Meat consumption**
- Meat alternatives**
- Socio-economic factors which influence you.**

**Just use the QR code below or go to the following address to complete our short 15-minute survey to go in the draw.**



<https://tinyurl.com/meat-identity-income>