THE PSYCHOLOGICAL AND IDEOLOGICAL FOUNDATIONS OF MEAT CONSUMPTION, VEGETARIANISM, AND VEGANISM

BY

MADELINE JUDGE

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Abstract

Despite increasing evidence suggesting that plant-based diets may have multiple benefits over animal-based diets (e.g., Craig & Mangels, 2009; Stehfest, et al., 2009), vegetarians and vegans tend to represent a minority of most Western populations. This thesis investigated the social and ideological foundations of perceptions of vegetarians and vegans in Western societies, and also explored the potential role of visions of the future in motivating support for social change towards plant-based diets.

For my first two studies, I adopted a mixed methods approach to understanding perceptions of vegetarians and vegans in Western societies (Creswell, 2014). Study 1 was a thematic analysis of 44 online discussion forums containing evaluations of vegetarians and vegans as social groups, and the analysis was informed by discursive and rhetorical psychology (Billig, 1996; Potter, 1996). In my interpretations of the data, I highlighted the flexible and argumentative nature of expressing 'attitudes' towards vegetarians and vegans. I also discussed these discourses in relation to the wider ideological dilemmas of liberal individualism, rationality versus emotions, diet and health, and the human-animal relationship.

In Study 2, I drew on the discourses in Study 1 to develop a survey-based investigation of attitudes towards vegetarians and vegans, in a sample recruited from the general population of Aotearoa New Zealand ($N = 1326$). Two attitude measures were developed based on a previous scale assessing attitudes towards vegetarians (Chin, Fisak & Sims, 2002). Attitudes towards both vegetarians and vegans were generally positive; however, attitudes towards vegans were significantly less positive than attitudes towards vegetarians. Subsequent analyses tested two dual-process motivational models of social worldviews, ideological attitudes and outgroup attitudes (Duckitt, 2001), in the prediction of non-vegetarian attitudes towards vegetarians and vegans. The dual-process models fit the data well, suggesting that ideological motivations to maintain social cohesion and social inequality were associated with increasingly less positive attitudes towards vegetarians and vegans. I proposed that these associations may be due to vegetarians and vegans representing a challenge to social traditions, and a rejection of human dominance over animals.

In Study 3, I adopted a mixed methods approach to understanding visions of plant-based futures, in a convenience sample of first-year university students ($N = 506$). Study

3a involved a thematic analysis of participants' visions of potential future NZ societies, where most of the population now consumes plant-based, vegetarian, or vegan diets. Dominant themes included changes to health, the environment, and the economy, as well as changes to individual traits and values. In Study 3b, non-vegetarian participants were randomly assigned to imagine plant-based, vegetarian or vegan futures, and then completed a survey of collective future dimensions and support for plant-based policies (drawing from Bain, Hornsey, Bongiorno, Kashima, & Crimston, 2013). The strongest predictors of support for plant-based policies were visions of a vegetarian future as reducing societal dysfunction, and visions of a vegan future as increasing warmth in individuals. I concluded the thesis by reviewing the theoretical implications of the current research, discussing future research directions, and proposing some suggestions for the advocacy of plant-based diets.

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Thesis Introduction

What is the Problem?

There is growing concern about the negative environmental impacts and unsustainability of diets based on high levels of animal products (Hertwich et al., 2010; Odegard & van der Voet, 2014; Pimentel & Pimentel, 2003; Stehfest et al., 2009; Steinfeld, Gerber, Wassenaar, Castel, & deHaan, 2006). An estimated 70% of the world's agricultural land is now dedicated to livestock production, which has contributed to biodiversity loss, soil degradation, and air and water pollution (Steinfeld, et al., 2006). Animal agriculture is also responsible for an estimated 18% of global greenhouse gas emissions, an amount greater than the entire transport sector (Steinfeld, et al., 2006). The increasing intensification of livestock production has resulted in a multitude of adverse welfare outcomes for farmed animals, including practices such as confinement and overcrowding, the restriction of natural behaviours, surgical procedures without anaesthesia, and genetic problems resulting from selective breeding for growth (Joy, 2010; Singer, 1975).

Taking into consideration an increasing human population and an expected increase in demand for meat and animal products, researchers have predicted that global levels of meat consumption could double by 2050 (Steinfeld, et al., 2006). One strategy to reduce the environmental impacts of livestock production is to encourage the adoption of plant-based diets, such as vegetarian and vegan diets (Marlow et al., 2009; Schösler, Boer, & Boersema, 2012; Stehfest, et al., 2009). Comparisons of the environmental impacts of animal-based and plant-based dietary patterns suggest that omnivorous diets based on conventional agriculture have the most negative impact on the environment, while vegan diets based on organic products have the least environmental impact (Baroni, Cenci, Tettamanti, & Berati, 2006). Surprisingly, while environmental advocacy groups have heavily promoted pro-environmental behaviours such as recycling, using public transport or bicycles, carbon taxes, and renewable energy; until recently there has been relatively little promotion of plant-based, vegetarian, or vegan diets (Carlsson-Kanyama & González, 2009; Packwood Freeman, 2010).

An increase in the prevalence of plant-based diets is also likely to have beneficial consequences for public health. The American Dietary Association (ADA) has stated that

well-planned vegetarian and vegan diets are "healthful, nutritionally adequate, and may provide health benefits in the prevention and treatment of certain diseases" (Craig & Mangels, 2009, p. 1266). For example, vegetarians tend to have lower mortality rates from ischemic heart disease (Fraser, 2009), and following a vegan diet may be even more effective for treating Type 2 diabetes than current dietary recommendations (Barnard et al., 2009). Additionally, for over a decade, the World Health Organization (WHO) has recommended a primarily plant-based diet[1] to protect against a variety of chronic diseases (FAO/WHO, 2002).

Given the environmental, health, and ethical issues associated with diets high in animal products, it is important to investigate how people understand plant-based diets, in order to better promote these diets. Over the last century, the vegetarian movement appears to have made a significant impact on Western society, as indicated by the widespread availability of vegetarian foods and the endorsement of plant-based diets by large organisations (Craig & Mangels, 2009; FAO/WHO, 2002). And yet, in most Western cultures, vegetarians and vegans tend to make up a minority of the population. Because ones' status as a vegetarian is self-defined, and multiple variations of vegetarianism exist, the exact prevalence of people who consume vegetarian diets can be difficult to determine (Ruby, 2012). For example, in one study, around 80% of the self-identified vegetarians reported consuming some meat (Vinnari, Montonen, Härkänen, & Männistö, 2009). However, estimates from the European Vegetarian Union website (European Vegetarian Union, 2007) suggest that the prevalence of vegetarianism ranges from 40% of the population in India, 9% in Germany, 4% in Canada, 3% in Australia, less than 2% in France, 2% in the UK, 4% in the United States (Stahler, 2012), and 2% in Aotearoa New Zealand (Sanitarium, 2009).

Why are there so few vegetarians in Western cultures? Most psychological research on food consumption has focused on cognitive processes involved in consumption, or psychopathology in relation to food consumption; only in recent years

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[1] It is interesting to note that the WHO employs the term 'plant-based diet' rather than 'vegetarian' or 'vegan'. Some researchers suggest that the term 'plant-based' has wider appeal, as it implies that the diet may still contain *some* animal products (Lea, Crawford, & Worsley, 2006). Weinsier (2000) has also argued that the variation in dietary behaviours of individuals who identify as vegetarian is so wide that it makes the term almost meaningless in a nutritional sense.

have researchers in psychology become interested in the psychology of everyday food habits (Rozin, 2006; Wilson & Allen, 2007). Social psychology can contribute significantly to understanding the psychological processes influencing social stability and social change in the area of vegetarianism and meat consumption. For my thesis, I have focused on the social and ideological aspects of vegetarianism and veganism in Western cultures. I began this research journey with many questions. What shapes food choices, and what does it mean to be a vegetarian or a vegan? Why does vegetarianism (and veganism especially), seem to generate so much argumentation between individuals? The following thesis is the outcome of thinking about and researching these questions.

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Meat Consumption, Vegetarianism, and Veganism in Western Cultures

In the following chapter, I review some of the history of vegetarianism in Western cultures, theories regarding the symbolism of meat, and research on the psychological and social aspects of vegetarianism and meat consumption. I conclude this chapter by proposing that my research on the intergroup processes and ideological factors associated with mainstream perceptions of vegetarianism and veganism can make an important contribution to the literature in this area.

A Brief History of Meat Consumption and Abstention

As an omnivorous species, human beings have the ability to consume many different foods. Yet what is deemed to be 'food' is often quite limited and influenced by the cultural context (Murcott & Henry, 1996). Across various cultures, animal-based foods tend to be viewed with a degree of ambivalence and uncertainty (Beardsworth, 1995). In particular, animal flesh is often held in high esteem, but also tends to be the food category most often subjected to prohibitions (Nemeroff & Rozin, 1989). Beardsworth (1995) has proposed that ambivalence towards meat arises from three major paradoxes: eating meat can be pleasurable, but can also be unpleasant because animal products frequently elicit disgust; meat can provide nutrition, but can also transmit pathogens; and although consuming meat may contribute to survival, it also requires the death of another animal. Beardsworth (1995) suggests that these paradoxes tend to be managed through cultural traditions, knowledge, and familiar flavours that function to communicate what foods are safe and pleasant to eat, and through rituals and customs that reduce the discomfort associated with killing nonhuman animals (henceforth referred to as 'animals'; Beardsworth, 1995; Serpell, 1996). Some cultures and individuals also attempt to resolve these paradoxes by avoiding the consumption of meat entirely and consuming plant-based diets (Beardsworth, 1995; Spencer 2000).

The practice of voluntarily omitting meat from one's diet has existed in both the Eastern and Western contexts for over two thousand years (Spencer, 2000). In the East, vegetarianism has been a relatively popular practice, due to the influences of religions

such as Buddhism, Jainism and Hinduism and the concept of 'ahimsa', or non-violence to living things (Spencer, 2000; Stuart, 2006). In India, vegetarianism also plays a role in the caste system, and can communicate social status (Twigg, 1979). In contrast, in the West, vegetarianism has historically been much less common[2]. Prior to the creation of the term 'vegetarian' in the 19th century, individuals in Western cultures who abstained from meat tended to be known as Pythagoreans, after the Greek philosopher, Pythagoras. Pythagoras argued that the soul was able to transmigrate between animals, and that abstinence from meat resulted in better health outcomes and more respectful relationships with other animals (Spencer, 2000). Abstention from meat was also advocated at times by various other philosophers and scholars in the Western philosophical tradition, such as Porphyry, Plutarch and Leonardo da Vinci (Spencer, 2000).

In the West, the development of Christianity and associated beliefs in a human-animal divide and human dominion over other animals was influential in normalising meat consumption and positioning vegetarianism as deviant (Spencer, 2000). Additionally, as dominant traditions and social events often centred on the consumption of meat, the refusal to consume meat could be interpreted as a lack of respect or rejection of societal values (Spencer, 2000). Consequently, individuals who abstained from meat tended to be viewed as deviants or radicals in society, and were at times ridiculed, ostracised, or even persecuted as heretics (Spencer, 2000). The perception that meat-based diets were superior to plant-based diets spread during European colonisation; according to Belasco (2006), some justifications given for colonisation included the supposed need to liberate cultures from their "uncivilised" grain-based diets (or "savage" diets that were based on the wrong kinds of meat, p. 9).

Defining the terms 'vegetarian' and 'vegan'

The word 'vegetarian' came into prominence in the mid-19th century, around the time of the origination of The Vegetarian Society in Britain (Spencer, 2000). The Vegetarian Society initially advocated vegetarianism for health, the environment, and the belief that the production and consumption of meat promoted aggression (Spencer, 2000).

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[2] Although a distinction is commonly made between involuntary vegetarianism in the East, and voluntary vegetarianism in the West, Klein (2008) has disputed the validity of this divide between 'voluntary' and 'involuntary' veg*anism. Klein points out that numerous interactions between cultures have shaped the development of vegetarianism in both the East and the West. For example, Spencer (as cited in Klein, 2008) describes a process whereby Western vegetarianism drew on Indian philosophy, but also added to these concepts, and then later these expanded ideas were taken from Western vegetarianism back to India.

Animal welfare was incorporated as another reason for vegetarianism a few decades later, in conjunction with increasing public disapproval of vivisection (Spencer, 2000). At times, vegetarianism in the Victorian era was linked to radical social movements such as feminism (Adams, 1990), secularism, and socialism (Gregory, 2007). For most of the last century, vegetarianism continued to be viewed as a deviant practice, and was occasionally associated with mental illness (Barahal, 1946).

More recently, perceptions of vegetarianism in Western cultures appear to have changed quite dramatically. It has been proposed that since the 1970s vegetarianism has entered into the mainstream, as evidenced by the increasing variety of vegetarian options available at most restaurants and supermarkets (Beardsworth & Keil, 1993; Craig & Mangels, 2009; Smart, 2004). According to The Vegetarian Society (UK), the current definition of a vegetarian is:

> Someone who lives on a diet of grains, pulses, nuts, seeds, vegetables and fruits with, or without, the use of dairy products and eggs. A vegetarian does not eat any meat, poultry, game, fish, shellfish or by-products of slaughter. (The Vegetarian Society, n. d., para. 1)

Some researchers have conceptualised vegetarianism as existing on a continuum ranging from omnivore to vegan (Allen, Wilson, Ng, & Dunne, 2000; Beardsworth & Keil, 1992). Within this continuum, subtypes of vegetarianism that emerge as increasing categories of foods are omitted from the diet include semi-vegetarian (mostly vegetarian but eats meat occasionally), pesco-vegetarian (omit meat but consumes fish, dairy, and eggs), lacto-ovo vegetarian (omits meat but consumes eggs and milk), lacto-vegetarian (consumes milk), ovo-vegetarian (consumes eggs), and vegan (does not consume any animal products, and often also does not purchase other products based on animal products, or that have been tested on animals; Beardsworth & Keil, 1992).

The vegetarian movement became divided in the mid-20th century, resulting in the development of The Vegan Society in 1944 (Spencer, 2000). The term 'vegan' was created from the first and last sections of the word 'vegetarian', and was intended to distinguish vegans from vegetarians (Spencer, 2000). According to The Vegan Society, the development of veganism was predominantly motivated by ethical concerns; vegans rejected the exploitative relationships involved in deriving products from animals, which included the dairy and eggs that were commonly consumed by vegetarians (Spencer,

2000; The Vegan Society, n.d.). According to The Vegan Society (UK) the current definition of veganism is:

> …a way of living which seeks to exclude, as far as is possible and practicable, all forms of exploitation of, and cruelty to, animals for food, clothing or any other purpose. From 'junk food vegans' to raw food vegans - and everything in between - there's a version of veganism to suit everyone. Yet one thing we all have in common is a plant-based diet avoiding all animal foods such as meat, dairy, eggs and honey - as well as products like leather and any tested on animals. (The Vegan Society, n.d., para. 1)

In most Western cultures, vegans tend to be fewer in number than vegetarians, (e.g., 1% versus 3% of the U.S. population; Stahler, 2012), and actual proportions may be even smaller considering the variation between self-definition and behaviour (Ruby, 2012). Though most psychological research tends to focus on the dietary aspect of veganism, veganism is frequently practiced in many areas of life, not just one's diet (e.g., avoiding clothing, toiletries, and cosmetics containing animal products). As mentioned above, veganism has been conceptualised by some researchers as a 'strict' version of vegetarianism and the end point of a dietary continuum (Beardsworth & Keil, 1992). However, it has been argued that this is not how veganism is experienced by vegans, and it may be more appropriate to view veganism as a distinct category from vegetarianism (Cole, 2008; Maurer, 2002).

At this point I should emphasise that although I am referring to The Vegan Society's definition of veganism, vegans are not a homogenous group, and there are diverse approaches to veganism. Some vegans are associated with organisations, while others are more individualised vegans with no connections to organisations (Larsson, Rönnlund, Johansson, & Dahlgren, 2003). Approaches to veganism include health advocacy, veganism for spiritual reasons, veganism as consistent with feminism (Adams, 2010), veganism as part of punk subcultures (Cherry, 2006), veganism as part of nutritional decolonisation (Harper, 2010b), veganism as part of anti-capitalism (Torres, 2007), and veganism as part of a wider movement for food justice (Food Empowerment Project, n.d.). There are also a range of ethical perspectives on veganism, including those who advocate veganism as a moral baseline opposing the ideology of speciesism (Francione & Garner, 2010), and those who advocate a contextual moral veganism based

on an awareness that the meaning of veganism depends on the context (and therefore veganism is not appropriate as a universal moral imperative; Bailey, 2007).

Contemporary Western vegetarianism as a social movement

Maurer (2002) suggests there are three levels of society that the Western vegetarian movement targets in order to promote social change: political or institutional changes, changes to cultural norms, and changes to individual behaviour. It has been suggested that the decision to become vegetarian or vegan involves both psychological factors and contact with social movement materials (Dietz, Frisch, Kalof, Stern, & Guagnano, 1995).

There are mixed outlooks on the impact that the veg*an[3] movement has had on wider society in the West. On the one hand, vegetarian food is now widely available and viewed as a healthy meal option (Lea & Worsley, 2003; Smart, 2004). Potts and Parry (2010) suggest that in recent years veganism has been rebranded as an appealing lifestyle choice, as part of a wider movement towards ethical consumption. In the United States, several well-known public figures, including former U.S. President Bill Clinton and former U.S. Vice-President Al Gore have been described as 'vegan' in the media (Holpuch, 2013, November 26), and recently U.S. business magazine, Forbes, even named high-end vegan foods as one of the top food trends of 2013 (amidst other trends such as octopus, pastrami, and devilled eggs; Bender, 2013, October 28).

On the other hand, though the popularity of vegetarian meals (and more recently vegan meals) may have increased, the veg*an movement does not appear to have succeeded in dramatically increasing numbers of converts to the movement's ideology (Smart, 2004; Stahler, 2012). The proportion of the population represented by veg*ans appears to have remained fairly stable over the last few decades, and some researchers have even suggested that levels of Western vegetarianism have reached a plateau (Beardsworth & Bryman, 2004). Maurer (2002) argues that despite nearly 200 years of advocacy, the vegetarian movement has failed to convince the majority of individuals in Western cultures that eating meat is hazardous to their health, or morally problematic.

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[3] Throughout this study I use the contraction veg*an to represent vegetarians and vegans in combination, and veg*anism to represent vegetarianism and veganism, unless there is a distinction needs to be made (this term has been used in previous research, for example, see Cole & Morgan, 2011; Potts & White, 2010)

Boyle (2011) has suggested that vegetarianism (and perhaps increasingly veganism) is viewed as "a 'superior' behaviour that is nonetheless rejected" (p. 268).

Beardsworth and Keil (1993) explore the paradox that vegetarian ideas challenge the dominant ideology of meat-eating, and yet recently vegetarian meals have become widely accepted and accessible. The authors argue that while there is a greater tolerance of vegetarianism in society, tolerance does not equate to the acceptance of vegetarian ideas. Beardsworth and Keil contend that the ideological challenge of vegetarianism has been weakened by its incorporation into capitalist economic systems, via the creation of niche markets for vegetarian foods. The authors introduce the concept of "menu pluralism" (p. 233) to describe societal changes in approaches to food that have allowed vegetarian meals to become mainstreamed. Beardsworth and Keil suggest "vegetarianism or veganism can be seen by the public as simply additional options from which to choose" (p. 233). It has been argued that the mainstreaming of vegetarianism has had the negative consequence of reducing a need for collective organising, and for the existence of groups such as The Vegetarian Society (Beardsworth & Keil, 1993; Smart, 2004).

There have been a number of critiques of mainstream vegan advocacy. For example, Harper (2010a) critiques the white post-racial approach of mainstream vegan organisations, highlighting the problems with describing vegan products as 'cruelty-free' despite the likelihood that some of these products have been produced by child slavery. The organisation, People for the Ethical Treatment of Animals (PETA), has also been criticised for promoting vegan advocacy campaigns that objectify women (Gaarder, 2011). There have been debates about whether ethical vegetarianism or veganism is discriminatory to groups of people with different nutritional needs (Adams, 1995; Donovan, 1995; George, 1994); and criticism that organisations asserting that veganism is 'easy' assume their audience is in a position of privilege, with access to a variety of healthy foods (Bailey, 2007; Harper, 2010a).

In addition to examining the historical development of the veg*an movements, it is important to examine the research on the psychological basis of why some people choose to adopt veg*anism, while others do not (and also to consider whether this is even a legitimate question). The next section reviews some of the research on the psychological processes underlying the behaviours of meat consumption, vegetarianism and veganism in the context of Western cultures.

The Psychological Bases of Contemporary Veg*anism

Demographic influences

There are mixed findings in the research examining the influence of demographic variables, such as socioeconomic status, education, and ethnicity, on levels of meat consumption and veg*anism. In a large sample of U.S. residents, Gossard and York, (2003) found that Black and Asian residents reported consuming more meat than White residents, and that lower levels of education and social class appeared to be associated with higher levels of meat consumption. However, in another study based in the United States, none of the social structural variables included were significantly associated with vegetarianism, although Black participants were more likely to endorse vegetarian arguments than White participants, and women were also more supportive of vegetarian arguments than men (Kalof, Dietz, Stern, & Guagnano, 1999). In a more recent survey in the United States, 3% of White participants identified as vegetarian, in comparison to 6% of Black participants and 8% of Hispanic participants (Stahler, 2012). Individuals earning over $100,000 had one of the lowest rates of vegetarianism, at 1%.

In contrast to other demographic variables, gender appears to play a significant role in the area of veg*anism and meat consumption. Many research studies have identified that men tend to consume higher amounts of meat than women (Beardsworth et al., 2002; Gossard & York, 2003) and men tend to be less likely to be vegetarian (Kalof, et al., 1999; Perry, Mcguire, Neumark-Sztainer, & Story, 2001; Worsley & Skrzypiec, 1998), although at least one study has reported inconsistent findings in this area (Allen, et al., 2000). It has been suggested that gender differences in vegetarianism are most likely to be due to differences in values between men and women (Allen, et al., 2000; Dietz, et al., 1995; Kalof, et al., 1999).

Reported motivations for vegetarianism

As mentioned at the beginning of this chapter, themes of health and morality in relation to vegetarianism appear to have been present in Western philosophy for a very long time (Spencer, 2000). In recent empirical research, the most frequently reported motivations for vegetarianism include concerns about animal welfare, individual health, and environmental concerns (Amato, Partridge, & Amato, 1989; Beardsworth & Keil, 1992; Fox & Ward, 2008; Ruby, 2012). Other motivations for vegetarianism include food

security, disliking meat, and religious or spiritual reasons (for a comprehensive review of studies investigating vegetarian motivations, see Ruby, 2012).

Motivations for vegetarianism can change and develop, and many vegetarians report that their number of motivations has increased over time (Beardsworth & Keil, 1992). In one study, younger people were more likely to emphasise the importance of moral reasons, while older people were more likely to endorse health-related reasons for vegetarianism (Pribis, Pencak, & Grajales, 2010). There is also evidence of cultural differences in motivations for vegetarianism between Western and Eastern contexts (Ruby, Heine, Kamble, Cheng, & Waddar, 2013). For example, Ruby et al. (2013) identified that Euro-American vegetarians tended to be motivated by a concern for animals and the environment (relative to omnivores), whereas vegetarians in India tended to be motivated by religion and concerns regarding purity and ingroup loyalty (relative to omnivores).

There is variability across studies in the leading motivation reported for vegetarianism, with some studies identifying personal health as the most common motivation, and others identifying ethical considerations (Ruby, 2012). Based on reported motivations for vegetarianism, some researchers have argued that there should be a distinction between 'health' vegetarians and 'ethical' vegetarians (Jabs, Devine, & Sobal, 1998; Rozin, Markwith, & Stoess, 1997). For example, in qualitative interviews with 19 adult vegetarians, Jabs, Devine and Sobal (1998) suggested that health and ethics could form the two main classifications of vegetarians based on their reported motivations. Most surveys of vegetarian motivations take what participants say as a direct indication of what they think. However, some researchers have questioned the appropriateness of grouping vegetarians in terms of reported motivations (Beardsworth & Keil, 1997; Wilson, Weatherall, & Butler, 2004). Wilson et al., (2004) argue that particular motivations may be employed persuasively depending on the context; for example, reporting 'health' as a motivation can function to rhetorically oppose possible negative interpretations of being moralizing. The authors suggest it is important to take into account the discursive and rhetorical nature of 'reasons' given for vegetarianism and meat consumption.

Perceived benefits and barriers to vegetarianism in non-vegetarians

When researching motivations for veg*anism, it can be informative to examine the reasons that non-vegetarians report for *not* adopting vegetarianism. Lea and Worsley (2003) examined the perceived benefits and barriers to vegetarian diets in a large Australian sample of non-vegetarians. Most participants reported that there were potential health benefits to a vegetarian diet, but that their enjoyment of eating meat and reluctance to change their eating habits would act as barriers to adopting vegetarianism. Other barriers included the belief that humans are meant to eat meat, that their family eats meat, and a lack of information about vegetarian diets (Lea & Worsley, 2003). In a subsequent study looking at attitudes towards plant-based diets (rather than vegetarian diets), the main barrier that participants reported was a lack of information, followed by an unwillingness to change their habits, and a belief that their family wouldn't eat a plant-based diet (Lea, et al., 2006). In a study of attitudes towards vegetarianism in teenagers, the top three reasons given for not becoming vegetarian included a belief that vegetarianism was unhealthy, liking meat, and feeling pressured to eat meat by others (Worsley & Skrzypiec, 1998). Based on these studies, it appears that social pressures can act as a barrier to becoming vegetarian. Additionally, in some studies that have examined non-vegetarians' perceived barriers to vegetarianism, a small percentage of participants reported that being a vegetarian would be difficult because of the potential to be stereotyped negatively (Lea, et al., 2006; Lea & Worsley, 2003).

The symbolism of meat

In addition to directly asking people why they are or are not vegetarian, it is also important to consider the role of culturally-specific symbolic and ideological beliefs in shaping food behaviours. It has been argued that Western cultures place a higher value on meat than its nutritional status alone would indicate (Adams, 1990; Allen & Ng, 2003; Fiddes, 1991; Twigg, 1979; Wilson & Allen, 2007). In this section I discuss some of the social scientific theories that have been proposed to explain the dominance of meat consumption and the marginalisation of vegetarianism in Western cultures, including research on the values and worldviews of individuals in these societies.

It has been argued that vegetarianism is generally understood by non-veg*ans as a voluntary choice linked to a particular worldview and associated beliefs, whereas meat-

eating is viewed as natural and not requiring explanation (Adams, 2003; Fiddes, 1991). The typical Western diet centred on meat and animal products has therefore been described as an "unmarked pole" to which vegetarianism is compared and framed as deviant (Wilson et al., 2004, p. 568; see also Adams, 2003). Twigg (1979) describes modern vegetarianism in the West as an "explicit food ideology" (p. 18) containing themes of egalitarianism and individual choice, and associations with a collection of specific motivations and beliefs (such as an emphasis on animal welfare, personal health, and the environment). It has been argued that there is also an unseen dominant ideology consisting of a set of beliefs that support the dominance of meat consumption (Fiddes, 1991; Twigg, 1979). The notion of an ideological basis to meat consumption has been popularised recently by Joy (2010), who has labelled this ideology 'carnism', and describes it as based on beliefs that the consumption of a culturally-specific set of animals is "natural, normal, and necessary" (p. 96).

Historically, meat has been highly valued in part because the ability to consume large amounts of meat communicated wealth and social status (Fiddes, 1991). Twigg (1979) suggests that meat is the focus of most meals, and "stands in a sense for the very idea of food itself" (p. 21). Twigg has argued that in the dominant Western food ideology, food types are viewed on a hierarchy, with red meat at the top, followed by white meat, fish, dairy products, eggs, and fruit and vegetables at the bottom. Red meat is positioned at the top of the hierarchy because it contains blood, which symbolises power, strength, virility and masculinity. A number of other theorists have also highlighted the associations between meat, social status, power and hegemonic masculinity (Adams, 1990; Fiddes, 1991; Luke, 2007).

In contrast to meat and animal products, fruits and vegetables are seen as inferior, weak and feminine foods (Twigg, 1979). Therefore, within the Western food hierarchy, vegetarianism (and veganism in particular) could be constructed as a form of asceticism, in giving up desirable and strength-providing foods for more inferior foods. However, Twigg (1979) proposes that the vegetarian ideology does not just involve eating lower on the food hierarchy, but also directly challenges and inverts this hierarchy. Raw 'living' vegetables and fruit become highly valued, while meat is negatively associated with death, ill-health, violence and a denial of empathy.

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Empirical research supports the dominant status of meat relative to other food types in Western cultures. Allen (2005) examined status-seeking and perceptions of the status of foods in a sample of 64 Australians. The perceived prestige of general food categories was close to what would be expected by theories of a Western food hierarchy. Apart from the highest prestige being assigned to seafood, red meat was at the top, followed by white meat, dairy, fruit, vegetables and cereal. Participants high in status-seeking tended to choose high-status foods and reject low status foods. Allen suggested that consuming high-status foods may therefore be employed as a strategy for increasing social status.

Meat and masculinity

Red meat is argued to symbolise strength, power, and dominance over other animals and the natural world via its association with the hunting of animals, which has typically been viewed as a masculine practice (Adams, 1990; Fiddes, 1991; Luke, 2007). Adams (1990) locates a link between meat consumption and masculinity within the wider ideology of patriarchy, and suggests that the objectification of animals in food production is linked to the objectification of women in images of sexual violence in patriarchal cultures. Adams (1990) utilises the concept of the "absent referent", to discuss how numerous societal and ideological structures function to separate the living animal from 'meat' as a food item. Adams argues that because the animals become the absent referent in meat consumption, individuals can find it difficult to think of meat as being a part of an animal.

It has been argued that the changes in reactions to vegetarianism over the last century could be related to progress in the feminist movement (Adams, 1990; Beardsworth & Keil, 1997). Women have traditionally made up a large part of the vegetarian movement, and feminism has resulted in women having greater autonomy; therefore, the feminist movement may have allowed for greater uptake and advocacy of vegetarianism (Adams, 1990; Beardsworth & Keil, 1997). Fiddes (1991) has also argued that a recent decline in the popularity of red meat reflects more than just health concerns regarding the safety of meat consumption; it may also reflect wider changes in societal values. Fiddes proposes that red meat was historically so highly valued because it was a potent symbol of human dominance over other animals and the natural world. However, with increasing awareness of the widespread negative human impacts on the environment,

it appears that this perception may be changing. Red meat may now represent human dominance over nature as being excessive and destructive (Fiddes, 1991).

Rothgerber (2013) identified some gender differences in the justification strategies employed to defend meat consumption. Women tended to use strategies to distance meat consumption from the slaughter of an animal, while men tended to justify meat consumption by expressing positive attitudes towards meat and endorsing a hierarchy of humans as superior to other animals. The author concluded that simply providing information of the benefits of vegetarianism may not be enough to encourage vegetarianism in men, as the association of meat with enacting masculine gender roles may act as a significant barrier. Rothgerber suggested that vegetarian advocates could employ strategies such as highlighting the influences of gender socialisation, attempting to reduce the perception that all men enjoy eating meat (perhaps by raising awareness of 'masculine' vegetarian exemplars or encouraging discussions about ambivalence towards meat in men), and actively reframing vegetarianism as a practice that is consistent with masculine norms. Rozin et al. (2012) have also suggested that a strategy to counter associations between veg*anism and reduced masculinity may be to create vegetarian options that communicate power and status, such as vegetarian 'steaks' with grill lines.

Differences in values between vegetarians and omnivores

If meat represents power and patriarchy, it is possible that abstention from meat could be interpreted as not just an alternative diet, but also a challenge to dominant power structures. Veganism in particular may challenge the ideology of human superiority over animals (McDonald, 2000). Consistent with the predictions of sociological theories that associate meat with power and dominance over both humans and other animals (Adams, 1990; Fiddes, 1991; Luke, 2007; Twigg, 1979), research has identified differences in values between vegetarians and omnivores, in particular, in their respective preferences for hierarchy (Allen, et al., 2000). In one study, individuals who identified strongly as 'omnivore' (as opposed to 'vegan') reported greater endorsement of social dominance and inequality in society than individuals who identified as weak omnivores or vegetarians (Allen et al., 2000). Strongly identified omnivores also tended to report higher right-wing authoritarianism (another personality measure commonly associated with prejudice towards outgroups; Allen et al., 2000). In other studies, vegetarians tended to place

greater emphasis on valuing openness and emotions, relative to omnivores (Allen et al., 2000; Wilson & Allen, 2007).

Research suggests that highlighting the symbolic association between meat and dominance can influence individual attitudes towards meat, and can even increase the reported consumption of fruit and vegetables (Allen & Baines, 2002). Allen and Baines (2002) manipulated the salience of the symbolism of meat in regards to hierarchy and inequality. Following the manipulation, participants who valued egalitarianism expressed less positive attitudes towards meat. The authors therefore suggested that a potential strategy for promoting vegetable and fruit consumption could be to increase the symbolic association of these foods with egalitarianism. The symbolic qualities of foods may also influence factors such as perceived taste. Allen, Gupta and Monnier (2008) found that participants who valued egalitarianism tended to rate the taste of a vegetarian sausage roll higher than a beef sausage roll, even if they had been deceived about what they were actually eating. This study demonstrates that perceived taste can sometimes reflect the values perceived to be symbolised by the food, rather than the physical properties of the food itself.

Kwan and Roth (2011) describe vegetarianism as a form of "counter-hegemonic embodiment…that does not work through organized collective action but instead writes protest directly onto the individual body" (p. 187-188). Kwan and Roth argue that vegetarianism often co-occurs with other counter-hegemonic attitudes, such as critiques of gender conformity, feminism, and environmentalism. Additionally, Lindeman and Sirelius (2001) have also suggested that "food choice has become a new site where one expresses one's philosophy of life" (p. 175). In two studies involving female participants, the authors investigated the relationships between food choice motivations, values, and humanist/normative worldviews. Vegetarians most strongly endorsed an ecological ideology as the motivation for their food choices, and this was connected to a humanist orientation to the world (but not a normative orientation). In contrast, those individuals who most strongly endorsed a health ideology tended to express a normative view of the world. The authors inferred that vegetarians were not motivated by conforming to dietary norms, but rather by a desire to live in way that was consistent with their values, and these values may be linked to the values that are usually associated with left-wing social movements. Similar findings have been obtained in other studies; for example, individuals who emphasise traditional values tend to be less likely to be vegetarian, while individuals

who emphasise altruistic values tend to be more likely to be vegetarian (Dietz, et al., 1995).

Given the symbolism of food, the differences in values between vegetarians and omnivores, and the fact that that veg*ans tend to be in the minority in Western cultures, it is likely that there are social consequences associated with identifying as a vegetarian or a vegan. The following section discusses the research into the social aspect of veg*anism and then introduces the research studies in the current thesis.

Social Aspects of Vegetarianism and Veganism

Food choices play an important role in communicating values, identities and group relations. For example, food choices have been linked to the expression of gender identities (Buerkle, 2009), and cultural identities often include ideas about what individuals in different cultures do and do not eat (Murcott & Henry, 1996). Not surprisingly, social factors are suggested to play a significant role in the advocacy, adoption, maintenance, and exiting of veg*anism (Cherry, 2006; Jabs, Sobal, & Devine, 2000; Menzies & Sheeshka, 2012). For many vegetarians, being vegetarian is experienced as part of their self-identity (Jabs, et al., 2000), and there is evidence that individuals who view vegetarianism as part of their identity are more likely to sustain vegetarianism (Haverstock & Forgays, 2012). Cherry (2006) identified that in the punk subculture, having supportive social networks increased the likelihood of maintaining veganism and it was easier to maintain veganism in situations where it had become a normative behaviour.

As mentioned in the previous section, "Perceived benefits and barriers to vegetarianism in non-vegetarians", social factors can be a barrier to the adoption of veg*anism (Worsley & Skrzypiec, 1998). Experiences of interpersonal difficulties between veg*ans and non-veg*ans have led to the development of 'survival guides' for veg*ans, such as *Living among Meat Eaters: The Vegetarian's Survival Handbook* (Adams, 2003), and *Vegan Freak: Being Vegan in a Non-Vegan World* (Torres & Torres, 2009). Research suggests that vegetarians employ various communication strategies to manage the potential social issues associated with being vegetarian (Greenebaum, 2012; Romo & Donovan-Kicken, 2012). For example, Romo and Donovan-Kicken (2012) propose that vegetarians struggle with several dilemmas in communicating vegetarianism, such as the dilemma between wanting to stay true to their beliefs, but not appear deviant,

and the dilemma between communicating their vegetarian beliefs without seeming judgemental of others.

Perceptions of vegetarians and omnivores

How do non-vegetarians view vegetarians? Sadalla and Burroughs (1981) provided some of the earliest empirical evidence of specific characteristics being associated with people who eat vegetarian foods. In their study, participants rated the characteristics of a target based on their preference for different foods. Target individuals who preferred typically vegetarian foods were rated as "pacifist, hypochondriacal, drug-using, weight-conscious, liberal, and likely to drive foreign cars" (p. 53). Participants who personally identified as vegetarian described themselves as non-competitive, intellectual, sexy, conscious about their weight and more likely to be drug-users. Drawing from interviews with vegetarians and anecdotal data, Adams (2003) suggests that there are six common stereotypes that non-vegetarians employ to explain the behaviour of vegetarians: the "Ascetic", who is admired for their self-discipline and ability to reject pleasurable foods, but is seen as exceptional; the "Puritan", who is motivated to prevent everyone from having pleasure; the "Bambi Vegetarian", who is emotionally immature and excessively attached to nonhuman animals; the "Freak", who just wants to be different to everyone else; the "Holier-than-thou Vegetarian", who likes to feel superior to others; and the "Phobic Vegetarian", who has some specific psychological problems that are revealed in their food choices (p. 49-51).

In a sample of university students (with an overrepresentation of females), Chin et al. (2002) identified a generally positive attitude towards vegetarians, though men tended to be less positive towards vegetarians than women. More recently, Ruby and Heine (2011) investigated perceptions of vegetarians and omnivores on the dimensions of virtue and masculinity. The authors proposed that previous studies investigating attitudes towards vegetarians were potentially confounded by the perceived healthiness of a vegetarian diet, and it was possible that individuals associate virtue with vegetarians simply because they tend to eat a healthier diet. Ruby and Heine compared ratings of people who consumed a vegetarian or an omnivorous diet, while controlling for perceived healthiness of the diet and perceived similarity to the target. Both omnivores and vegetarians tended to rate targets who favoured vegetarian foods as more virtuous than omnivorous targets (though this effect was greater for the vegetarian participants). Similar

results were obtained in a second study that explicitly described the targets as vegetarians or omnivores.

Ruby and Heine (2011) also identified that vegetarian men tended to be rated as less masculine than omnivore men. This finding was replicated in the study by Rozin, et al., (2012). Therefore, the association between meat and masculinity also appears to play a role in shaping perceptions of vegetarians. Under the dominant model of masculinity, men who don't eat meat risk being viewed as weak and feminine (Adams, 1990; Luke, 2007; but see Sobal, 2005, for a discussion of alternative ways of framing meat consumption in association with less dominant models of masculinity). However, predicting reactions to vegetarianism in relation to the gender of the vegetarian may be more complex than vegetarian men simply being viewed as less masculine. In interviews with 23 ethical vegetarians, Merriman (2010) argued that there was a gender difference in peer and family reactions to participants' vegetarianism. Specifically, men did not report much disapproval from family and peers regarding their adoption of vegetarianism, whereas women reported substantial disapproval, especially from male family members and peers. Merriman suggested that hostile male reactions to female vegetarianism may be linked to paternalistic beliefs that women cannot reliably make autonomous decisions about their own bodies. Merriman notes that for the females in the study, hostile reactions were unsuccessful; however, it was not known how many females may have been put off vegetarianism by these reactions, as they would not have been included in the study.

The perception that vegetarians are more virtuous does not necessarily mean vegetarians will be viewed *positively* by non-vegetarians. Minson and Monin (2012) argue that there are two possible reactions when an individual is seen as more virtuous than the average individual: they could be either admired or resented. Monin and O'Connor (2010) argue that reactions to morally motivated deviants will vary as a function of the perceiver's personal involvement in the behaviour rejected by the deviant. If the perceiver is not personally involved in the condemned behaviour, they will be more likely to react positively to the deviant. In contrast, if the perceiver is someone who takes part in the condemned behaviour, they will be likely to react negatively to the deviant. Monin and O'Connor (2010) suggest that individuals who eat meat might therefore respond negatively to vegetarians because they are personally involved in the behaviour that vegetarians condemn. In an investigation of attitudes towards vegetarians in a sample of non-vegetarian college students, 47% of participants freely associated at least one

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negative word with vegetarians, such as 'annoying' or 'preachy' (Minson & Monin, 2012). The average number of negative associations increased with the expectation that vegetarians would see themselves morally superior to the perceiver. In a subsequent study, Minson and Monin (2012) manipulated the salience of moral reproach from vegetarians between groups of participants. Attitudes towards vegetarians in the salient moral reproach group were significantly less positive than attitudes in the control group. Minson and Monin concluded that participants were engaging in "do-gooder derogation" (p. 200) of vegetarians as morally motivated deviants. Although vegetarians may be perceived as more moral than omnivores, they may also be perceived negatively as a function of this upward moral comparison (Minson & Monin, 2012).

Perceptions of vegans

There have been very few studies examining attitudes towards *vegans* as a distinct group from *vegetarians*. When comparing the society definitions for vegetarianism and veganism, it appears that while vegetarianism is defined solely as a dietary practice, the definition for veganism is more explicitly ideological and based around a rejection of the exploitation of animals (The Vegan Society, n.d.; The Vegetarian Society, n. d.). Povey, Wellens and Conner (2001) suggest that veganism may present more of a challenge to dominant culture than vegetarianism, but veganism has not been well-researched in the psychological literature (many studies simply merge vegans with vegetarians due to the relatively low proportions of vegans in sample populations). It is possible that perceptions of vegans may differ from perceptions of vegetarians.

Hirschler (2011) suggests that social pressures could be a possible reason why there are so few vegans, and a future area of research could be to investigate prejudicial attitudes towards vegans. In a study of the experiences of vegans, many participants reported encountering negative social experiences at some point (Hirschler, 2011). Despite common social norms against expressing negative views of other social groups (Billig, 1991), a recent discourse analysis involving UK newspapers identified a frequency of negative stereotypes of vegans, including vegans as: "ascetics, faddists, sentimentalists and even hostile extremists" (Cole & Morgan, 2011, p. 134). Cole and Morgan (2011) argue that the derogation of vegans in mass media has several negative consequences: it marginalises vegans, prevents omnivorous readers from learning about veganism, and obscures the vegan challenge to speciesist and oppressive relations

between human and nonhuman animals. Potts and Parry (2010) also discuss interconnections between perceptions of veganism, sexuality, gender, and heteronormativity, in instances of online backlash to the concept of vegan sexuals (vegans who only want to have an intimate relationship with another vegan). In online discourses, vegan sexuals were constructed as "(sexual) losers, cowards, deviants, failures and bigots" (Potts & Parry, 2010, p. 53), especially by omnivorous heterosexual men.

In the preceding sections of this chapter I have reviewed the history of veg*anism; theories on the symbolism of food in Western cultures; relationships between levels of meat consumption and individual differences in worldviews, values and beliefs; and social perceptions of individuals based on their dietary identities. Because veg*ans are a minority group in Western cultures, the act of being veg*an can still be considered a deviation from the norm of meat consumption (though adherence to plant-based diets may be viewed by some as "positive deviance", given the associations with health; Boyle, 2011, p. 267). Adopting a vegetarian or vegan identity can communicate individual identities, values and beliefs to others, and the act of being veg*an may also challenge dominant ideological belief systems. I would argue that there is a need for more research on the intergroup processes and social consequences of adopting vegetarian, and particularly vegan identities.

The Current Research

Boundaries of the research

For the purposes of my research, I shall focus on exploring perceptions of modern voluntary vegetarianism and veganism in Western cultures. Study 1was based on data retrieved from various English-speaking websites and therefore was not limited to a particular region, whereas Study 2 and Study 3 were located in Aotearoa New Zealand.

Aotearoa New Zealand is an interesting context in which to examine understandings of vegetarians and vegans, and perceptions of plant-based futures. Historically, there has been a strong emphasis on farming and meat consumption in the dominant culture of Aotearoa New Zealand (Potts & White, 2008; Sargent, 2001). Prior to European colonisation in the 19th century, Māori cultivated plants and consumed a variety of plants, meat, birds, and seafood (Royal & Kaka-Scott, 2013, August 13). Early Pākehā settlers brought with them pigs, sheep, poultry, wheat, and potatoes (among other things),

as well as notions of creating a utopian society based on pastoral farming that would supply Britain with meat and animal products (Sargent, 2001). Sinclair (1986) argues that for early European settlers, "'breaking in' the land [to cultivate pastures for agriculture] was seen as central to the process of building a nation". In contrast, indigenous food systems tended to be based on values of *kaitiakitanga* (kinship with the natural environment) and emphasised the role of humans as *kaitiaki* (guardians) of the land (Selby, Moore, & Mulholland, 2010).

At present, Aotearoa New Zealand is home to 84 million chickens, 31.3 million sheep, 10.1 million cows, 1 million deer, and 360,000 pigs (Poultry Industry Association New Zealand, n. d.; Statistics New Zealand, 2013)[4]; and meat, dairy, and wool are considered among the top exports[5] (Statistics New Zealand, 2012). A recent shift towards intensive agricultural production in Aotearoa New Zealand has resulted in many associated negative impacts on the environment. Livestock production in Aotearoa New Zealand is responsible for almost 50% of the total national greenhouse gas emissions (primarily resulting from methane produced by animals, animal waste, and fertilizers; Ministry for Primary Industries, 2011), and dairy intensification has also resulted in widespread freshwater degradation (Wright, 2013). It could be argued that Aotearoa New Zealand currently faces a dilemma between economic interests in animal agriculture and environmental responsibilities. Resistance to intensive agriculture and the colonisation of indigenous food systems has included Māori food sovereignty movements such as the Māori Organics Authority, *Te Waka Kai Ora*, and other movements that have connections with the international Slow Food movement (Hutchings & Greensill, 2010).

What does the avoidance of meat and animal products communicate in the context of Aotearoa New Zealand? According to Murcott and Henry (1996), "food may perhaps be as potent a medium of communicating an idea of nation as words and pictures." (p. 30). Although present-day NZ society is officially bicultural, and dietary behaviours show evidence of a wide variety of cultural influences, in terms of dominant food traditions there is still a strong emphasis on the centrality of meat in social events such as summer barbeques, Christmas dinners, and Sunday roasts (Potts & White, 2008; Wilson & Allen, 2007). It has therefore been suggested that veg*anism conflicts with the myths of the

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[4] In contrast, the human population of New Zealand is only around 4.4 million.
[5] Interestingly, according to Statistics New Zealand (2012), the contribution that agriculture makes to the GDP in New Zealand has declined from 12% to just 4% since the 1970s (though this figure does not include manufacturing industries that involve animal products).

dominant national identity in Aotearoa New Zealand; in particular, the historical Pākehā emphasis on meat and dairy production (Bell, 1996; Potts & White, 2008).

An estimated 2% of the NZ population identifies as vegetarian, while just 0.2% identify as vegan (Sanitarium, 2009). Potts and White (2008) explored the personal experiences of vegetarians and vegans in Aotearoa New Zealand. NZ vegetarians reported that becoming vegetarian required a radical change from the dominant way of viewing animals, and that their vegetarianism was at times viewed as "unpatriotic" by others (Potts & White, 2008, p. 347). Some participants reported experiencing discrimination or aggression, difficulties with family, friends and workmates, and even mental health issues. However, vegetarians also reported that some aspects of the NZ national identity were conducive to the adoption of vegetarianism, such as an emphasis on interactions with nature and wild landscapes, independent thinking, and democratic political views (Potts & White, 2008).

Reflexive statement

When conducting qualitative research, it is recommended that researchers be reflexive about their personal perspective and identities, in order to locate themselves within their research (Braun & Clarke, 2013). In terms of the basic demographic questions that psychological researchers tend to ask their participants, I would identify as a Pākehā, middle-class, non-heterosexual woman. I was born in a small town in the South Island of Aotearoa New Zealand and grew up on a five-acre lifestyle block in the rural Otago countryside. I felt conflicted about eating animals as a child, and adopted vegetarianism when I was 11 years old. I think this decision was influenced by my experiences with animals and nature; my parents were passionate about outdoor activities (though they did not share my views on vegetarianism) and I spent a lot of time exploring the wild areas of the South Island as a child.

After secondary school I attended the University of Otago, and completed a Bachelor of Science with Honours in Psychology. In my second year of university I met my partner, who also happened to be vegetarian. She suggested we should consider adopting veganism, and although I was resistant initially, we have now both been vegan for over four years. I decided to pursue postgraduate research on vegetarianism, veganism, and meat consumption, as this topic was something that had been a significant

feature of my life, but did not seem to me to have received much attention from within psychology. I find researching meat consumption and vegetarianism so interesting because it involves so many areas: debates about health, the environment, morality, food security, social justice, gender, culture, and social identities; as well as debates about human nature and the relationship between humans, other animals, and the environment.

Epistemological position and research design

For my thesis I have adopted mixed methods research designs, approached from a pragmatic epistemological position (Creswell & Plano Clark, 2007). Creswell and Plano Clark (2007) refer to mixed methods research as research that combines qualitative and quantitative methods, which can sometimes also involve different underlying paradigms or epistemological standpoints. It can be difficult to reconcile social constructionist and realist paradigms in one programme of research, as the basic epistemological and ontological assumptions underlying these approaches differ significantly. However, for my research I am adopting the pragmatic stance recommended by Creswell and Plano Clark (2007), where both paradigms are viewed as valuable in terms of their ability to answer different types of research questions. Over the three studies, the specific methods I employed included thematic analyses of both naturally-occurring and survey-based data, cross-sectional correlational surveys, and an experimental manipulation.

Study 1 and Study 2 involved a pragmatic approach to understanding 'attitudes' towards vegetarians and vegans, and these studies together formed an exploratory sequential mixed methods design (Creswell, 2014; Creswell & Plano Clark, 2007). Study 1 had a social constructionist foundation, in which the focus of research is on how identity categories are constructed in discourse, and how language is used to achieve goals in interactions (Potter & Wetherell, 1987). In contrast, Study 2 had a realist or positivist foundation, where the goal of the research was to investigate the relationships between stable internal states (Creswell & Plano Clark, 2007). The design of Study 1 and Study 2 was described as exploratory and sequential because the aim was to first explore the discursive construction of vegetarian and vegan identities in naturally-occurring data, and then to draw from this research to design a second study examining the possible underlying motivations that predict attitudes towards vegetarians and vegans (Creswell & Plano Clark, 2007).

Study 3 involved a convergent parallel mixed methods design to investigate perceptions of plant-based futures. In this design, both the qualitative and quantitative analyses are conducted concurrently, and the findings from both analyses are used to inform the general interpretations in the discussion section (Creswell, 2014). For this study, both the qualitative and quantitative methods were approached from a realist paradigm. Study 3a was a qualitative investigation of participants' responses to an open-ended survey item, whereas Study 3b was a quantitative investigation measuring relationships between internal states.

Thesis overview

My thesis has an advocacy orientation, and aims to investigate factors supporting social stability in the dominance of meat consumption in Western cultures, as well as factors involved in resistance and social change in this area. I am hoping to contribute to the psychological literature around vegetarianism and meat consumption by exploring two features of the vegetarian and vegan movements. Firstly, I aimed to contribute to understanding how vegetarian and vegan identities are constructed in discourse, and how ideological motivations may influence attitudes towards vegetarians and vegans in Western societies. The possibility of differences between attitudes towards vegetarians and attitudes towards vegans has not been well investigated in the psychological literature; therefore, throughout my research I have compared attitudes towards these two groups and have conducted parallel analyses where possible. Secondly, I aimed to explore how visions of a future where most of NZ society has adopted plant-based, vegetarian, or vegan diets, would be interpreted by individuals in Western cultures who are not currently vegetarian or vegan.

Chapter Two presents an exploratory thematic analysis of naturally-occurring online discourses about vegetarians and vegans. Research suggests that identity categories are not stable or fixed, but can be negotiated and constructed in dialogue (Potter, 1996; Potter & Wetherell, 1987). Additionally, the way that identities are constructed can be used rhetorically to achieve goals in interactions (Potter & Wetherell, 1987). For Study 1, my goal was to investigate the way that people talk about vegetarians and vegans in a naturalistic setting. Forty-four discussion blogs and comments sections of online articles were collected and examined for recurring themes. The thematic analysis was informed by rhetorical and discursive psychology (Billig, 1996; Potter & Wetherell, 1987). Four

major themes were identified: liberal individualism, the Enlightenment, health, and the human-animal relationship. Within these discourses I identified specific constructions of vegetarians and vegans including vegetarians and vegans as intolerant, authoritarian, irrational, unhealthy, and extremist. Vegans were often contrasted with vegetarians, and were constructed in more negative terms. This study demonstrated that in online contexts, it was often difficult to maintain a positive subject position as advocate of vegetarianism, and especially so as a vegan.

Chapter Three presents an investigation into the ideological bases of individual differences in attitudes towards vegetarians and vegans. In Study 2, I developed a measure of attitudes towards vegetarians and a measure of attitudes towards vegans, based on previous research (Chin et al., 2002). These measures were included in a wider survey advertised in a national newspaper in Aotearoa New Zealand, together with a number of other psychological measures (Wilson, 2011). In general, although attitudes to both groups were on the positive end of the scale, attitudes towards vegans were significantly less positive than attitudes towards vegetarians, and men were less positive towards vegetarians and vegans than women. Statistical analyses indicated that right-wing authoritarianism and social dominance orientation were significant predictors of attitudes towards vegetarians and vegans. Mediation analyses also suggested that gender differences in attitudes may be partially moderated by these psychological variables. Structural equation modelling was employed to test two dual-process motivational models (Duckitt, 2001; Duckitt, et al., 2002) of outgroup attitudes in non-vegetarians. These models contained hypothesised causal links between dangerous and competitive-jungle worldviews, ideological attitudes, and outgroup attitudes. The models fit the data well, and explained a significant amount of the variance in both attitudes towards vegetarians and attitudes towards vegans.

Chapter Four presents an investigation examining how visions of plant-based future societies are related to support for policies to promote these futures, drawing from the collective futures framework (Bain, et al., 2013). In Study 3, participants imagined a possible NZ society in 2050, where most individuals now consume a plant-based, vegetarian, or vegan diet. In Study 3a, a thematic analysis was conducted on responses to an open-ended survey item examining students' perceptions of these future scenarios. Dominant themes in the data included societal changes, such as changes to health, the environment, and the economy, as well as changes to individual traits and values, such as

individuals becoming happier, more caring, and more communal (but also potentially becoming less happy, more authoritarian and more judgemental). Statistical analyses were employed to investigate the relationships between expected collective future dimensions and support for policies to promote plant-based diets. For a vegetarian future, the strongest predictor of support for plant-based policies was an expectation of reduced societal dysfunction in the future. For a vegan future, the strongest predictor of support for plant-based policies was an expectation of increased warmth in society in the future.

Chapter Five concludes the thesis by discussing links between the three empirical studies and by locating this research within the wider literature on veg*anism, attitudes, intergroup relations, and ideology. I also discuss strengths of the research, limitations, applications of the research for advocacy groups, and future directions for research.

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A Rhetorical Analysis of Online Discussions about Vegetarians and Vegans

Introduction to Study 1

The following chapter addresses how individuals construct and negotiate dietary identities in asynchronous Internet-based discussions. The study employed a thematic analysis approach (Braun & Clarke, 2006), and was broadly informed by discursive and rhetorical psychology (Billig, 1996; Billig et al., 1988; Potter, 1996; Potter & Wetherell, 1987; Wetherell & Potter, 1992). As discussed in Chapter One, there have been mixed findings in the quantitative research investigating attitudes towards veg*ans. Some studies have reported generally positive attitudes (Chin, et al., 2002), while others have documented a large percentage of negative characterizations (Minson & Monin, 2012). While vegetarians tend to be viewed as more virtuous than omnivores (Ruby & Heine, 2011), it also appears that highlighting the salience of a potential moral reproach from veg*ans increases negative attitudes (Minson & Monin, 2012). Male vegetarians also tend to be viewed as less masculine than male omnivores, which could be interpreted as a positive or negative perception depending on the value placed on this characteristic (Ruby & Heine, 2011).

Wilson et al. (2004) have argued that quantitative investigations assuming the existence of stable motivations for vegetarianism may be problematic, because differing motivations can be employed rhetorically depending on the argumentative context. Expanding on this idea, it is possible that reported 'attitudes' towards veg*ans are also rhetorical and employed flexibly (Billig, 1991). The variations in findings in the quantitative studies discussed above may be better explained by examining the rhetorical function of expressing attitudes towards veg*ans in a particular context. A preliminary search for online discussions about veg*ans revealed several discussion boards based on questions such as 'what do you think about vegetarians?'. The existence of this question implies there is a potential for controversy in this area, and suggests that people are expected to have differing opinions about vegetarians and vegans as a social categories (Billig, et al., 1988; Wilson, et al., 2004). Therefore, a discursive approach involving naturally occurring interactions between veg*ans and non-veg*ans could provide a

greater understanding of the social and argumentative nature of expressing attitudes towards vegetarians and vegans.

A discursive approach to discussions about vegetarians and vegans

Traditional social psychology typically attempts to measure stable internal representations, which are assumed to be reflected in the use of language (Potter & Wetherell, 1987). In recent decades, this traditional positivist approach in psychology has been subject to the criticism that reported attitudes can be flexible, and even contradictory (Billig, 1996; Potter & Wetherell, 1987). Billig et al. (1988) suggest that evaluations cannot be separated from arguments regarding current matters of controversy, and people express differing views depending on the argumentative context. Traditional positivist psychology has also been criticized for assuming the possibility of objectivity, whereas discursive psychology assumes that research is always conducted through a particular perspective, and therefore cannot be objective (Potter & Wetherell, 1987).

Discursive psychology with its focus on everyday discourse was developed as an alternative to cognitive approaches that made use of surveys and experimental procedures. Rather than interpreting language as reflecting an inner reality, discursive psychologists argue that "discourse is both constructed and constructive" (Wiggins & Potter, 2008, p. 77). The focus of research is on how the language used in everyday interactions, and the discursive strategies that people employ to achieve goals in these interactions (Potter & Wetherell, 1987).

A discursive approach allows for in-depth analyses that can provide greater understandings of the complexity of a particular issue (Potter & Wetherell, 1987), and has provided valuable insights into the discursive construction of many social groups, including race (Augoustinos & Every, 2007; Wetherell & Potter, 1992), gender (Gough, 1998), gay and lesbian groups (Brickell, 2001), and feminists (Riley, 2001). Vegetarian and vegan identities are more examples of social identities, and the meanings of these terms are likely to be shaped not only by those who personally identify as vegetarian and vegan, but are also through negotiation in social interactions with non-veg*ans.

Ideological dilemmas of common sense

Ideology is notoriously difficult to define; however, most conceptions of ideology are based around the idea of ideology as a reasonably coherent set of socially shared beliefs (Jost, Nosek, & Gosling, 2008; van Dijk, 1998). Billig et al. (1988) take a different approach to ideology, arguing that ideology in everyday contexts takes the form of ideological dilemmas that are reflected in the contrary themes of common sense in a particular society. For example, Billig et al. suggest it is possible to agree with *both* of the contrary common sense ideas of, "absence makes the heart grow fonder" and "out of sight, out of mind" (p. 16). Billig et al. argue that rather than simply holding a single attitude, individuals are aware of both sides of ideological dilemmas and employ this knowledge to think about issues and build arguments.

Explicit dilemmas are able to be identified when an individual expresses both sides of a contrary theme in order to repel possible criticism or appear reasonable (though they may put a slight emphasis on one side of the dilemma; Billig, et al., 1988). Implicit dilemmas require greater interpretation from researchers, who need to identify the counter-themes that are being implicitly argued against. Billig (1996) suggests that all arguments for particular positions are also implicitly arguing against possible counter-positions. Additionally, individuals can employ rhetorical "commonplaces" (p. 222) or "rhetorically self-sufficient" arguments (Wetherell & Potter, 1992, p. 177) to argue for particular positions. Billig et al. (1988) recommend that researchers should examine everyday discourse for the contrary themes of common sense.

In a rhetorical analysis of online discussions about health and vegetarianism, Wilson et al, (2004) suggest that health reasons for being vegetarian are often used rhetorically to avoid an accusation of being moralising. This strategy may indicate an awareness of a 'judgemental' vegetarian stereotype. The authors also suggest that meat-eating was constructed as the norm, while vegetarians were often required to account for their dietary practices. A rhetorical analysis of discussions about vegetarians and vegans may provide a greater understanding of the ideological dilemmas involved in arguing about meat consumption and abstention.

Data Collection

Robinson (2001) suggests that "unsolicited first-person accounts on the Internet can be extremely valuable sources of rich, authentic data." (p. 714). Additionally, the relative anonymity of Internet-based discussions is hypothesised to allow for more naturalistic responses regarding controversial topics than face-to-face interviews (Evans, Elford, & Wiggins, 2008; Robinson, 2001). Therefore, the data was drawn from public domain Internet-based discussion forums and comments submitted to online news articles.

I followed the criteria for research using naturalistic data on the Internet described by Robinson (2001) in my consideration of the ethical requirements for the current study. Only comments from publicly available web-based discussion forums and blogs were included in the analysis; discussion forums that required a password were excluded. If the author identified their name in their comment, it was removed in the extracts included in the thesis as an attempt to protect confidentiality (Robinson, 2001).

The Internet search engine, Google, was used to locate discussion forums or blogs containing evaluative comments about vegetarians or vegans. Initially, my search terms were simply, 'vegetarian' and 'vegan'. However, this resulted in predominantly veg*an advocacy websites or recipe websites, which contained relatively few evaluations of veg*ans from a non-veg*an point of view. Subsequent search terms included: 'vegetarians are *', 'vegans are *', 'vegetarians AND vegans', 'meat eater', 'non-vegetarian', 'what do you think of vegetarians OR vegans' and 'I * vegetarians OR vegans'. The forums obtained using these search terms varied widely, including health forums (e.g., http://healthmad.com/), opinion forums (e.g., http://www.sodahead.com/) and anti-vegetarian websites (e.g., http://avsme.webs.com/). A list of the URL addresses of the 44 websites included in the study can be found in Appendix A.

The criteria for selection were that the discussion forum had been created within the last five years, and contained at least three comments about vegetarians or vegans as individuals or social groups. Five years was selected as a suitable time period in order to gather sufficient data, while still constraining the data corpus to examples that are currently relevant (Maurer, 2002 argues that perceptions of vegetarianism may change over time due wider influences such as scientific advances, social issues such as Mad Cow Disease, and the activity of vegetarian advocacy groups).

In addition to the Google search, I also searched several online news websites for the terms 'vegetarian' or 'vegan' using the specific search engines on the website (e.g., http://www.stuff.co.nz/). Articles on news websites are likely to be read by a wider audience than discussion forums specifically related to veg*anism, and therefore the associated comments were expected to contribute a greater variety of discourses. The analysis centred on the comments that members of the public posted on particular articles, rather than the articles themselves. Again, only articles that had at least three comments regarding veg*ans, and had been created within the last five years were selected.

Analytic Strategy

The discussion forums and comment lists selected for analysis were copied and pasted from Internet Explorer into Microsoft Word files. These files were then imported into the qualitative analysis software program, NVivo 9 (QSR, 2010). NVivo 9 allows researchers to identify basic ideas in the data, and collate related ideas within a broader 'code'. These codes can then be collated into more general themes, or 'nodes' (Bazeley 2007).

I performed a thematic analysis, which involved searching across the dataset for common themes or patterns in the comments regarding vegetarians and vegans (Braun & Clarke, 2006). In this type of research, the researcher is considered to have an active role in interpreting the data, rather than there being a set of 'findings' that can be discovered from the data (Braun & Clarke, 2013). Therefore, it is recognised that the analysis will be influenced by the researcher's assumptions, and the arguments are justified by reference to illustrative extracts (rather than employing numbers or inter-rater reliabilities). Throughout the research process I attempted to be reflexive of my perspective and assumptions, especially during my analysis and interpretations of the data.

The analysis of the themes was informed by discursive and rhetorical psychology (Billig, 1996; Billig, et al., 1988; Potter, 1996; Potter & Wetherell, 1987; Wetherell & Potter, 1992). Consistent with the work of previous discourse analysts, I examined how individuals employed various discursive strategies and common sense notions to persuade others that their views were rational, reasonable or justified. As recommended by Billig et al. (1988), I also examined the data for evidence of ideological dilemmas, in the form of contradictions and opposing themes. I considered both the explicit and implicit content of

these common sense arguments. I analysed both the content of what was said and how it was said (i.e., the discursive and rhetorical devices that were utilised in discourses).

Although there are some previous qualitative studies that have identified prominent constructions of vegans in the media and online discourses (Cole & Morgan, 2011; Potts & Parry, 2010), I took an inductive approach to the current study, where the analysis is very closely tied to the data, rather than being driven by a particular theory or previous research (Braun & Clarke, 2006). I avoided reading previous literature in the weeks leading up to the study, in order to attempt to avoid approaching to the data with strong preconceptions about what I would find.

To begin with, I looked across the data corpus for cases where people were discussing vegetarians and vegans as social identities, and these instances formed my dataset. I initially just read over the dataset to familiarise myself with the content and to develop some ideas for possible themes. Following this familiarisation phase, I sorted the comments into codes based on the basic idea communicated within a particular sentence or paragraph. Evaluations of vegetarians or vegans were initially divided into two categories, those relating to vegetarians, and those relating to vegans, so that potential similarities and differences in constructions of vegetarians and vegans could be identified (though this was not always possible, as some evaluations did not use a direct label).

Although the focus was on items that specifically referred to veg*ans, I attempted to code all the data so that more implicit arguments could be included in the analysis. If a section of the dataset or a code did not appear to be relevant to the focus of the analysis at all, it was sorted into a node labelled 'miscellaneous'. During the analysis the codes were regularly examined and refined in order to achieve the best possible fit to the data. Comments that contained more than one idea were coded multiple times. For example, Extract 2.51 was assigned three codes: 'vegetarians are self-righteous', 'vegetarians are preachy', and 'vegetarians are hypocritical'.

Following the initial coding phase, the codes were sorted into higher-level 'nodes' based on tentative themes (Bazeley, 2007). The analysis was separated into two parts: themes based on the content and common discursive structures (similar to Augoustinos & Every, 2007). When all the codes had been sorted into themes, these themes were reviewed to see if each individual theme could be justified based on the content. During

this phase, some themes became subsets of more general themes, some themes were merged together, and other themes were divided into more specific themes.

Once several overarching themes were established, the codes and initial dataset were reviewed to check that these themes fit the data well, and to ensure that the number of undefined comments were as few as possible. Additional data that had not been included in the initial analysis were then examined using the current themes to ensure no other possible themes had been excluded. The analysis continued until the themes reached saturation, where no further themes could be developed by the addition of more data. The extracts selected for discussion are considered representative of the body of data in each theme. References for the extracts included in the following discussion can be found in Appendix A.

Analysis and Discussion of the Themes

I interpreted four major themes from the dataset. The first theme involved liberal individualistic discourses based around a debate about the importance of personal choice versus social responsibility. The second theme was based around ideas deriving from the Enlightenment, including an emphasis the importance of rationality and scientific evidence over emotion, morality or religion. The third theme centred on health and a debate about what is the 'natural' diet for humans. The final theme centred on the human-animal relationship and a debate about the position of humans within the 'natural order' of species.

Liberal individualism

"It's all about personal choice"

The most common theme in the data was the use of liberal individualistic discourses, including frequent references to concepts such as 'rights', 'freedom' and 'personal choice'. This theme was present in around half of the codes that I assigned to the data. The right to individual autonomy, and the idea that "nobody should be compelled" (Wetherell & Potter, 1992, p. 177), are suggested to be rhetorically self-sufficient arguments indicating important values in Western liberal societies (Billig, et al., 1988). In a longitudinal analysis of language in the media, Nafstad, Blakar, Carlquist, Phelps and Rand-Hendriksen (2007) found that with the globalisation of neoliberal

capitalism, discourses associated with liberal individualism appear to be becoming more frequent, while discourses emphasising duties and communality appear less frequently.

Extract 2.1

I have all the respect in the world for vegetarians, and vegans. It's all about personal choice. And I think people lose sight of that on both sides of the debate. But it's nice to see that the majority of commenters on this particular blog - omnivores like myself, and vegetarians and vegans alike - seem to have a balanced and rational point of view. (Posted on Barnett, 2009, October 29)

In Extract 2.1, the statement, 'it's all about personal choice' appeals to common sense and argues for social harmony between 'omnivores', 'vegetarians' and 'vegans' (the construction of an 'omnivore' identity will be discussed further in the upcoming section, "Veg*ans are intolerant and illiberal"). The use of the terms 'respect', 'balanced' and 'rational', and the praise for 'the majority of commenters', position the author of this extract as reasonable and accepting. The emphasis on personal choice reflects the social desirability of the liberal concept of 'freedom to choose'. However, the argument that diet is *all* about personal choice also contains an implicit argument, against the possible counter-position that dietary choices have collective consequences for other humans, nonhuman animals, and the environment (and it therefore could also be interpreted as an unreasonable position). Some choices are better than others, and particular 'choices' in society can become viewed as moral obligations or duties (Billig, et al., 1988). For example, behaviours that are widely agreed to be unacceptable in society, such as theft or murder, could also be construed as 'personal choices'; however, the moral imperatives of society dictate that these are 'bad' behaviours, and we are morally obligated to choose *not* to do them.

Extract 2.2

The ethics of diet are an issue for many people, whether from personal choice or religious stricture. As a member of the human race, which has evolved over many years to eat a wide and varied omnivorous diet, I have no ethical issues about killing and eating animals. Everyone has the right to eat whatever they want and I think it is completely wrong to try and impose ones own illusion of reality on

another. Freedom to choose and tolerance of other people's views are the important issues. (Posted on Eschenbach, 2010, October 20)

The author of Extract 2.2 again limits the debate to the common sense notions of 'freedom to choose' and 'tolerance'. Concerns about the 'ethics of diet' are attributed to personal choice or religious influences, whereas the behaviour of 'eating animals' is attributed to evolution (this argument will be revisited in the upcoming section, "Health and the natural diet"). The 'illusion of reality' comment therefore appears to implicitly refer to ethical veg*anism, rather than meat consumption. In contrast to the illusory basis of dietary ethics, the author constructs the importance of freedom to choose as reality. Billig (1991) suggests that arguing for multisubjectivity (i.e., where everyone is expected to hold differing opinions on a topic) as the only correct way to interact, actually contains a contradiction, as this argument is an intersubjective or persuasive stance on the way that things *should* be. Therefore, in Extract 2.2 there appears to be a contradiction between arguing that 'it is completely wrong to try and impose ones own illusion of reality on another' while also stating that 'everyone has the right to eat whatever they want' (which also contains an implicit argument against the moralization of eating animals).

Extract 2.3

I like and enjoy meat, I do not see anything wrong with eating meat. That being said I also see nothing wrong being a vegetarian or vegan. To each their own. Arguments like this seem to be more like arguments over personal preferences and you mind as well be arguing over your favorite color. I do not feel compelled to tell any vegetarian the way they live their life is wrong, that's just stupid. (Posted on Rad, 2011, February 28)

When discussions about meat consumption are framed around the multisubjective notion of 'each to their own', veg*anism can be portrayed as simply a personal preference. Extract 2.3 characterises meat consumption as trivial, by drawing analogies between 'meat' and the abstract concept of 'your favorite color'. Another comment in the dataset also suggested that arguing about 'meat' was equivalent to arguing about 'soccer'. Trivialising meat consumption via making comparisons to morally neutral categories can function to implicitly discredit arguments that eating meat is morally problematic. Billig (1991) suggests that dismissing an argument as trivial is rhetorically powerful and difficult to argue against. In the above extract, nonhuman animals are noticeably absent,

demonstrating what Adams (1990) describes as animals being the 'absent referent' in the construction of 'meat' as a food item. Adams (1994) argues that "the invisibility of animals' oppression permits the debate to be about individual human liberties, rather than making animals' oppression visible" (p. 122). It could be argued that the emphasis on the importance of personal choice in debates about consuming meat relies in part on the invisibility of nonhuman animals.

Extract 2.4

Now, you may try to argue that eating animals is a matter of personal opinion or choice, but again I'd have to disagree -- this is not about your opinion versus my opinion, this is about animal suffering. You can't discuss your "personal choice" of eating animals while leaving animals completely out of the conversation. Think of it this way, if you were walking down the street and saw someone beating their dog, would you try to do something to stop it? The same principle applies here. Since eating animal foods is a question of want and like versus need, killing a sentient being, when there is absolutely no need -- except for someone's pleasure -- becomes simply unnecessary and merciless. (Posted on Solomon, 2009, September 17)

Extract 2.4 illustrates a counter-argument to the previous extracts, suggesting that choices should be limited when a particular choice causes harm. The author argues that animals should be included in the debate around eating meat, and proposes that someone 'beating their dog' would be held responsible for their actions; therefore, so should individuals who eat animals. In constructing meat consumption as exclusively a 'want' or 'like', the author explicitly argues against the argument that there is a 'need' to eat animals. However, those who argue that there should be a moral imperative against killing animals for human consumption tend to be a small minority of Western societies, and therefore this argument may seem contrary to common sense (Stahler, 2009). This extract illustrates the difficulty in arguing against eating meat based on moral concern for animals in Western societies, where concern for animals tends to fall under the "liberal principle of moral pluralism" (Garner, 2003, p. 3). Ethicists have previously commented on the anthropocentric nature of liberalism, in that its focus on reciprocity means that it cannot address the intrinsic value of nonhumans and nature (Hassoun, 2011). As Billig (1991) suggests, "the more unpopular a view, the more argumentative possibilities exist

whenever that view is aired; and the more unpopular it is, the stronger the opposition it is likely to encounter whenever it is publicly aired" (p. 184). Therefore, there are likely to be a number of arguments opposing the argument in Extract 2.4; for example, the author could be positioned as arguing against common sense regarding the appropriateness of a plurality of views (Billig, 1991), and is open to the potential criticism of transgressing liberal social norms of respecting individual autonomy.

*Veg*ans are intolerant and illiberal*

Liberal individualist discourses have social consequences for individuals who identify as vegetarian or vegan. Limiting veg*anism to the realm of personal preference allows for the veg*an identity to be positioned as unnecessary or invalid. For example, in Extract 2.5, the author argues that labels indicating dietary behaviour are unnecessary.

Extract 2.5

One thing I've always wondered how come all those labels? Why not just eat whatever you like to eat and not worry about labelling it? Aside from the difficulty of other people cooking for you, I guess. But on the other hand, aside from your mother, who memorizes that list in order to cook for you? (Posted on Cain, 2011, March 31)

In Extract 2.5, the rhetorical questioning of a need for 'all those labels' appears reasonable, as it implies the common sense notion of 'togetherness' and the avoidance of socially divisive behaviours (Augoustinos & Every, 2007; Augoustinos, Tuffin, & Rapley, 1999; Wetherell & Potter, 1992). However, it implicitly refutes the legitimacy of identifying as veg*an in particular, since identities such as 'omnivore' and meat-eater' are usually only claimed in differentiation from veg*anism. It also only addresses the dietary aspect of 'vegetarian' and 'vegan' identities (whereas these identities can also represent ideological positions). This discursive strategy has been discussed in other research; for example, Augoustinos et al. (1999) argued that university students in Australia emphasised the importance of everybody identifying as 'Australian' to delegitimize arguments for the recognition of cultural diversity and different social identities. Additionally, in debates about feminists, men can employ liberal notions of tolerance to construct advocacy for social change as unnecessary (Riley, 2001). For example, Riley

(2001) suggests that some men emphasise the importance of being 'gender-neutral' to marginalise feminist advocacy for social change.

One of the most common accusations levelled at veg*ans is that they violate the liberal social norms of tolerance, equality and acceptance of others views. Social norms against prejudice and intolerance mean that it can be difficult to put forward a negative view of a group in society without appearing prejudiced and unreasonable. However, although Extracts 2.1 and 2.2 illustrated the social norms of expressing tolerance and respect to individuals with differing opinions, it is also possible to express negative views towards individuals who are perceived to transgress social norms.

Extract 2.6

I have nothing against vegetarians except when they start the bs [*sic*] talk that your giving out for reasons not to eat meat its your choice but dont make us meat eaters sound like weirdos for eating steak. You keep to your tree hugging and non meat slaughtering and ill head out to the steakhouse later on for a nice juicy steak. (Posted on Kiwistarfruit, 2007, August 1)

Current social norms of tolerance restrict the overt expression of prejudicial views (Billig, et al., 1988), and therefore, any negative views of social groups must also appear rational and justified (van Dijk, 1992). The author of Extract 2.6 employs a disclaimer of prejudice; a discursive strategy that has been previously identified by discursive psychologists investigating talk about outgroups (van Dijk, 1992; Wetherell & Potter, 1992). Disclaimers allow for "the double strategy of positive self-presentation and negative other-presentation" (van Dijk, 1992, p. 98). The social norm against exhibiting overt prejudice towards social groups appears to also restrict the expression of negative attitudes towards vegetarians and vegans. In Extract 2.6, the use of a disclaimer functions to present the author as tolerant and accepting, and protects them from the potential criticism of prejudice. Negative views are denied at the outset, with the use of the disclaimer "I have nothing against vegetarians except…". This sentence resembles previously identified disclaimers regarding outgroups, such as "I have nothing against migrants but…" (Augoustinos & Every, 2007, p. 126). However, despite the denial of prejudice, the author of Extract 2.6 follows this disclaimer with a reference to a common stereotype of veg*ans as 'tree hugging'.

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Van Dijk (1992) argues that disclaimers not only allow for positive self-presentation, but also reveal wider social relationships. In particular, disclaimers can be employed to present ones ingroup positively and reinforce the dominance of the ingroup. Researchers have argued that the practice of meat consumption is 'unmarked' (Adams, 2003; Wilson, et al., 2004). While 'vegetarian' and 'vegan' are well-known labels for individuals who abstain from meat, there is not a conventional label for those who choose to consume meat. However, in online discussions around veg*anism when personal diet becomes salient, many commenters adopted a particular identity in opposition to veg*anism, such as 'meat-eater', 'omnivore' or 'carnivore'. Interestingly, it appeared that this opposing 'meat eater' or 'omnivore' group identity allowed for the discussion to be set in an intergroup context, so that liberal ideals of tolerance could be employed to argue against any criticism of meat consumption as a practice (since it is meat consumption that *defines* this particular group). For example, in Extract 2.6, the dominant ingroup was identified by the description 'us meat eaters' (as opposed to vegetarians) and the author defends this ingroup from the perceived accusation of being 'weirdos'.

Veg*anism can also be constructed as infringing on the private sphere of personal choice. This strategy has also been employed in debates about the morality of purchasing fur (Olson & Goodnight, 1994) and arguments characterising gay men and lesbian rights advocacy as infringing on the heterosexual private space (Brickell, 2001). The norms of what constitutes appropriate social behaviour, and what exceeds the limits for tolerance and respect, are usually set by the dominant majority group (van Dijk, 1992). In Extract 2.6, the author initially portrayed themselves as accepting of veg*ans; however, their declaration of tolerance was followed with a limitation or restriction of tolerance. Negative views of veg*ans were justified based on the accusation that veg*ans transgress social norms by discriminating against 'meat eaters' and are therefore not deserving of tolerance themselves.

Extract 2.7

What annoys me the most about vegetarians I have met is how self righteous and intolerant they are. If one is coming around for dinner they always make sure they warn you so that you have something vegetarian prepared for them but when I am going to a vegetarian's house for dinner and tell them that you am not a vegetarian and would like a meat dish prepared do you think they do it? You are more likely

to end up with a Tofu burger with a lecture on animal cruelty as a side dish.
(Posted on Field, 2009, May 15)

In Extract 2.7, the author references personal experience and limits their criticism to 'vegetarians I have met', which functions to defend against a possible criticism of prejudice. The author employs the liberal notion of equality to justify negative perceptions of veg*ans based on their unfair expectation of veg*an food while refusing to provide meat. This discourse of equality ignores ideological differences between veg*ans and non-veg*ans; veg*ans who are concerned with the morality of eating other animals may find preparing meat for others morally distressing, whereas cooking a veg*an meal would not necessarily have the same impact on a non-veg*an. It also ignores structural differences; since veg*ans comprise a small minority of Western populations, it is likely that most social institutions and traditions cater to non-veg*ans (as indicated by veg*ans' reported difficulties in finding foods that do not contain animal products; Beardsworth & Keil, 1992). Van Dijk (1992) suggests that accusations of discrimination or prejudice can often be reversed, so that the *accuser* is portrayed as intolerant, disrupting good interactions, being overly sensitive or too politically correct. Extract 2.7 also demonstrates how the dominant majority can set the limits of appropriate social behaviour. The discourse that veg*ans will be tolerated as long as they act appropriately (i.e., avoid advocate veg*anism to others), appears to reflect the pattern of "feminists are ok as long as they behave" (Gough, 1998, p. 41) identified in previous research.

Extract 2.8

99% of vegetarians try to force their opinion and life choices on others. (Posted on G C, 2010, December 3)

An extension of the claim that veg*ans transgress social norms, is the accusation that veg*ans 'force' their views on others. This argument is demonstrated in Extract 2.8 by the extreme case formulation (Pomerantz, 1986) that '99% of vegetarians' are forceful. The accusation of being 'forceful' has also been employed to justify negative portrayals of feminists (Riley, 2001). According to Wetherell and Potter (1992), "to define something as compulsory is, in terms of the liberal discourse of freedom and human rights, to define it negatively" (p. 189). In the current dataset, veg*ans were often portrayed as threatening the right to freedom of choice by compelling others to stop eating meat. In Extract 2.8, the attribution of 'force' functions to justify a negative view of

vegetarians (Bruna Seu, 2010), positioning them as antagonistic and hostile, and positioning people who eat meat as victims. By constructing veg*ans as threatening freedom of choice, antipathy towards veg*ans can be constructed as something that everyone should be concerned about. Billig (1991) suggests that when holders of strong views are perceived to have power over others and are arguing persuasively, it is more likely they will be accused of 'forcing' their views. Billig notes that details how views are actually imposed on others tends to be left out, but "the illegitimate use of social power is hinted at" (p. 176). This strategy reduces the ability of veg*an advocates to argue for social change, or even identify as veg*an, without risking association with stereotypes of intolerance or forcefulness.

Extract 2.9

VEGANS ONLY NEED PROTECTING FROM THEMSELVES [emphasis in original]. Eccentric and impractical beliefs are fine, but if their beliefs are protected than in theory it would be illegal to refuse to employ a vegan in say a shoe shop or Simpsons on the Strand. How would the customers react to being told that wearing leather shoes or eating meat was a sickening and vile practice. (Posted on Walker, 2010, March 8)

Extract 2.9 was a rare example in the dataset of a more overtly discriminatory discourse regarding vegans (this extract was in response to a news article on the topic of extending human rights law to include veganism). In this extract, the common stereotype that vegans push their beliefs on others was constructed as a reasonable excuse to exclude vegans from particular forms of employment. Although vegan discrimination may not be a widespread issue of concern, it is one that has occurred on occasion (Iacobbo & Iacobbo, 2006). For example, there are reported cases of vegans being unfairly dismissed for refusing to hand out hamburger leaflets, or refusing to take a vaccine that contained animal products (Soifer, 2002).

Another discursive strategy used by several commenters was to divide the opposing group into 'good' and 'bad' members (Edley & Wetherell, 2001; Wetherell & Potter, 1992). As demonstrated in Extract 2.10, the author can appear reasonable by using this strategy, since their negative perceptions are only of the 'bad' members, rather indicating than prejudicial attitudes towards the group as a whole.

Extract 2.10

Wow... rant alert. Just because you can't love animals and eat them doesn't mean I can't. Congratulations to the majority of vegetarians/vegans here who accept others are entitled to make their own life choices but to the religiously fanatical vegetarians/vegans I say... "Don't have a cow". (Posted on Barnett, 2009, October 29)

In Extract 2.10, veg*ans who respect personal choices are constructed as moderate and understandable, in contrast to 'fanatical' veg*ans who attempt to moralise meat consumption (the religious connotations in this extract will be discussed further in the section, "The Enlightenment and the emphasis on rationality"). This discursive pattern of 'good' veg*ans versus 'bad' veg*ans shares similarities with patterns identified in the discursive construction of other outgroups. For example, Edley and Wetherell (2001) describe a "Jekyll and Hyde" (p. 443) pattern in men's descriptions of feminists; feminists could be described as rational, in wanting to achieve the liberal conception of equality, or alternatively as extreme and irrational in advocating more radical changes. These characterisations were able to be employed simultaneously, and the authors suggested that this strategy functioned to restrain the more radical challenge of feminism. Wetherell and Potter (1992) also discuss the pattern of constructing 'good' Māori versus 'bad' Māori in Pākehā discourses about Māori protest. I would argue that a similar process can be identified in discourses on veg*anism; 'good' veg*ans are those individuals for whom it is 'just' a personal choice (for health or taste preferences), whereas 'bad' veg*ans are those who explicitly reject the acceptability of meat consumption.

Extract 2.11

Vegetarianism is the choice not to eat meat. It is usually non-judgmental, simply a choice. Veganism is almost by definition, militant and extremely critical of others choices to consume and/or use animal products. (Posted on Barnett, 2010, August 24)

In discourses that framed certain members of the group as being intolerant and forceful, vegetarians were sometimes specifically contrasted with *vegans*, as can be seen in Extract 2.11. Vegetarians were constructed as understanding that vegetarianism is 'simply a choice', while vegans were constructed as 'militant and extremely critical of

others', presumably in regards to actively trying to advocate veganism. The above extracts demonstrate the liberal ideological discourses discussed previously, by associating acceptable characteristics with vegetarians, and undesirable characteristics with vegans. Personal choice was constructed as an acceptable reason for vegetarianism, whereas moral reasons for veganism were constructed as illegitimate and judgemental (Edley & Wetherell, 2001).

Extract 2.12

I think the vegan cause suffers from this. I know now that it is only a minority that are always looking for a fight, but those few really do a number on the image of veganism. It is an emotional issue and it's easy for someone in either camp to get heated about it. But I wonder of those loose-cannon vegans realize that to alienate one omnivore to the vegan cause is to ensure that one more person will probably eat meat with full self-justification for the rest of their lives. Do this to a couple of people, and maybe it was better for the animals if that person never went vegan in the first place. But as I said, this is a vocal minority and most vegans seem to recognize that peace between humans and humans is a prerequisite to peace between humans and animals. (Posted on Cain, 2011, February 21)

Another common strategy used when discrediting vegans was to question the effectiveness of their tactics (Wetherell & Potter, 1992). Extract 2.12 provides an example of the argument that vegans 'alienate' omnivores and are therefore ineffective, or even counter-productive advocates of the 'vegan cause'. The accusation of ulterior motives in the description of 'always looking for a fight' appears similar to the Pākehā construction of Māori protesters as 'stirrers', where protesters were discredited as having ulterior motives (Wetherell & Potter, 1992, p. 157). Wetherell and Potter (1992) describe how protestors can be constructed as forceful, divisive and aggressive, whereas the dominant group is constructed as passive, calm, and in a state of harmony. In this construction, protestors can be blamed for any conflict, since they are portrayed as disturbing the state of peacefulness. It could be argued that veg*an advocates were constructed in online discourses in a similar way to other advocates for social change; the current dominance of meat consumption was constructed as normal, while veg*an advocates were framed as the source of divisiveness and conflict. In Extract 2.12, the author also states that 'it is only a minority', implying that the more 'loose-cannon vegans' are not only ineffective in their

campaign, but also do not represent the rest of their group ('most vegans'). These terms also have connotations of militancy and violence. The good/bad veg*an dichotomy functions to imply that not only are most non-veg*ans against social change, but most veg*ans are against social change as well. This discursive strategy functions to construct the actions of those who advocate veg*anism as not representing the view of the majority of veg*ans, and therefore acting illegitimately (Edley & Wetherell, 2001). This is similar to the political rhetoric strategy where the ingroup is constructed as widely as possible, while the outgroup is constructed as small and unrepresentative (Reicher & Hopkins, 1996).

'Pushing' versus 'expressing' views

According to Billig (1991), both people in an interaction are "speakers and hearers" and both "seek to persuade the other, whilst signifying their lack of persuasion by the other" (p. 179). However, there tends to be a difference in the rhetorical strategies that are employed if one speaker is characterised as the holder of strong views. Holders of strong views that differ from common sense frequently have to use rhetorical common-places to support their view and make it more persuasive (Billig, 1991).

Extract 2.13

I am by no means trying to **persuade** [emphasis in original] anyone to cut meat out of their diet even for a day. I am merely suggesting it as a way of helping the issue of animal cruelty and global warming. Whether or not people are willing to this is a personal choice. Of course being vegan, the choice of other people to lessen their dependency on animal products even for a day would make me very happy. But, I am realistic and do my best to remain non-judgemental in almost all topics. I do not judge meat eaters- most people I know are, and most of them are wonderful people. (Posted on Kiwistarfruit, 2007, August 1)

Billig (1991) states, "The notions that all have their own views and that it is wrong to 'push' one's views onto others are cultural truisms or commonplaces" (p. 175). People who transgress the common sense notion of respecting a diversity of views can therefore be constructed as doing something wrong. The norm against pushing views on others can be countered by the notion of a legitimate right to express one's view (Billig, 1991, p. 175). In the dataset, debates about veg*an intolerance and forcefulness can be interpreted

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as individuals arguing about how to categorise veg*an arguments and discourses; whether to construct veg*ans as simply *expressing* views, or as *pushing* views on others. Veg*ans expressing their views run the risk of being interpreted as pushing views that diverge from common sense, and so, veg*ans may need to precede the expression of their views with claims to value multisubjectivity, such as 'each to their own' (however, again it can also be noted that claims that one is not being persuasive is a persuasive action). This strategy and the distinction between 'pushing' and 'expressing' views is demonstrated in Extract 2.13, where the author argues that they are 'merely suggesting', as opposed to 'trying to persuade'.

Extract 2.14

I recently went vegan after doing plenty of research into nutrition and animal welfare. I am not one of those vegans who try to change everyone and preach about it. Each to their own I say. It is a worry though how these animals are farmed and killed for us to eat. If you eat meat, please be ethical and buy the best you can afford. (Posted on Goodyer, 2011, February 23)

Norms of liberal tolerance create a dilemma for veg*ans who wish be socially accepted but who also wish to convey veg*an arguments (see also Carmichael, 2002; Romo & Donovan-Kicken, 2012). Wilson et al. (2004) argue that veg*ans can use liberal discourses in order to defend against accusations of being moralising. Similarly, the author of Extract 2.14 positions themselves as respectful of others' opinions with the use of the statement 'each to their own', and argues 'I am not one of those vegans' as a disclaimer against the potential criticism that they will attempt to judge or influence others (van Dijk, 1992). The author then employs the word 'though' as part of a rhetorical strategy to communicate dilemmatic views simultaneously, (similar to the argument, 'on the one hand, on the other hand'; Billig, et al., 1988). This strategy allows the author to deflect the potential criticism of attempting to influence others, while also allowing them to communicate the view that 'it is a worry how these animals are farmed and killed'. The final sentence could be read as an attempt to persuade others to 'be ethical'; however, the author attempts to construct this as a request rather than an order, via the use of the word 'please'.

It could be argued that arguments for veg*anism as a moral obligation also feature individualistic discourses. Extracts 2.13 and 2.14 position the individual consumer as

responsible for their choices and for the harm caused to animals in food production. Some self-identified veg*ans described 'meat eaters' as 'ignorant', and focused on individual responsibility, rather than describing behaviour as shaped by wider social and structural forces (a similar individualistic focus has also been identified in green consumer discourses; Moisander, 2001). As Kheel (2005) notes, "we do not choose the social, economic, or cultural factors that support meat dominance and male dominance, nor do we choose our childhood backgrounds; yet these have profound impacts on our choices about food" (p. 12). The idea that food behaviours are exclusively about individual choice and responsibility fails to recognise the structural influences of current society on dominant dietary practices in Western society. Meat consumption is the more widespread and ingrained dominant practice relative to vegetarianism, and for most vegans, the path from meat consumption to veganism involved several years of contemplation, learning, and decision-making (Hirschler, 2011; McDonald, 2000). Therefore, while becoming vegetarian is easy to view as a 'choice' to deviate from the norm, the consumption of meat is not such an obvious 'choice'.

In summary, the preceding extracts appear to demonstrate an ideological dilemma between arguments emphasising the individual right to freedom of choice, and arguments emphasising social responsibility to make choices that do not cause unnecessary harm. Liberal individualistic discourses of freedom, choice and rights serve to restrict attempts to discuss veg*anism as a responsibility or obligation. Previous researchers have observed that the area of food seems fairly protected from any kind of limitations, despite the fact that what humans consume can have collective material consequences (Belasco, 1997). The right to freedom of choice has also been previously described as a powerful rhetorical barrier to advocacy in other areas, such as health campaigns against smoking (Katz, 1997). This is a similar rhetorical strategy employed by pro-fur advocates (Olson & Goodnight, 1994), and pro-choice advocates in the abortion debate (Vanderford, 1989).

The Enlightenment and the emphasis on rationality

Biased propaganda versus scientific facts

Liberal discourses contain another implicit dilemma; if all opinions are to be respected, how do we agree on what behaviour is 'right'? The general consensus is that the most rational, scientifically-informed opinion should get precedence over irrational

non-scientific opinions (Billig, et al., 1988). The superiority of 'fact' and 'rationality' over 'belief' and irrationality' derives from the Enlightenment, when religious doctrine and beliefs began to be rejected in favour of scientific methods of establishing knowledge (Billig, 1991). However, when it comes to moral judgements, it can be difficult to establish what is right and wrong simply based on scientific findings. Ethical arguments may therefore be viewed as less convincing than arguments supported by science. A key discursive strategy to support ones position is to appeal to the authority of rationality and science, and to accuse the opponent of deriving inappropriate support for their claims (i.e., non-scientific, biased propaganda; Billig, et al., 1988). This strategy can be identified in Extract 2.15, where 'militant vegans' are accused of using biased information from sources with 'agendas' to support their arguments, rather than 'unbiased scientific sources'.

Extract 2.15

Why is it that when vegans, particularly militant vegans, always use PRO-vegan sites as their references. They NEVER [emphasis in original] use unbiased scientific sources. They act like the only reliable source is the one that happens to erroneously agree with. It is a pseudo-religion and must be stopped with proper education and deprogramming. Pro-vegan and pro-industry sites serve no purpose and have agendas from whichever side they support. Places like the AMA, ADA and other properly scientific sites give far more honest information than all of those propaganda sites, such as you find from Peta and other pro-vegan sites. (Posted on Thomson-DeVeaux, 2011, April 5)

Through the accusation that pro-vegan sites have 'agendas', the author can construct their resistance to veg*an advocacy as warranted because they are legitimately opposing a perceived manipulation (Bruna Seu, 2010). Although there are examples of scientific evidence supporting the positive consequences of veg*anism for personal health and the environment (e.g., Baroni, et al., 2006; Craig & Mangels, 2009), in the current dataset, information that supported eating meat tended to be described as 'scientific', whereas evidence that supported veg*anism tended to be labelled 'propaganda'. This powerful rhetorical device allows scientific evidence supporting veg*anism to be disregarded because the source is described as 'pro-veg*an', and therefore susceptible to bias.

Extract 2.16

There is no point in arguing with meat eaters. They are ignorant of the facts. Yes they can have their OPINIONS [emphasis in original] but unless they actually try (and stick to) a vegetarian diet for at least a year, they really have no clue of the benefits of cutting meat. (Posted on mrbliss1977, 2008, October 12)

As can be seen in Extract 2.16, the strategy of constructing the opposing argument as based on 'opinion', rather than 'facts' was also available to individuals arguing for veg*anism. However, in this extract, the emphasis is placed on the importance of subjective experience, rather than scientific knowledge.

Closely linked to the accusation that veg*ans are susceptible to bias, is the construction of the 'preachy' vegan. Terms such as 'preachy', 'proselytizing', 'harassing', 'bitching' and 'lecturing' were commonly used to describe veg*ans, and have connotations of being excessively insistent, unwelcome and self-righteous. In addition to the common categorisation as 'preachy', several other words with religious connotations were commonly associated with veg*ans, such as 'fundamentalist', 'converted', 'missionary', and 'zeal'. Preaching often refers to the communication of morals or beliefs; it is not often associated with the transfer of factual information. The construction of 'preachy' veg*ans therefore implies that the content of their arguments would more likely be based on opinion or propaganda than fact, and are probably not open to rational debate. The claim that veg*ans are 'preachy' can function rhetorically to discredit what veg*an arguments as unscientific at the outset. The distinction between 'preaching' and the communication of 'fact' is illustrated in Extract 2.17. This extract also attributes the source of the disagreement to the emotion of anger (discussed further in the section, "Veg*ans are emotional").

Extract 2.17

See above, all these examples kind of show that you are indeed preaching, and not just delivering established fact. Clearly, you are ANGRY [emphasis in original] because the world doesn't see things your way. Trust me, this will never change, get over it and try to be happy. (Posted on Solomon, 2009, September 17)

In Extract 2.18, vegan arguments are described as 'vegan dogma' and veganism is portrayed as a 'cult' or 'religion' (and is also discredited by the association with 'hysteria,

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emotionalism and outright lies'). The parallels made between veg*anism and other religious groups functions to discredit veg*anism by associating veg*ans with religious morality, rather than scientific evidence. The association of veg*anism with preaching, religiosity, propaganda, and sentimentality therefore functions to construct vegan advocacy as 'improper influence' that is based on unscientific beliefs or biased research, rather than 'proper influence' based on scientific facts and rationality (Wetherell & Potter, 1992).

Extract 2.18

Your bullshit vegan dogma is no better than any other cult or religion, as is perfectly emphasized by the way you constantly need to resort to hysteria, emotionalism and outright lies to get your nonpoint across. (Posted on Pierrette, 2009, February 13)

The 'preachy veg*an' evaluation was often paired with the accusation that veg*ans believe they are 'holier-than-thou', or think they are morally superior to non-veg*ans (this was a very common construction in the dataset).

Extract 2.19

The issue I personally have with many (but not all) vegetarians is that they have this irresistible urge to lecture others on the ethics about eating meat, the "holier than thou syndrome" I call it. I feel I am always being judged by them, having said that they may well feel likewise. (Posted on Leung, 2011, April 7)

Extract 2.19 demonstrates the association between discussing 'the ethics about eating meat' and the accusation that veg*ans think they are morally superior or 'holier than thou'. The argument that veg*anism is more ethical is constructed as implying a moral judgement of the non-veg*an. Therefore, accusing veg*ans of *attempting* to appear morally superior also enables positive self-presentation, by implicitly defending the author against the criticism that people who eat meat are morally inferior. Attributing debates about the ethics of eating meat to a 'syndrome' specific to veg*ans also allows the author to avoid engaging with these arguments directly.

Extract 2.20

You know, the woman didn't say her values were superior; she said they were not the same as her family's. One can lay claim to a set of values without condemning the choices of others as inferior. I feel I have a strong set of values, or at least recognize the values that are important to me, and can admire others for their commitment to theirs. 'vegetarian' is not a synonym for 'judgemental' (ps i am a meat eater). (Posted on Leung, 2011, April 7)

Extract 2.20 illustrates an exception to the norm in the dataset. In this extract, the author challenges the stereotype that veg*ans think they are morally superior. This comment was a rare case where a veg*an was 'admired' for her commitment to 'her values', rather than being accused of being judgemental. This positive construction of a vegetarian by a 'meat eater' is facilitated by the liberal language of value pluralism that construct values as multisubjective; everyone has the right to decide their own ideas of what values are 'important', and a commitment to 'a set of values' do not imply that one individual ethical position is superior to others (Billig, 1991).

Veg*ans are emotional and irrational

While it is common to argue for the importance of rationality, the opposing side of this common sense dilemma emphasises the importance of attending to emotions. This theme was often present in the argument that veg*anism is associated with compassion or empathy, whereas meat consumption is not. In Extract 2.21, 'corpse-consuming' individuals were criticised as being less compassionate than vegans.

Extract 2.21

Vegans are more compassionate, caring, empathetic, and sympathetic than their corpse-consuming counterparts - this is a given. (Posted on Hawes, 2010, May 31)

Although the author of Extract 2.21 associates veganism with positive emotions such as compassion, in the dataset veg*ans were frequently constructed as *too* emotional, and therefore not 'rational'. Extract 2.22 constructs an image of veg*ans as sentimental and unrealistic in projecting 'Bambi' into the' real world'. This appears similar to the 'Bambi Vegetarian' stereotype described by Adams (2003), where veg*ans are constructed as overly emotional, rather than rational.

Extract 2.22

Vegans take Bambi, Thumper, Fox and Hound, etc. and project the anthropogenic into the real world. We are humans. Unless you are swimming in the ocean, then you are at the top of the food chain. (Posted on Eschenbach, 2010, October 20)

Although few comments explicitly described veg*ans as women, it has been suggested that the derogation of veg*anism as overly emotional stems from the association of masculinity with rationality, and femininity with emotionality (and irrationality; Adams, 1994). The 'rational' position in regards to meat consumption often involved a reference to humanity's position 'at the top of the food chain' (see Extract 2.22 and Extract 2.23).

Extract 2.23

I didn't spend 2 million years climbing to the top of the food chain, just to eat vegetables. (Posted on McDonald, 2010, August 24)

Extract 2.23 employs humour via a phrase commonly used to ridicule veg*anism. This comment references the common sense notion that humans are at the 'top of the food chain' and also implicitly argues that meat is desirable and vegetables are undesirable (via the statement 'just to eat vegetables'). Individuals in the dataset who ridiculed veg*ans appeared to assume that the majority of readers would also be meat eaters, and would find their comment humorous (Billig, 2005). Billig (2005) argues humour can be either disciplinary or rebellious. Disciplinary humour can maintain social norms by disciplining those who deviate from the norm, whereas rebellious humour makes fun of the dominant social norms (Billig, 2005). However, Billig notes that it can be difficult to define which type of humour is being employed; for example, even remarks that appear disciplinary and repressive can also be argued to be rebelling against the norms of political correctness. Some of the comments ridiculing veg*anism in the dataset could be argued to be disciplinary humour functioning to reinforce the dominant social norms of meat consumption.

Extract 2.24

There's no real logic in veganism … it's simply the modern form of self-flagellation. (Posted on Eschenbach, 2010, October 20)

Extract 2.24 describes veganism as 'the modern form of self-flagellation', which implicitly suggests that a vegan diet is one lacking in pleasure and also has connotations of religion and Puritanism (similar to the Puritan stereotype suggested by Adams, 2003). Many comments in the dataset constructed veganism as ascetic, whereas there were few comments asserting that vegan diets are hedonistic. The association of veganism with asceticism has also been identified in academic discourses (Cole, 2008). Discourses describing veganism as 'strict vegetarianism' imply that veganism involves continual self-denial and abstinence from animal products; however, this does not reflect the experiences of many long-term vegans who report no desire to consume meat (Cole, 2008). Cole (2008) argues that ascetic constructions of veg*anism only appear appropriate because of the widespread assumption that animal products are inherently desirable. Cole draws an analogy with smoking cigarettes; in present society, it would be inaccurate to describe non-smokers as 'abstainers'. However, this characterisation may have appeared more valid during time periods where smoking was socially normative. The common sense association of meat and animal products with pleasure can therefore be employed to represent veg*ans as motivated by ulterior motives, such as Puritanism, asceticism or the denial of pleasure, rather than concern for animals (Adams, 2003).

Extract 2.25

I can understand how some people can become Vegetarians, but I could never do it. I like meat too much. (Posted on Cherry, 2011, February 19)

Given the common sense notion that meat is inherently desirable, the statement, 'I like meat too much' can become a self-sufficient argument to defend one's meat consumption (Wetherell & Potter, 1992). The statement is self-sufficient as there is no need to elaborate on what exactly makes meat more desirable, or to specify which specific types of meat are enjoyed. These statements also indicate the primary construction of meat as 'food' and a source of pleasure, rather than a part of an animal (Adams, 1990). Interestingly, the author of Extract 2.25 constructs veg*anism as impossible for them personally, with the statement 'I could never do it'. However, the aspect of meat that is considered essential is not its nutritional value, but rather the taste (i.e., 'I like meat too much'). The construction of meat consumption as a necessity, rather than a choice, can serve to defend against the accusation that eating animals is wrong because it causes 'unnecessary' harm to animals (see Extract 2.4). Claims to 'need' meat could also indicate

that meat is still considered essential to a meal, reflective of Twigg's (1979) argument that meat can represent the idea of food itself.

Extract 2.26

Being vegan is a luxury we can only afford in the developed world, as we have warm houses, warm clothes, and we don't have physically demanding lifestyles. Veganism is fine in the developed world as a life style choice, but don't try and force it onto the lives of others who live in environments where it would endanger their lives. (Posted on Eschenbach, 2010, October 20)

In contrast to characterisations of veg*anism as asceticism, in Extract 2.26 veg*anism is constructed a form of elitism, a 'luxury' for the wealthy in the 'developed world'. This statement implicitly argues against the existence of poor veg*ans or vegan subcultures in other cultures. Again, in this extract there is an accusation that veganism will be 'forced' on others, and a suggestion that veganism is not nutritionally appropriate for those with 'physically demanding lifestyles' (this notion will be discussed further in the section, "Health and the natural diet").

Health and the natural diet

For the purposes of the current study, my analysis of the comments mentioning the theme of health will focus predominantly on the associated consequences for the construction of vegetarian and vegan identities. Wilson et al. (2004) have also provided a thorough analysis of the more general ideological dilemmas arising in discussions about vegetarianism and health.

"Humans are omnivores"

The common sense emphasis on the importance of science and rationality over emotional or moral decisions was also apparent in the debate about the 'naturalness' of meat consumption or veg*anism. A large number of arguments against veg*anism appealed to scientific evidence for the 'natural' diet for human beings, in which commenters appeared to become lay anthropologists. Both veg*ans *and* non-veg*ans frequently appealed to rationality and science over explicit emotional or moral statements, despite these 'rational' statements also often implying a moral standpoint.

Extract 2.27

Humans are scientifically proven to be omnivores. We are supposed to eat meat.
(Posted on lidyax2, 2009, February 28)

In Extract 2.27, the statement 'humans are scientifically proven to be omnivores'
appeals to scientific backing to support moral decisions regarding dietary behaviour.
Here, the scientific classification of the human species as 'omnivores', (i.e., having the
ability to eat both plant and animal products), was utilised to imply humans are
'supposed' to eat meat. Potts and Parry (2010) have also discussed how biological
essentialism regarding the 'naturalness' of eating meat is employed in online comments
that derogate vegan sexuals; vegan sexuals were described as denying their 'natural urges'
in relation to both eating meat, and being attracted to individuals who eat meat.

Extract 2.28

It's called omnivorism. Our bodies evolved or were created, whatever suits you, to
eat meat AND vegetables [emphasis in original]. I appreciate the fact that some
people choose to adopt a vegetarian or vegan lifestyle based on personal ethics,
but it's not "the way it should be". (Posted on beirirangu, 2011, January 14)

In Extract 2.28, there seems to be an ideological dilemma between arguing that
individuals have the 'freedom to choose' their diets, while also arguing that there are
physiological restrictions on behaviour (Billig et al. 1988). Statements such as, 'it's all
about freedom of choice', but also 'we are designed to eat meat', were both common
sense arguments that could be engaged to support meat consumption. One of the major
themes in discussions about veg*ans was the implicit criticism that because humans
'evolved or were created' to eat meat, veg*ans are acting irrationally. This argument
draws on the powerful common sense notion that what is 'natural' is 'right'. Extract 2.28
employs discourses of 'evolution' or 'creation' interchangeably to support the
'naturalness' of meat consumption. This strategy was also identified in the analysis by
Potts and Parry (2010). This particular view equates evolution with intelligent design,
implying that it is possible to establish how things 'should be' from evolutionary findings,
as opposed to the view that evolution is judgement neutral and flexible depending on
changes in the environment. Extract 2.28 therefore appeared to contain a moral imperative
to *eat* meat because it is a 'naturally evolved' process and in contrast, veg*anism is not

the 'way it should be'. This approach also minimises personal responsibility for actions by attributing behaviour to natural or biological predispositions (Agnew, 1998).

The discursive resource of arguing that what is 'natural' is 'right' was also available to individuals arguing against meat consumption, who similarly employed biological discourses to justify their position as rational. For example, the author of Extract 2.29 argued against the notion that humans are meant to eat meat, instead arguing that humans are 'designed as a herbivore'.

Extract 2.29

Re "It is written into our genes, our gut, the shape of our teeth, that we sustain ourselves with meat". WRONG, WRONG, and WRONG [emphasis in original]. The human body is actually the opposite, designed as a herbivore. (Posted on Barnett, 2009, October 29)

*Veg*ans are pale, weak and skinny*

The argument that 'we are omnivores' constructs veg*anism as unnatural, and therefore as likely to result in ill-health. In several extracts, meat consumption was associated with good health and strength, whereas vegetarianism, and especially veganism, was associated with ill health and weakness. Common constructions of veg*ans included that they were likely to be physically weak with the appearance of a sick or malnourished person, and also may suffer from psychological problems. The characterisation of vegans as having poor health is illustrated by Extract 2.30, where a vegan is described as 'pallid with bad skin and bad teeth'. This extract also demonstrates the characterisation of 'vegan food' as unappealing, as discussed previously in the section, "Veg*ans are emotional".

Extract 2.30

I was in Africa last month and there was a vegan in the walking safari camp. Can you imagine that? A vegan in the carnivore's kingdom. She got her special food 3x a day. Compared to the delicious impala, springbuck and sausages the rest of us enjoyed, the vegan food looked really unappetizing. Fake meat, tofu dogs etc. Gross. This girl was skinny and pallid with bad skin and bad teeth. She was still

pale white after five days' walking in the African sun. (Posted on Gorilla, 2007, June 18)

One potential criticism of the notion that diet is 'all about personal choice' is the allegation that some choices are worse than others, and in particular, that eating meat causes harm (see the section, "Liberal individualism"). Rozin (1997) suggests that meat consumption may be becoming moralised in a similar way to how smoking has been moralised. In the context of smoking, it is generally agreed that individuals have the right to smoke even if they may be harming themselves in the long run. However, the scientific finding that smoking can harm *non-smokers* paved the way for the moralisation of smoking, and legal restrictions on smoking through a public health approach (Rozin, 1997). High meat consumption may be linked with a greater risk of illness and disease, but meat consumption also has positive health associations, and unlike smoking is not commonly linked with harm to others. Although vegetarian and vegan arguments attempt to draw attention to the fact that meat consumption directly harms animals, Adams (1990) notes that the absent referent functions to keep the concept of meat separate from its animal origins. A possible defence of the criticism that meat consumption causes harm to animals is to argue that meat consumption is not a choice at all, but a physiological necessity. This argument appears in Extract 2.31, where the author states that eating meat makes them feel 'guilty' (and also emphasises that they 'really love animals'), but employs a rhetorical question to imply that veg*anism is potentially not a 'good diet'. The author also appeals to the authority of their 'doctor friend' to support their suggestion that veg*anism is unhealthy.

Extract 2.31

I REALLY love animals [emphasis in original], I support RSPCA and WSPA. I would like nothing more than to not eat meat but isn't meat part of a good diet? Also a doctor friend told me her sister tried to stop eating meat and became quite ill and her hair starting falling out etc. I don't eat much meat just chicken occasionally. But still feel guilty :o (Posted on Barnett, 2009, October 29)

The physical portrayal of veg*ans in these extracts fits with the symbolic properties of meat as strength-providing, and vegetables as inferior foods (Adams, 1990; Twigg, 1979). It has been widely theorised that meat is symbolic of masculinity. As discussed in Chapter One, a consequence of this symbolism is that vegetarian men are

perceived as less masculine (Ruby & Heine, 2011). Although only a few extracts specifically linked meat with males, the frequent description of veg*ans as 'weak' may be indirectly linked to the idea that vegetarians are less masculine, as men are 'supposed' to be strong and powerful (Rozin, et al., 2012). Most of the comments describing veg*ans as weak did not explicitly refer to the gender of veg*ans. However, Extract 2.32 was one of the few examples where veg*anism was explicitly associated with femininity, in the suggestion that veg*anism would not be an issue for a 'little girl' (interestingly, the vegan in Extract 2.30 was also described as a 'girl').

Extract 2.32

Vegetarianism deprives people of several important nutrients, which make people weak and frail. Of course, if your a little girl with not much use for energy and activity, you wouldn't notice the deprivation so much. (Posted on Stevens, 2010, December 29)

In the dataset it was frequently stated that veg*ans must take supplements. Veganism was often discredited by the argument that it is 'unnatural' because many important nutrients 'can only come from meat or animal products' (see Extract 2.33). In Extract 2.33, it was argued that perfect health and nutrition can be achieved simply by 'eating as nature intended', which was implied to be an omnivorous rather than veg*an diet (Wilson, et al., 2004). This comment implicitly argues that the traditional Western diet is complete, even though diets including animal products also often require supplementation. For example, iodine and selenium are supplemented to diets in Aotearoa New Zealand as these nutrients are scarce in the soil (Thomson, 2004), and folate supplementation is also recommended for pregnant women in Aotearoa New Zealand and Australia (Bower et al., 2004). The implicit devaluation of 'modern supplements' is illustrated in Extract 2.33.

Extract 2.33

I was taught a long time ago that there are a few amino acids that the human body needs, and which can only come from meat or animal products. So for example, eggs, cheese, etc. Or meat. But cutting out ALL of those [emphasis in original] is actually not very good for your health. Tofu and soybeans and all that don't make a suitable replacement. Maybe by use of modern supplements the problems can be

avoided. Me, I'll eat as nature intended, thanks. (Posted on Eschenbach, 2010, October 20)

In the dataset, it appeared that meat consumption was frequently associated with intelligence, in addition to physical strength. For example, in Extract 2.34, it is asserted that eating meat gave the human species 'larger and more complex brains'.

Extract 2.34

The fact is our eating meat for the last umpteen billions of years led to the evolution of larger and more complex brains. (Posted on Field, 2009, May 15)

The notion that higher meat consumption contributed to the evolutionary development of the human brain was extended by some commenters to imply that meat consumption is necessary for brain development in *modern day* individuals. In Extract 2.35, the association between animal product consumption and brain development is employed to argue that people who do not eat meat will have 'poorly functioning brains'.

Extract 2.35

I'm convinced veganism is an eating disorder on the order of anorexia. A vegan consciously chooses to not consume a class of healthy foods. How's that any different than an anorexic who chooses to not consume all classes of foods, healthy or not? The malnutrition from a vegan diet seems puts the vegan in a negative feedback loop where their poorly functioning brains tell them to continue to eat in an unhealthy manner. (Posted on Eschenbach, 2010, October 20)

As demonstrated by Extract 2.35, veg*ans were occasionally portrayed having mental illness or psychological problems (similar to the 'Phobic Vegetarian' stereotype proposed by Adams, 2003). In particular, there was a frequent association between veg*anism and eating disorders. In psychological research there has been a large amount of research investigating a link between veg*anism and eating disorders. For example, some researchers propose that veg*anism may serve as an alibi for restricted eating (Sullivan & Damani, 2000). Other researchers have found higher incidences of eating disorders among semi-vegetarians (but not necessarily full vegetarians) and have proposed that some measures of eating disorders could be biased against veg*ans (Timko, Hormes, & Chubski, 2012). From a Foucauldian discourse analysis perspective, Taylor

(2012) has argued that the association between vegetarianism and mental deviance results in the "normalization of speciesism through the disciplining of our alimentary appetites" (p. 145).

Extract 2.36

In modern times there are alternatives to eating meat as a part of our diets, with us being able to take in the right balance of nutrients and proteins from vegetables and other supplements alone. However most vegetarians as a rule don't bother to get that balance right and tend to miss out on a lot of protein and have low iron counts in their blood, which is where the stereotypical view of vegetarians as pale and ill looking comes from. This also tends to make them thinner, but usually fairly weak as well, as protein is the key to building and maintaining muscle. There are of course healthy and strong vegetarians, but they are in the minority as most don't bother to get the correct nutrients and stay as healthy as an omnivore, which is what their bodies were designed for, having made the choice to be a vegetarian through their concern for animal welfare, or distaste for meat rather than seeing it as an actual lifestyle change. (Posted on Hebert, 2007, September 1)

In Extract 2.36, although there is a concession that it is *possible* to be vegetarian healthily, it is constructed as difficult to achieve, and the 'stereotypical view of vegetarians as pale and ill' is attributed to vegetarians being careless or irresponsible with their personal health. As noted previously by Wilson et al. (2004), the bottom-line argument in discussions about veg*anism and health tends to be an emphasis on 'balance'. This notion of 'balance' is clearly demonstrated in Extract 2.35, where the author states, 'most vegetarians as a rule don't bother to get that balance right'. The notion that diet directly influences health is a fairly recent development, which puts a lot of moral weight on individual responsibility to be in good health (Katz, 1997). It has been argued that there is a now secular morality of health in Western cultures, in which being healthy is constructed as a virtue, while being unhealthy is a sin (Katz, 1997). People are held morally responsible for their own health, through their individual choices of food, exercise and lifestyle. Therefore, there is a 'right' way and a 'wrong' way to eat, and people can be blamed and held responsible for their personal decisions if they are in poor health. The consequence for veg*ans is that ill health is often constructed as a personal responsibility resulting from the decision to abstain from meat, and deserving of blame.

The Protestant imperative to preserve human health is rhetorically powerful (Rozin, 1997) and can be employed to construct veg*anism as immoral, in particular in the context of raising children (Katz, 1997). The mistreatment of vulnerable groups can have an emotive effect (Lynn & Lea, 2003), and individuals can easily moralise abstinence from meat if it is constructed as causing harm to children (Rozin, 1997). For example, the author of Extract 2.37 argues that veg*anism 'constitutes child abuse'.

Extract 2.37

What I truly object to, however, is forcing such a diet on children. We have evolved as omnivores, like it or not. That's how we developed superior brains and came to own the planet. Vitamin B is essential for that development, especially in the early years, as to deprive children of this constitutes child abuse, in my book. And searching for substitutes is just a cop-out, proving that the only grounds for avoiding meat are political and/or religious. (Posted on Taylor, 2011, September 7)

This extract implies that veg*anism results from irrational decision-making based on 'political and/or religious' grounds, rather than rational decisions informed by scientific evidence. The common sense understanding that there is a risk of nutritional deficiencies associated with a vegan diet allows people to portray raising a vegan child as a threat to their welfare. While a discussion regarding the nutritional needs of vegan children is outside the scope of this study, it is of interest to examine the social construction of vegan parents. Constructions of parents with children suffering from nutritional deficiencies differ considerably depending on the parent's dietary identity. In the media, cases of vegan-identified parents who have been convicted of child abuse because their children have nutritional deficiencies from neglect, are framed with an emphasis that the parents were 'vegan' (e.g., see the reference Thomson-DeVeaux, 2011, April 5, in Appendix A). In contrast, omnivorous parents who have caused their children to have nutritional deficiencies or ill health from diet-related neglect are not commonly defined as 'omnivore' parents in the media. In Extract 2.37, vegan parents are also described as 'forcing' their children to be vegan, demonstrating that animal-based diets are constructed as the default, unmarked diet, while veganism is a 'choice' of lifestyle that deviates from the norm (Wilson, et al., 2004).

Extract 2.38

Patti, regarding "Imposing your preference on your child is hardly healthy", it seems to me that you are suggesting that there is some default diet 'ticked' as a child's choice at birth. This just isn't true I hope you realise. My own current thinking is that kiwi's tend to get programmed early in life that meat is healthy, and even more strongly that 'not meat' is quite unhealthy. This is far from the truth. People should be encouraged to make their own educated choices, not scorned for being different. (Posted on Littlewood, 2009, March 6)

Extract 2.38 provides an example of an opposing view, refuting the idea that there is a default diet for children. The author also mentions the influence of society on dietary 'choices', by stating 'kiwi's tend to get programmed early in life that meat is healthy'. This comment regarding societal influences on dietary choices was a rare occurrence in the dataset. It could be argued that without a discussion and awareness of the cultural bases to dominant food patterns, the dominant Western diet high in animal products is normalised and naturalised, whereas veg*anism is constructed as a movement that aims to restrict individual autonomy, motivations, and taste preferences (that just happen to result in the dominant Western diet).

Although there was a predominance of constructions of veg*ans (especially vegans) as unhealthy, there were also many counter-arguments suggesting veg*ans were *healthier* than people who eat meat. The ideological dilemma between veg*anism as a healthy practice and veg*anism as an unhealthy practice has been previously discussed by Wilson et al. (2004). It has been suggested that people who abstain from consuming meat are often expected to account for their deviance with a rational motivation, such as personal health (Wilson, et al., 2004).

Extract 2.39

First a meat eater has a fifty percent higher chance of dying of a heart attack or stroke. Vegetarians also have half the risk of getting cancer compared to meat eaters. (Posted on mrbliss1977, 2008, October 12)

Extract 2.39 demonstrates the pattern of appealing to the authority of scientific research to support ones position, this time to support the argument that veg*ans are healthier than meat eaters. In regards to the debate about health, individuals identifying as

veg*ans often portrayed themselves as healthy, in order to defend against negative stereotypes of veg*ans as unhealthy. Not surprisingly, very few commenters argued that one should be veg*an even if it increases the likelihood of poorer health, again demonstrating the common sense emphasis of the importance of personal health.

Extract 2.40

From a health perspective, I feel better than I have in a long time. Vegetarianism has significant health benefits in terms of cancer prevention, weight, blood pressure, etc. I don't have any trouble getting all the protein and iron I need. I am a good cook, which helps a lot. (Posted on Barnett, 2009, October 29)

Extract 2.40 demonstrates the argument that vegetarianism results in positive health outcomes, and also includes a disclaimer against the criticism that the author's diet may be deficient, with the statement, 'I don't have any trouble getting all the protein and iron I need'.

Extract 2.41

My body tells me what to eat I know it sounds weird but a good diet is not based on denial. (Posted on Rayner, 2011, May 23)

A common sense argument in the dataset appeared to be that individuals should follow the diet that feels right for them physically (as seen in Extract 2.41). Health was portrayed as something that is subjective and personal, and should be free from social influences. In a discursive analysis of maternal discourses about healthy eating, O'Key and Hugh-Jones (2010) highlight the dilemma that accepting nutritional information can threaten a 'good mothering identity', because there is an expectation that mothers should *already know* what is best for their child. In Extract 2.41, the argument, 'my body tells me what to eat" appears to be another example of individualist rhetoric, where subjective experience is considered the best source of health information (as opposed to nutritional recommendations). This argument can function to evade debates about the scientific evidence for the healthiness of animal-based or plant-based diets. Again, the reference to 'denial' in this extract appears to draw on the dominant discourse of veg*anism as ascetic.

The human-animal relationship and the 'natural order'

Vegans are extremists

Debates about the human-animal relationship and human responsibilities to other animals appeared frequently in online discussions about vegetarians and vegans. As mentioned in the "Liberal individualism" section, the argument that dietary behaviour is simply about personal choice can become difficult to defend against the argument that some choices cause unnecessary harm to animals. In the dataset, although there was an emphasis on the notion that diet is 'all about personal choice', there was also a common sense notion that our 'choices' should not include supporting the inhumane treatment of animals (and therefore, there is a potential contradiction between arguing emphasising 'freedom of choice', while also arguing that we have a social responsibility not to support cruelty). The notion that there are 'cruelty-free', 'ethical', and 'humane' ways of raising and killing animals for food was a common occurrence in the dataset. Joy (2010) suggests that the positive concept that some forms of farming are 'humane' has developed in contrast to the fairly recent development of 'factory farming'. In the dataset, even when it was conceded that farming practices can cause harm to animals, it was possible to deny personally supporting this harm, by claiming to purchase 'humane meat'. Extract 2.42 demonstrates the argument that individuals who eat meat have a moral obligation to treat animals well and to not support 'cruelty'. The use of the word 'however' suggests that there may be some negativity associated with admitting that the author eats meat. The word 'believe' also indicates that the topic of killing animals for food is an area of controversy, and there may be different stances on the issue (Billig, 1996).

Extract 2.42

I eat meat. I however don't agree with cruelty to ANY [emphasis in original] animals and believe that if they need to be killed for meat then it must be done in a humane and quick way. (Posted on Barnett, 2009, October 29)

Liberal societies value a common sense emphasis on 'balance', 'moderation' and 'rationality' (Billig, 1982; Wetherell & Potter, 1992). It has been suggested that a moderate position is only made possible by the construction of extremists (Wetherell & Potter, 1992). 'Extremists' can be constructed as taking a shared value to an unnecessary extreme (Nelson, Gwiasda, & Lyons, 2011). Therefore, 'extremist' is generally a negative

term. Describing an individual or group as 'extremist' can function to discredit an opponent and their argument, even if they are arguing for a value that is endorsed by the majority. In the dataset, vegans were constructed as advocating against animal cruelty (which appeared to be a widely supported value), but were also accused of 'taking it too far'. Again, it appeared that the dominant majority sets the limits of appropriate behaviour, this time with regards to the appropriate treatment of animals and reaction to cruelty in the production of animal products (van Dijk, 1992). The argument that vegans 'go too far' appears in Extract 2.43.

Extract 2.43

Given the absolutely cruel and insane way we slaughter animals (cutting the hooves off cows while they are still alive–in the US; or beating dogs to death as in Korea and China because the beating makes the meat better), I think there's something good to be said for the Vegan ethical stand against eating animals, but their extremism and lack of sufficient protein and vitamins in their diets makes them also guilty of cruelty, particularly when they make their children follow their strict diets. (Posted on Admin, 2009, September 10)

Extract 2.43 shows a pattern of "concession/criticism" (Wetherell & Potter, 1992, p. 167), where it is conceded that 'there is something good to be said for the vegan ethical stand', but vegans are also criticised for their 'extremism'. As described previously, the author employs ascetic discourses with the word 'strict' to describe vegan diets and an accusation of cruelty to children. As an example of 'cruel' treatment of animals, the author references the 'beating dogs to death as in Korea and China'. Deckha (2012), and Kymlicka and Donaldson (2014), have discussed how the construction and regulation of 'animal cruelty' is often linked to human group relations, rather than deriving from a concern for the inherent value of animals. For example, 'cruelty' is often defined as 'unnecessary harm'; however, the behaviours constructed as 'necessary harm' tend to be ingroup behaviours (e.g., killing 'food' animals), while behaviours deemed 'unnecessary harm' tend to be outgroup behaviours (e.g., killing 'pet' animals, such as dogs).

Extract 2.44

To eat no meat at all is to take an extreme position in an area where extremism is not called for. People always say "Hitler was a vegetarian", as if that were some

sort of paradox, some sort of surprise. Well it isn't to me. He was a vegetarian because he was an extremist. He was incapable of doing things by halves. (Posted on Coren, 2009, April 4)

In Extract 2.44, the statement, 'Hitler was a vegetarian' functions rhetorically to link vegetarianism with a person who is almost universally despised, and therefore by association vegetarians are constructed as a target of suspicion and as extremists (the author strategically avoids the fact that a large number of other despised people in history ate meat). This argument also generalises an extreme negative case study to all vegetarians.

Extract 2.45

And there's also that whole matter of the vast majority of vegans/ARs being violent nutcases, like the terrorists at PETA, ALF, SHAC and so forth. So much for "compassion" (Posted on Pierrette, 2009, February 13)

The construction of vegans as fanatical militant extremists may arise from the association of veganism with animal activist groups. For example, the author of Extract 2.45 equates vegans with animal rights (AR) activists with the use of a forward-slash. The accusation that vegans are militant extremists (as opposed to being moderate, balanced, rational, and tolerant) emphasises a potential for aggression, and even violence, and appears very similar to arguments that have been used to vilify animal advocates (Yates, 2011). When examining constructions of a particular group, it is also important to example how the alternative is implicitly argued against (Billig, et al., 1988; Hopkins & Reicher, 1997). In Extract 2.21, the use of quotation marks around the word 'compassion' alludes to the common sense understanding that vegans are often motivated by compassion, but implies ironically vegans are not compassionate at all (Potter, 1996).

When vegans are constructed as 'extremists', non-veg*ans who purchase 'humane meat' can be positioned as moderates. In the dataset, it appeared that factory farming was constructed as one extreme, veganism as another extreme, and 'humane meat' as the moderate position (this was also constructed as the most 'rational' position). This strategy allows authors to defend meat consumption, while maintaining a positive self-presentation as someone opposed to animal cruelty. It also implicitly denies the validity of veg*anism as a possible solution to the cruelty involved in factory farming. The general claim, 'I eat

humane meat', may function as a disclaimer to ward off potential criticisms that the author does not care about animal welfare (Billig, 1996). It may be that common sense is shifting in this area in response to cultural developments (such as the increasing visibility of the animal rights movement or evidence of the mental capabilities of 'food' animals) and so endorsing 'humane meat' may be a strategy for easing the dilemmatic tension between caring for animal welfare and wanting to consume animals.

Moderates can also have contradictions (Billig, 1982). For example, the moderate position of consuming 'humane meat' and supporting animal welfare in meat production can be contradicted by the fact that animals must be killed for consumption. However, in the dataset, a common argument was that killing animals for food did not need to involve cruelty, and instances of cruelty in slaughter were constructed an *exception to the norm*. Extract 2.46 demonstrates the argument that cruelty in animal slaughter is an exception to the norm, by emphasising that not 'all' animals are slaughtered cruelly, and that local regulations in Australia (as opposed to other countries) restrict the possibilities for cruelty in slaughter. The author also references personal experience to argue that being 'stunned' is not a painful experience.

Extract 2.46

What gave you the impression that ALL animals who are slaughtered for meat are done so cruelly [emphasis in original]? Sure, sucks to be a musk deer, and yes, there have been hundreds of cases of horrid slaughterhouses all around the world, but you can't judge all of them by those few examples. In Australia (I am Australian and I don't know any other country's laws, sorry) there are rules and regulations that must be considered when building a slaughterhouse, and these rules go on for 14 pages. And the actual law for killing the animals is also very strict – the animals are stunned (I've been stunned by accident before, and it only hurts when you wake up) and then they are killed. (Posted on mrbliss1977, 2008, October 12)

Many comments appeared to make a common sense distinction between cruelty and killing; cruelty is morally wrong, but killing for food is not wrong. The notion that there is a 'humane' way to raise and kill nonhuman animals for food implicitly argues against the counter-position that there is cruelty or violence involved the slaughter of nonhuman animals. The common sense emphasis on the importance of 'humane meat'

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functions to support the legitimacy of an 'appropriate' use of animals, and correspondingly implicitly denies the counter-argument that animals exist for their own reasons and should not be exploited (Adams, 1994).

Extract 2.47

I don't think it is possible treat an animal well if your treatment includes killing it and selling its body parts. Clearly the animal is not interested in this arrangement and it is imposed on the animal by force, as much or as little as is necessary. The question is not how animals are coddled throughout this established process of taking ownership of their lives and commodifying them, but whether we should continue to involve ourselves in this process at all. (Posted on Cain, 2011, March 31)

The counter-argument that there is no such thing as 'humane meat' is apparent in Extract 2.47, where the author constructs the killing of animals for food as wrong because it is against the animal's interests. This argument may be susceptible to some of the criticisms discussed in earlier sections of this chapter, and also to the argument that 'humans are animals too' and therefore killing for food is simply 'the law of the jungle' (this point will be discussed further in the upcoming section, "Drawing the line").

Extract 2.48

Certainly I disagree with hunting animals for fun (and I have endless debates with my pig-hunting father about it) and wherever possible I make the effort to consume cruelty-free meat; non-battery eggs and chicken, pork etc. I also don't eat veal. But eating animals that have been hunted for food, or raised (ethically) for meat is fine with me. It doesn't interfere with my ability to love my pets any less, or my desire to donate to worthy animal causes. Because at the end of the day, it's the cruelty we're talking about here, and let's face it, I should imagine that a crocodile dragging it's prey into the water and slowly drowning it while holding it in razor-sharp is seems a far worse way to die than the swift death sheep and cattle endure. And don't get me started on how cats treat their prey. (Posted on Barnett, 2009, October 29)

The author of Extract 2.48 constructs their position as anti-cruelty, via a claim to consume 'cruelty-free meat; non-battery eggs and chicken, pork etc'. This extract also

illustrates the common argument against the killing of nonhuman animals for *pleasure*, but the acceptance of killing for *food*. Again, this argument raises the question of what constitutes 'unnecessary harm'. It could be argued that when eating animals is not necessary for survival, the main reason that individuals eat animals is for pleasure or convenience. Therefore, there is a possible contradiction in claiming that 'hunting animals for fun' is wrong, but killing for gustatory pleasure is not wrong. This could be seen as a dilemma between the desire to eat meat, and the common sense norms against unnecessary harm, and killing for pleasure. This extract also illustrates a particular strategy employed in justifying eating meat, where the animal is constructed as 'better off' on a farm (Plous, 2003). Arguing that 'farm' animals are better off being killed by humans than being killed by predators in the wild allows the author to construct farming as something that is actually good for the animal (and strategically ignores that a farmed animal is practically guaranteed death at the hands of a human predator, whereas an animal living in the wild may manage to avoid being prey at all).

> Extract 2.49

> Meat is great. And to be perfectly honest, i couldn't care any less about having free range meat or not, animals are not humans, we breed animals to kill them and eat them. If it is cost effective to cram animals in cages, so be it. (Posted on Goodyer, 2011, February 23)

As demonstrated by Extract 2.49, not all commenters claimed to purchase 'humane meat'. The author of this extract naturalises a subordinate status of farmed animals by stating 'we breed animals to kill them and eat them', implying the sole purpose for their existence is as a food source for humans (Adams, 1994). However, in the current dataset, the claim that 'I couldn't care less about having free range meat" was an exception to the norm.

Condemnation of the condemners

In the dataset, a common criticism of meat consumption was that it is hypocritical to claim to be concerned about the welfare of animals and yet support the killing of animals for food (as demonstrated in Extract 2.50). Billig (1996) notes that in order for arguments to be compelling they need to be consistent, and therefore an accusation of

inconsistency is a powerful rhetorical device. Drawing attention to inconsistency opens up the possibility of criticism, and easily allows inconsistent arguments to be discredited.

Extract 2.50

Hypocrisy is king. We "love animals" but don't give a damn how much they suffer. Hypocrisy. You can't "love animals" and eat them. Animals are not objects. They are conscious highly evolved creatures that have developed societies, feelings, emotions and the ability to love. (Posted on Barnett, 2009, October 29)

When an individual condemns a behaviour as wrong, a potential strategy that can be employed to defend against this accusation is to accuse the *condemner* of hypocrisy. Cohen (2001) describes this type of scenario as "condemnation of the condemners" (p. 97). In the dataset, a common response to the accusation that meat consumption is hypocritical was to claim that it is *veg*ans* who are hypocritical. Focusing on the hypocrisy of others deflects personal criticism, and instead makes the behaviour of the condemners the issue (Cohen, 2001). Although veg*ans can be constructed as 'extremists', veg*ans can also be accused of being 'hypocrites'. Veg*ans who attempted to avoid all forms of animal exploitation were described as extreme, while veg*ans who did not avoid all uses of animals were portrayed as hypocritical. The strategy of rhetorically employing both 'hypocrite' and 'fanatic' subject positions has also been interpreted in discourses from pro-fur advocates (Olson & Goodnight, 1994).

Extract 2.51

What often cracks me up is that the self-righteous vegetarians will often preach while standing in front of you in their leather boots. Now THAT's hypocrisy [emphasis in original]. (Posted on Barnett, 2009, October 29)

Extract 2.51 demonstrates the association of vegetarians with hypocrisy, in terms of vegetarians being 'self-righteous' about their avoidance of animal foods, while simultaneously wearing a product that is made from animals (i.e., 'leather boots'). Accusations of hypocrisy may function to invalidate the argument against the condemned behaviour because the speaker is behaving inconsistently with the argument. However, as Cohen (2001) points out, although inconsistent behaviour can make someone a hypocrite, it does not mean that their argument is false.

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Extract 2.52

Those who vociferously condemn meat eaters for the "cruelty" that their habit inflicts upon animals, seem to have no qualms about locking the rest of us into impossibly cramped cages of political correctness, while denying us our natural heritage. That, to me, is the real hypocrisy. (Posted on Barnett, 2009, October 29)

The above extracts demonstrate how accusations of hypocrisy can deflect attention away from one's own behaviour. In Extract 2.52, the author's reference to the 'real hypocrisy' emphasises that it is the veg*ans, rather than the non-veg*ans, who are demonstrating hypocrisy. Additionally, the use of quotation marks around the word 'cruelty' subtly questions the credibility of the vegetarian argument that meat consumption is cruel (Potter, 1996). The extract also provides an example of reversal; those who argue against cruelty to animals are accused of actually being cruel to humans (van Dijk, 1992). The reference to 'political correctness' positions the debate in the wider context of Western society, where political correctness is often argued to result in constraint, oversensitivity, and restrictions on freedom of speech (Billig, 2005).

Arguments emphasising the importance of being consistent and avoiding hypocrisy can be extended to argue that veg*anism inevitably leads to a 'slippery slope' of attempting to live ethically. The statement "you have to be practical" (Wetherell & Potter, 1992, p. 177) can function as a rhetorically self-sufficient argument that constructs practicality and reasonableness as the bottom line, and implies that while it is possible to agree with veg*anism in principle, it is impractical in practice.

Extract 2.53

I really enjoy eating meat, but I can't and don't justify it against the compelling arguments that vegetarians / vegans make. But there's many things that I do in life that are not environmentally or morally sound. We simply can't exist without doing some level of harm to someone or something. You have to just live at a level that you're comfortable with, and forcing your own ideals on others is an evil in itself. If you want to be perfectly morally, ethically and environmentally sound then you're out of luck. Even killing yourself creates moral and environmental issues. (Posted on Barnett, 2009, October 29)

The author of Extract 2.53 justifies their resistance to the 'compelling arguments' for veg*anism by arguing that it is impossible to 'be perfectly morally, ethically and environmentally sound'. Therefore, this argument constructs veg*anism as futile and implicitly justifies the status quo of meat consumption. Constructing action as ineffective can function to defend against potential moral criticism for inaction (Bruna Seu, 2010). Bruna Seu (2010) discusses the use of this 'slippery slope' strategy in reactions to human rights appeals, and suggests that in claims about the ineffectiveness of taking personal action, "the 'baby' of socially responsible action is thrown out with the 'bathwater' of the partial truth contained in all of these statements" (p. 449).

Extract 2.54

Maybe it's possible to take an individual stand, to be an ethical vegetarian in a world that I accept is based on meat-eating. People who do this would feel they're upholding a value that's spiritually important and they'd feel they're consistent, which is not a trivial thing. But for me, I doubt I'd be untroubled by double standards: I'd be offering no personal support for the meat economy - except for the food I need to give to my cat and dogs, the ground-up horse flesh, the biscuited chicken remains, the casseroled cow guts... (Posted on Barnett, 2009, October 29)

The author of Extract 2.54 highlights an issue with individualistic arguments for veg*anism, which tend to emphasise personal responsibility for creating social change and challenging the dominance of meat consumption, 'in a world that I accept is based on meat eating'. This extract also demonstrates the argument that ethical vegetarianism could be considered as a 'slippery slope', due to the need to feed other animals meat.

Drawing the line

Another frequent portrayal of veg*ans as hypocritical was the rhetorical question, 'what about plants?'. Sapon (n.d.) argues that many questions asked of veg*ans are actually fragments of rhetoric that function to frame meat consumption as the norm, and demand that veg*ans attempt to defend an argument that is indefensible. The argument that plants are alive (and so eating plants could be considered wrong) does not appear to be an argument that humans should be morally concerned about killing plants. Rather, this argument uses the common sense absurdity of being concerned about plants, to imply that

extending moral consideration to animals must also be absurd. Extract 2.55 illustrates the argument that a need to eat plants invalidates the argument that eating animals could be morally wrong.

Extract 2.55

There's nothing ethically or morally wrong about eating animals (and don't even begin to pretend that there is: any argument would have to get around the impossibility of distinguishing between levels of life by allowing for plant eating), so it is simply a personal decision. (Posted on mrbliss1977, 2008, October 12)

While the question, 'what about plants?' can be seen to have a rhetorical function, it is also a reference to the ideological dilemma about where to draw the line regarding our moral responsibilities to nonhumans. Extract 2.55 implicitly argues that there is no issue with current distinctions between 'levels of life', that separate 'inedible' animals (including humans) from 'edible' animals. It has been argued that social norms in Western cultures regarding which animals constitute 'food' are relatively arbitrary (Joy, 2010); for example, dogs, cats, horses, monkeys, dolphins and whales are among those animals that many individuals in Western cultures would not consider to be food (Fessler & Navarrete, 2003). Arguing that it is not possible to draw distinctions between 'levels of life' also implicitly denies differences between plants and animals in their capacity for pain and suffering (Plous, 2003). Adams (1994) suggests that the argument referring to the need to consider plants is another example of the common sense focus on universalism, abstraction and rationality, deriving from the Enlightenment.

Another criticism of the moral argument against eating animals was that this argument implies that humans should be concerned about animals that are eaten by other animals (a notion that was constructed as absurd). This can be interpreted as an attempt to universalise the veg*an moral imperative, to the abstract conclusion that attempts to moralise human behaviour are illogical if the behaviour can be found the 'natural' world (Adams, 1994). This notion appears in the common sense argument that 'humans are animals too'. Stibbe (2001) has identified this argument in the discourses of industries that produce animal products. Since it appears ridiculous to accuse predatory animals of behaving immorally and to demand that they stop eating other animals, this comparison functions rhetorically to discredit the moral argument of veg*anism and to justify humans eating animals.

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Extract 2.56

I'm an animal-loving meat-eater and my response to the sanctimonious is simply that animals eat other animals. Lions eat antelopes. Sharks eat seals. Cats eat mice. Do they hate each other? No. It's simply the law of the jungle, and at the end of the day, humans are animals too. (Posted on Barnett, 2009, October 29)

In Extract 2.56, prototypical predators such as 'lions', 'sharks' and 'cats' are constructed as analogous to humans. However, this argument obscures important differences between humans and carnivores; humans are arguably non-prototypical predators in that they are omnivorous and make use of tools and agriculture (Stibbe, 2001). It is also interesting to note that members of Western societies typically do not eat carnivores (Twigg, 1979, proposes that meat from carnivores is symbolically 'too strong' because carnivores are seen as powerful). Adams (2004) argues that the claim that 'humans are animals too' demonstrates a 'naturalising of the political' (p. 113). In Extract 2.56, the statement 'my response to the sanctimonious' demonstrates that the 'humans are animals too' argument may function as another defence against the potential criticism that the author is behaving immorally by eating animals (similar to the argument 'what about plants', discussed above).

In Extract 2.56, the argument that 'humans are animals too' implies that humans can eat other animals with no moral qualms since it is just the 'law of the jungle'. However, this argument is susceptible to the criticism that not all 'natural' behaviours that are exhibited by other animals are morally justifiable. For example, the author of Extract 2.57 uses the example that 'male lions also kill lion cubs that they have not fathered'. The opportunity to accentuate or minimise similarities to animals in order to justify a particular position is also available to those promoting the opposing argument against cruelty to animals. An example of this appears the Extract 2.57, where the author creates a distinction between humans and other animals in terms of the human capabilities for 'reflecting', 'understanding' and 'refraining from doing things I know are cruel or exploitive'. The author also states that 'I doubt a lion has these same capacities'.

Extract 2.57

This argument is made a lot, and I'm really not sure why some people imagine that certain behaviors of animals justifies that same behavior in humans. Male

lions also kill lion cubs that they have not fathered. Does that somehow mean this same behavior is defensible for human beings? I don't know what a lion's experience is like, but I know that as a human I am capable of reflecting on the far-reaching consequences of my behavior, I am capable of understanding that non-human animals suffer, and I'm capable of refraining from doing things I know are cruel or exploitive. I doubt a lion has these same capacities, but its behavior is not up to me anyway. (Posted on Cain, 2011, March 31)

It is also possible to argue that humans have unique qualities that distinguish them from other animals, and therefore killing animals is justifiable, whereas killing other humans is not. This argument often implicitly argues that the natural world is hierarchical, and humans occupy the top position due to their unique qualities. Reasons given for meat consumption often contain hierarchical themes regarding the human-animal relationship. The 'natural order' argument implies that humans have the right to exploit other animals as resources because 'we are the dominant species'. This notion often appeared in the data as the self-sufficient argument that 'humans are at the top of the food chain'. Extract 2.37 included this notion in the statement that humans 'own the planet'. Other examples include Extract 2.22 and Extract 2.23. Extract 2.58 refers to the human 'ability to reason, have free will etc' as a reason to draw a line between humans and animals.

Extract 2.58

Vegans are the most pathetic excuse for anything ever, God gave us the ability to reason, have free will etc... Not the animals, there is nothing wrong with meat, and if you dont like the way the get the meat just go and see a local farmer. (Posted on Hollie, 2011)

To conclude, there appears to be an ideological dilemma regarding the boundary between humans and other animals. In differing argumentative contexts, individuals can either minimise or accentuate differences between humans and animals, depending on what they are trying to achieve (Agnew, 1998). Individuals supporting meat consumption can rhetorically construct humans as similar to predatory animals, in order to argue that there are no moral issues with eating animals. To counter this argument, individuals opposed to meat consumption can construct humans as dissimilar from animals (i.e., because we have the ability to control our behaviour), and therefore as having a moral obligation not to eat meat. However, it is also possible to argue for meat consumption by

constructing humans as dissimilar from animals, in that humans have qualities that require moral obligations that animals do not have. This argument can be countered by constructing animals as having morally relevant qualities that are similar to humans and therefore as deserving of moral concern. Marcu, Lyons and Hegarty (2007) argue that "the human–animal boundary is not essentialized; rather it seems that such a boundary is constructed in a dilemmatic and post hoc way" (p.875). Similar to the findings of Marcu, Lyons and Hegarty, the current analysis demonstrate that the human-animal boundary can be constructed rhetorically to support a particular position on the consumption of animals, and this discursive resource is available to both veg*ans and non-veg*ans.

Summary

In the current analysis, I interpreted four main themes in the dataset. The first theme centred on the use of liberal individualistic discourses. The extracts illustrating this theme emphasised the rhetorical importance of freedom of choice, tolerance, and respect. In the context of liberal discourse, veg*ans were often portrayed as violating others' rights and being disrespectful, intolerant and militant. Veg*ans also employed liberal discourses; however, these appeared to function primarily as a defence against negative stereotypes of veg*ans as illiberal. Two ideological dilemmas were apparent in the comments involving liberal individualism, the first between individual rights and social responsibility, and the second between 'pushing' views and 'expressing' views (Billig, 1991). Another common feature in liberal discourses about veg*anism and meat consumption was the absent referent of the animal (Adams, 1990). As suggested by previous theorists, to the consumer, the steak or the vegetarian meal can appear to be 'just' choices (Beardsworth & Keil, 1993; Torres, 2007). Therefore, the individualistic argument, 'it's all about personal choice', appeared to support the commodification of nonhuman animals.

The second theme drew on ideas from the Enlightenment, including an emphasis on rationality and scientific evidence. Within this theme, veg*ans (especially those motivated by morality) were constructed as unscientific, sentimental, preachy, religious and ascetic. The associations between veg*anism, religion, emotion, and irrationality made it difficult to argue for veg*anism from a scientific basis. The ideological dilemmas identified in this theme included the importance of rationality versus emotions or moral

principles, and an emphasis on scientific knowledge versus the importance of subjective experience (Billig, et al., 1988).

The third theme extended the emphasis on rationality to debates about the importance of health and defining the 'natural' diet for humans. Comments with this theme tended to associate meat with power, strength and dominance, while veg*ans were constructed as the opposite of these qualities: as weak, pale, skinny and unhealthy. The decision to adopt veganism was often constructed as a threat to personal health, and was moralised by framing veganism as causing harm to children. Veg*ans were constructed as less healthy than omnivores, but also at times constructed as healthier. Both veg*ans and non-veg*ans drew on discursive constructions of the 'natural' diet for humans to support their positions (Wetherell & Potter, 1992). An ideological dilemma involved individual autonomy versus physiological restrictions. The common sense bottom-line argument in this theme was an individualistic focus on the importance of subjective experience in establishing a 'healthy diet'.

The final theme involved the construction of the 'natural order' of species. This theme was closely related to the theme about the natural diet for humans, but also contained debates about the human-animal relationship. These debates included appeals to hierarchical themes in order to justify humans eating other animals as 'natural', due to the position of humans at 'the top of the food chain'. Both veg*ans and non-veg*ans employed contradictory accounts of humans as similar to animals, and humans as different to animals, to support their arguments. Individuals who reported eating meat defended against a potential criticism that they endorsed cruelty towards animals by constructing 'humane' or 'ethical' animal consumption as the moderate position. In contrast, veganism involving the avoidance of animal products completely was constructed as an extreme or unnecessary response to a common sense social value. This argument implicitly supports the legitimacy of 'appropriate' uses of animals, and denies the counter-argument that animals should not be exploited (Adams, 1994). Veganism as a form of ethical consumerism was constructed as a 'slippery slope', and although vegans were often constructed as extreme (too consistent), they were also often constructed as hypocritical in their practices (too inconsistent). The ideological dilemmas in this theme included debates about the humans-animal boundary, and the positioning of moderate versus extreme responses to animal cruelty.

Common discursive strategies and 'commonplaces'

Although morality was predominantly discussed in relation to human treatment of animals, it was a common thread throughout all the themes. For example, there were themes of morality and responsibility regarding appropriate social interactions; the 'right' way to behave was to be tolerant of other's beliefs and allow them the freedom to choose, while the 'wrong' way was to pressure others to do something against their will. Morality was also a prevalent theme in discussions about health. Pursuing individual health was constructed as 'good' behaviour, while allowing illness was 'bad'. Consequently, individuals could be held responsible for their health due to their dietary and lifestyle choices, especially those that had an effect on children.

Many of the discursive strategies employed in arguments about vegetarians and vegans were similar to the strategies employed by opponents in the abortion debate (Vanderford, 1989), men's discourses about feminists (Riley, 2001), heterosexual discourses about gay men and lesbians (Brickell, 2001), and Pākehā discourses on Māori protest (Wetherell & Potter, 1992). For example, Vanderford (1989) described the following rhetorical strategies used by pro-choice and pro-life groups: constructing the opposition as a small but disproportionately powerful minority, as not representing the rest of their group (so dividing between 'good' and 'bad' group members), as using inappropriate tactics to influence others, threatening social principles such as the right to freedom of choice, exploiting emotionalism rather than rationality, referring to propaganda rather than facts, making accusations of ulterior motives, and discriminating against vulnerable groups. Many of these discursive strategies were also identified in the current study.

Constructions of veg*an advocates may therefore function in similar ways to constructions of other advocates for social change, and the current analysis provides further evidence of the positioning of veg*anism as a form of protest against dominant dietary norms in Western cultures (Kwan & Roth, 2011). Some of the rhetorical commonplaces that I interpreted from the dataset included 'each to their own', 'nobody should be compelled', and 'you have to be practical' (see also Wetherell & Potter, 1992). These commonplaces were often employed rhetorically to neutralise the perceived criticism from veg*ans that eating animals is morally wrong.

Consequences for vegetarian and vegan identities

'Vegetarian' and 'vegan' appeared to be contested identity categories open to negotiation and debate; some comments described these groups positively while others described them in negative terms. As in previous research, veg*ans were commonly constructed as deviating from the unmarked norm of meat consumption, and therefore as requiring an explanation and justification for their behaviour (Wilson, et al., 2004).

The negative characterisations of veg*ans in the current analysis were similar to some of the negative stereotypes proposed by Adams (2003), and the characterisations discussed in previous research on discourses about vegans (Cole & Morgan, 2011) and vegan sexuals (Potts & Parry, 2010). Several recurring negative stereotypes of veg*ans, included veg*ans as 'forceful', 'preachy', 'holier-than-thou', 'hypocritical', and 'extremist'. Individuals employing these stereotypes defended against the possible accusation of prejudice towards veg*ans by employing disclaimers, and constructing veg*ans as deserving of negative attitudes due to their illiberal behaviour. The common construction of the 'forceful militant vegan' allowed for the portrayal of vegan advocacy as an 'attack' on others, focussing on the antisocial behaviours of the condemners, rather than engaging with the arguments. In the current dataset, veg*an advocacy was constructed as a form of illegitimate influence and vegan advocates were portrayed as attempting to limit freedoms rather than challenging the exploitation of animals as property or commodities.

Despite the prevalence of negative constructions of vegetarians and vegans, there were also some positive constructions. The main positive evaluation of vegetarians was that they were likely to be healthy. Some of the other positive characterisations included veg*ans as compassionate, disciplined, and committed to their values (though this may indicate that vegetarianism is seen as something difficult and ascetic). Generally, the majority of positive constructions came from those who also explicitly identified as veg*an, or claimed they were moving towards veg*anism.

There also appeared to be some differences in constructions of vegetarians and vegans. While vegetarianism was described as a personal choice and positively associated with health, vegans were contrasted with vegetarians and were portrayed in more negative terms; as intolerant, militant, unhealthy and extreme. The overall effect of constructions

of veg*ans appeared to be that in online contexts it can be difficult to maintain positive identity as a vegetarian, and especially as a vegan.

For self-identified veg*ans in the dataset, there appeared to be a dilemma between identifying as a veg*an (especially as a veg*an motivated by ethical concerns), and not wanting to be perceived as attempting to influence individuals who eat meat. In Extract 2.14, the author states, 'I am not one of those vegans who try to change everyone and preach about it'. This disclaimer suggests that is possible to claim a positive veg*an identity, but this may involve first distinguishing oneself from negative stereotypes of veg*ans. In discussions about vegetarianism, individuals who reported eating meat also often attempted to rationalize or explain their meat consumption (for example, a common statement was 'I eat meat, but…'). This suggests that it may also be difficult to maintain a positive identity as a 'meat eater', and there may be a dilemma between defending meat consumption while claiming to oppose cruelty to animals. In the discussions, it was not always possible to establish whether the author identified as veg*an or a 'meat eater'.

The contested nature of dietary identities in the current analysis implies that traditional psychological measures of attitudes towards vegetarians may not encompass all that is going on in putting forward an 'attitude'. 'Views' of 'vegetarians', 'vegans' and 'meat eaters' appeared to be somewhat rhetorical and goal-oriented, and the particular constructions that were emphasised varied depending on the argumentative context.

Applications

The way that individuals employ liberal discourses to talk about veg*ans demonstrates that while there may be tolerance for dietary differences, and it is possible for veg*an foods to become absorbed into the mainstream culture, within liberalism it can be difficult to advocate for social change towards veg*anism. Discourses of liberal pluralism and tolerance can be useful in allowing veg*an diets to become more widely accepted, but can also impede attempts to advocate veganism as a challenge to the ideology of speciesism. Society is expected to have a plurality of views, and so veg*an arguments against eating animals can be subsumed as just another potential view (Garner, 2003). Additionally, if the prevailing consensus is that veg*ans have the right to practice their beliefs and their views should be tolerated (within limits), then it can be difficult to

advocate that others should be veg*an, as this can be constructed as intolerance of other's views on the part of the veg*an.

One of the main implications of the current study is that it currently appears difficult to present oneself positively as a vegan. Most self-presentations from individuals who identified as vegan began with disclaimers to defend the speaker from the potential criticism of not behaving in a socially acceptable manner. Physical characterisations were also often negative, including describing vegans as 'pale', 'weak', 'skinny' and 'unhealthy'. References to morality as a motivation for veganism were often associated with being 'preachy', being part of a religion or cult, or being too emotional or sentimental. Even the positive characterisations of vegans were often linked to the perception that vegan diets were unappealing. For example, vegans were described as putting compassion ahead of pleasure, implying that they were ascetic. The predominance of negative constructions has significant consequences for vegan advocacy as encouraging others to adopt veganism may be more difficult if there is a predominance of negative stereotypes of vegans. Negative stereotypes of vegans may also function to dissuade potential vegans from identifying as such. This possible consequence of negative stereotypes has also been described in relation to feminism; for example, Percy and Kremer (1995) have argued that stereotypes of feminists as 'militant' and 'man-haters' discourage individuals who endorse feminist values from identifying as feminist. The stigmatization of vegans could be argued to be linked to the disregarding of vegan arguments, which in turn can function to support the dominant status of meat consumption (Cole & Morgan, 2011).

The current study may therefore be useful for veg*an advocates, in that it draws attention to the motivated nature of negative veg*an constructions. Additionally, veg*ans may personally benefit from being aware of the rhetorical aspect of constructions of veg*ans. Veg*an advocates may also need to attend to the social and political context in which veg*an arguments arise and veg*an identities are negotiated. Given the emphasis on liberal individualism and individual autonomy in the current dataset, it may be useful to consider advocating veg*anism as a form of autonomous self-determination (as opposed to a moral imperative). However, in doing this, it is also important to consider the present structural limitations on an individual's ability to adopt veg*anism. Most of the veg*an discourses in the dataset emphasised individual responsibility for consumption behaviours, while few individuals discussed the structural forces influencing food

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consumption (this individualistic focus has also been highlighted in the context of advocacy regarding green consumerism; Moisander, 2001).

It appears that the association of plant-based diets with improved health, and the association of industrial animal agriculture with animal welfare issues, are becoming more common sense notions. However, in the dataset, health benefits were generally constructed as resulting from *reduced* meat consumption, rather than full veg*anism; and arguments regarding the importance of animal welfare were commonly employed to legitimise the concept of 'humane meat', rather than endorsing veg*anism. This supports arguments of Maurer (2002), who proposed that attempts to advocate the health benefits of veg*anism would be unlikely to result in an increase numbers of committed vegetarians. Advocates for healthier eating may have a more difficult task than anticipated in promoting adherence to plant-based diets, as the 'health' appeal of meat may be linked to its deeper symbolic values, and therefore may not be countered simply by providing information. Organisations interested in promoting healthier eating behaviours may need to consider the role of common sense ideological themes regarding 'human nature' in public understandings of nutrition.

Limitations and future directions

In asynchronous discussions, the pattern of argument is different to synchronous discussions. Rather than engaging in a give and take of particular views, the commenter may try to argue against all possible counter-positions in a single comment. For example, Extract 2.59 illustrates several of the themes and discursive strategies discussed in my analysis: a disclaimer of negative attitudes ("I have no problem with it at all"), a claim to 'love meat', a portrayal of veg*anism as asceticism, an association of vegetarianism with poor health, a condemnation of the condemners, comparing meat consumption with actions that are necessary for survival, and an argument for the responsibility to provide 'comfortable lives' to animals.

Extract 2.59

I respect them, I suppose. I could never make that commitment. My girlfriends a vegetarian and I am honestly astonished by it. I have no problem with it all; I just adore eating meat (sad…). The way I see it, humans were designed to eat meat. It's a necessary part of our diets. Not eating meat isn't going to do anything but

make you less healthy. People around the world will still eat meat, whether you do or not. And people who condemn meat eaters are annoying as hell. That's like insulting someone for breathing or drinking water. Animals should be given comfortable lives and humane deaths, but humans should continue to eat them. Sorry, it's the truth. (Posted on Cherry, 2011, February 19)

Therefore, one of the limitations to my thematic analysis was that although many comments like Extract 2.59 contained a variety of different arguments, during the analysis I separated each of these arguments into discrete codes, and then collated them into individual themes. The separation of these comments into discrete codes meant that the comments were often divorced from their original rhetorical context, and although I have presented the themes as distinct, they were also flexible, complex, and overlapping.

There are some potential disadvantages to using internet data, particularly because the internet is not accessible to all members of society (Evans, et al., 2008). However, using data available via the internet provides an opportunity to gather naturalistic data that might be difficult to obtain in a controlled interview setting. One specific issue associated with using the internet for qualitative research is the possibility of 'flaming', where online comments tend to become more overtly hostile than they would be in personal interactions, and individuals may say things to simply incite reactions from others (Mann & Stewart, 2000). However, some discussion forums also remove the more offensive posts; therefore, there is also the possibility that the dataset may represent a sanitized version of evaluations.

Another issue with analysing asynchronous Internet discussions is that many of the comments are fairly brief, and there is no opportunity to ask for elaboration on these comments (Evans, et al., 2008). The current analysis may therefore only represent a narrow segment of possible discourses around vegetarians and vegans. It is possible that themes associated with particular discussion blogs are not indicative of wider patterns, but are specific to that particular context. For example, the news article regarding the proposed protection of veganism under human rights law may have artificially initiated discussions about the issue of prejudice and discrimination towards vegans, which may have been unlikely to be discussed in other contexts. However, my analysis also shares a number of similarities with previous research (e.g., Cole & Morgan, 2011; Potts & Parry, 2010).

Throughout this research, my own values and ideological beliefs have shaped the choices I made in the analysis and results, and interpretations I drew from the data. However, this is to be expected in any form of research, and therefore is not necessarily a limitation (Braun & Clarke, 2013). Throughout the research process I kept a journal of my thoughts about the data, and during the analysis I attempted to consider other possible ways to interpret the comments. One interesting outcome that I noticed during the course of undertaking this research was that I began to feel more concerned about my own personal health as a vegan. It may be important to consider the possible psychological consequences of being repeatedly questioned about one's health when identifying as a vegetarian or vegan. I would argue that pressure to present oneself as a 'healthy veg*an' may be also problematic if it prevents veg*ans from discussing personal health issues, especially in the context of seeking medical advice.

In terms of future research, it would be interesting to investigate the construction of veg*an identities in interviews or focus groups settings, in addition to online contexts. Also, while the current study provides a rich in-depth understanding of the multiple ways that veg*an identities can be constructed in online discussions, the arguments that I have made cannot be generalised to other contexts. A more realist approach to researching attitudes to may provide a better understanding of why, across various contexts, some individuals may tend to be more negative towards veg*ans than other individuals.

Conclusion

Wetherell and Potter (1992) stress that while ideological themes can be employed in flexible and contradictory ways (depending on the argumentative context), there is still some rigidity and dominance in discourses, given that, "some arguments are difficult for some groups positioned in certain ways to formulate" (p. 173). This notion can be applied to the current study, as it appeared that while both veg*ans and non-veg*ans were able to employ similar rhetorical strategies in their arguments there was a consistent pattern of discourses functioning to retain the dominant status of meat consumption. Some of the ways that meat consumption was justified included focusing on the importance of freedom of personal choice, constructing meat as natural and necessary, framing veg*anism as irrational and unscientific, and attempting to redefine the moral position (e.g., arguing that examples of cruelty in meat production are an *exception* to the norm rather than an inherent part of the process). In these discourses, veg*anism was

constructed as a lifestyle choice, while the more radical implications of veganism were neutralised. Overall, in online contexts it appears currently difficult for vegetarians and vegans to argue for veg*anism based on ethical concerns for animals, and consequently, veg*anism is most frequently constructed as a personal lifestyle choice. This difficulty may be partially explained by wider common sense Western notions of liberal pluralism that first and foremost construct nonhuman animals and nature as resources for human consumption.

Chapter Three

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The Ideological Bases of Attitudes towards Vegetarians and Vegans

Introduction to Study 2

In my analysis of the online discourses in Study 1, I argued that vegetarians (and especially vegans) were often constructed in negative terms; as intolerant, preachy, militant or extremist. What might explain negative reactions to vegetarians and vegans? While Study 1 provided a rich analysis of the flexible and dilemmatic nature of online constructions of vegetarian and vegan identities, the social constructionist approach underlying this study means that my inferences cannot be generalised outside the context in which they occurred. It is also of interest to consider why, across different contexts, some individuals might be more likely than other individuals to express a negative attitude towards veg*ans. In this chapter, an alternative approach to understanding perceptions of veg*ans is undertaken. The aim of Study 2 is to investigate the ideological bases of attitudes towards vegetarians and vegans, and this study is approached from a realist epistemological position. In Study 2a, I developed two attitude scales (based on previous research by Chin, et al., 2002): the first measuring attitudes towards vegetarians and the second measuring attitudes towards vegans. I then examined potential predictors of attitudes towards vegetarians and vegans. In Study 2b, I tested a dual-process motivational model of the psychological basis of attitudes towards vegetarians and vegans (Duckitt, 2001; Duckitt, et al., 2002).

Is there such a thing as *vegudice*?

Sociologists and other authors have coined terms such as "vegudice" (Iacobbo & Iacobbo, 2006, p. 127) and "vegaphobia" (Cole & Morgan, 2011, p. 134), in order to highlight the phenomenon of negative attitudes towards vegetarians and vegans as social groups. These labels appear to derive from the terms 'prejudice' and 'homophobia', and therefore imply that there is a form of group-related prejudice or stigma towards vegetarians and vegans. This concept could be linked to the experiences of stigmatization

and hostility reported by vegetarians and vegans in qualitative studies (Adams, 2003; Hirschler, 2011; Potts & White, 2008)[6].

Crandall and Warner (2005) argue that most prejudice research in psychology has been focused on a small 'window' of social groups, such as those involving gender, sexual orientation, or ethnicity. However, prejudice is variable over time, and different social groups will be more or less relevant at different times depending on prevailing social norms. Crandall and Eshleman (2003) define prejudice as "a negative evaluation of a social group or a negative evaluation of an individual that is significantly based on the individual's group membership" (p. 414). The authors emphasise that irrationality is not a necessary element of prejudice; even negative perceptions of groups that are normative and commonplace can be considered within this definition. Crandall and Warner suggest that social psychological researchers should extend their investigations to examine attitudes towards social groups outside of the traditional groups of race, or sex, or nationality. One area that has not been explored in depth is the role of individual predispositions in explaining attitudes towards vegetarians and vegans.

An individual differences approach to prejudice

Numerous studies have demonstrated that individuals who are prejudiced towards one outgroup also tend to display prejudice towards other outgroups (Altemeyer, 1981; Duckitt, 2001; McFarland & Adelson, 1996; Pratto, et al., 1994; Whitley, 1999). This generalisation of prejudice across different target groups implies that individual differences in predispositions toward prejudice may explain hostility towards outgroups. Initial attempts to measure individual differences in prejudice focused on the concept of an authoritarian personality, developed by Adorno, Frenkel-Brunswik, Levinson and Sanford (1950). However, measures of authoritarianism fell out of favour for a number of years, partly because levels of authoritarianism were found to be similar between highly prejudiced and less prejudiced regions (Pettigrew, 1958), and because the measures were found to be unreliable and influenced by an acquiescence response style (Altemeyer, 1981). Altemeyer (1981) revived the concept of authoritarianism by developing a more

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[6] Several authors have stressed that because veganism is voluntary and based on the rejection of animal exploitation, vegans are not a direct target of oppression (unlike individuals with fixed and visible identity categories, such as gender or race); and therefore, vegan stigmatization should not be compared with the experiences of marginalised groups who have been subjected to institutionalised discrimination and violence (Hammer, 2010, March 2; Nocella II, 2012; Simonsen, 2012).

reliable measure from a subset of the original scale, known as Right-Wing Authoritarianism (RWA). Altemeyer defined RWA as a particular personality trait associated with conventionality, submission to representatives of authority, and aggression towards others when the aggression is perceived as permitted by authorities. RWA was found to predict negative attitudes towards a variety of deviant social groups, in particular, those viewed as socially threatening (Altemeyer, 1981).

Another individual difference construct that reliably predicts prejudice towards outgroups is Social Dominance Orientation (SDO; Pratto, et al., 1994). The concept of SDO was developed from the wider Social Dominance Theory (SDT; Pratto et al., 1994). Social Dominance theorists attempted to explain the apparent universality of hierarchical group-based social structures throughout history and across cultures, and addressed social hierarchies at multiple levels, including the psychology of individuals, evolutionary theories, societal processes and ideology (Pratto, Sidanius, & Levin, 2006; Pratto, et al., 1994). SDO was initially described as a preference for hierarchical social structures (Pratto, et al., 1994), and the current definition suggests that SDO is "a generalised orientation towards and desire for unequal and dominant/subordinate relations among salient social groups, regardless of whether this implies ingroup domination or subordination" (Pratto, et al., 2006, p. 282). Since their development, both RWA and SDO have been shown to be robust predictors of prejudice towards a range of traditional outgroups of prejudice research (Altemeyer, 1998; McFarland & Adelson, 1996; Sibley, Robertson, & Wilson, 2006).

Correlates of attitudes towards vegetarians

One of the first examples of a survey-based approach to investigating the psychological correlates of attitudes towards vegetarians was conducted by Chin and colleagues (2002). Chin et al. developed the Attitudes Toward Vegetarians Scale (ATVS), containing 21 items based on data collected from interviews with vegetarians and non-vegetarians. Scale items were based on characterisations of the behaviour, health, and mental state of vegetarians, as well as the way that they should be treated by others. For example, one item of the scale is, "Vegetarians preach too much about their beliefs and eating habits" (Chin et al. 2002, p. 341). In their study, attitudes toward vegetarians were generally positive, although males were less positive towards vegetarians than females. Attitudes towards vegetarians were also found to be significantly correlated with

authoritarianism, indicating that individuals higher in authoritarianism had more negative attitudes towards vegetarians. However, this was only a small effect, as authoritarianism only explained 4% of the variance in attitudes. The ATVS was not correlated with social desirability, religious involvement, attitudes towards homosexuality, or political conservatism.

Chin et al. (2002) acknowledged a number of limitations to their study. Firstly, their sample consisted of predominantly female college students at a liberal university (Chin, et al., 2002). Surveys in Western contexts suggest that vegetarianism tends to be more popular among females and students than in the general population (Walker, 1995). Therefore, the generally positive attitude towards vegetarians identified in the study by Chin et al. may not be replicated in other samples. The authors also did not ask participants to identify their own dietary preference, so it was not possible to establish how many participants were vegetarian, or whether personal dietary identification was associated with attitudes towards vegetarians.

Secondly, Chin and colleagues (2002) suggested that future research should also examine perceptions of vegans, as attitudes towards vegans may be more negative than attitudes towards vegetarians. In Study 1, I suggested that vegans were often contrasted negatively with vegetarians in online discourses; vegetarians were positioned as 'moderate' while vegans were constructed as 'extreme' or 'militant'. If dietary behaviour is conceptualised as existing on a continuum from omnivore to vegan (as has been suggested or implied in previous research), vegans may be viewed as more 'extreme' than vegetarians (Allen, et al., 2000; Beardsworth & Keil, 1991; White, Schmitt, & Langer, 2006). Most individuals who identify as vegan do not also identify as vegetarian, therefore it seems vegans consider veganism to be distinct from vegetarianism (Gallup, 2012). It is not yet clear whether the division between vegetarianism and veganism should be considered on a quantitative continuum or as a qualitative distinction. As yet, there are no quantitative psychological studies examining non-vegetarians' attitudes towards *vegans* specifically; most research on attitudes towards dietary groups has only examined the categories of 'omnivore' or 'vegetarian' (e.g., Chin, et al., 2002; Minson & Monin, 2012; Ruby & Heine, 2011; but see also White, et al., 2006). Researchers in this area also often merge small numbers of vegan participants with vegetarians, as part of a broader 'vegetarian' group.

The current study

A logical next step is to investigate attitudes to vegetarians and vegans separately, and to examine the roles of SDO and personal dietary identification as predictors of these attitudes. To do this, I built upon the previous study by Chin et al. (2002) to develop two separate attitude scales based on the ATVS, in which the only difference between the scales was the description of 'vegetarians' or 'vegans' as the target group. This provided an opportunity to measure specific attitudes to vegans, and also to compare attitudes to vegans with attitudes to vegetarians. I replicated Chin et al.'s study design by including measures of RWA (Altemeyer, 1981), political conservatism, impression management (Paulhus, 1984), and single-item proxy measures of religiosity and attitudes towards gays and lesbians; as well as some additional measures (discussed below).

In order to address the limitation of sample representativeness in the study by Chin et al. (2002), the current sample was drawn from the general population of Aotearoa New Zealand. As discussed in Chapter One, Aotearoa New Zealand is one of the highest consumers of meat globally (World Resources Institute, 1961-2002), and has been described as one of the least vegetarian countries in the world (Laugesen, 2000). It is possible that less positive attitudes towards vegetarians and vegans would be identified in Aotearoa New Zealand than in the study by Chin and colleagues.

As discussed above, RWA is typically associated with negativity towards deviant groups (Altemeyer, 1981). Although adopting plant-based diets has been argued to be a form of *positive* deviance (Boyle, 2011), vegetarians and vegans clearly deviate from conventional social norms in Aotearoa New Zealand. An estimated 92 - 98% of the NZ population consumes meat (Sanitarium, 2009), and meat is central to many dominant NZ traditions, such as barbeques, Christmas dinners, and festivals based on consuming 'wild' meats (Armstrong & Potts, 2004; Potts & White, 2008). Ethical vegetarianism could also be viewed as unorthodox by religious authorities. For example, meat consumption has been traditionally supported by Christianity and abstention from eating meat has been viewed as a rejection of God's will (Spencer, 2000). Therefore, consistent with Chin et al. (2002), it was expected there RWA would predict increasingly negative attitudes towards vegetarians and vegans.

Although Chin et al. (2002) included a measure of RWA in their study; they did not include a measure of SDO. Researchers have suggested that SDT, which usually

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addresses hierarchy in human-human relations, could be extended to the perceived hierarchical structure of human-animal relationships (Allen, et al., 2000; Costello & Hodson, 2010; Dhont, Hodson, Costello, & MacInnis, 2014; Hyers, 2006; Pratto, et al., 1994). SDT suggests that ideologies of dominance and resistance take the form of "hierarchy-enhancing" and "hierarchy-attenuating" legitimizing myths respectively (Sidanius & Pratto, 2004, p. 324). Sidanius and Pratto (2004) suggest that speciesism: "the idea the humans have the 'right' to rule the planet and all living creatures on it" (p. 324), is one possible hierarchy-enhancing legitimizing myth.

As discussed in Chapter One, veganism is commonly associated with the rejection of human dominance over nonhuman animals, and may be related to the rejection of other hegemonic forms of dominance, such as patriarchy (Adams, 1990; Fiddes, 1991; Twigg, 1979). Past research has also indicated that strongly identified omnivores tend to endorse SDO to a greater extent than vegetarians (Allen, et al., 2000). In Study 1, I argued that there were a number of hierarchical themes expressed in discourses about vegetarians and vegans, such as references to the 'natural order' and human superiority over other species. SDO has also been associated with negative attitudes towards groups working to achieve social equality (Duckitt, 2006; Whitley, 1999). Given the association of veg*anism with resistance to human dominance over other animals, SDO was included in the current study as a potential predictor of increasingly negative attitudes towards vegetarians and vegans.

I also included three measures of dietary identification and behaviours (based on measures created by Allen et al., 2000), including dietary self-identification on a continuum from omnivore to vegan, the selection of a dietary identity from three options (not vegetarian, vegetarian, or vegan), and a food diary measuring servings of different food types consumed in the three days leading up to participation in the study. These measures were included to examine the role of personal dietary identification in the prediction of attitudes towards vegetarians and vegans.

Based on previous findings by Chin et al. (2002), and the online discourses in Study 1, I developed three main hypotheses for Study 2a: that a) attitudes towards vegans would be less positive than attitudes towards vegetarians; b) male participants would be less positive to vegetarians and vegans than female participants; and c) both RWA and

SDO would predict increasingly negative (or less positive) attitudes to vegetarians and vegans.

Method

Participants

Participants were 1326 individuals who ranged in age from 16 to 87 ($M = 48.92$, $SD = 15.82$). The sample was 66% female (34% male, one case identified as Other), 86% identified as NZ European (5% NZ Māori, 7% Other European), and 88% reported New Zealand as their nationality (5% UK, 1% Australia, 3% Other). The median level of education was one or more years of study towards a qualification at a polytechnic or university. Additionally, 36.6% had completed Bachelors degree/Trade Certificate/Advanced Training, and 25% had completed a postgraduate degree. Therefore, although more diverse than a typical university convenience sample, the current sample was more highly educated and had disproportionately more female and NZ European participants than the general population of Aotearoa New Zealand (Statistics New Zealand, 2006). According to the survey item, "Are you currently vegetarian/vegan?" the sample was 94.6% non-vegetarian, 4.9% vegetarian, and 0.5% vegan[7]. Participants were recruited by advertising the survey in the Sunday Star Times (a nationwide newspaper and news website), as part of a larger nationwide survey (Wilson, 2011). Ethical approval was granted by the School of Psychology Ethics Committee at Victoria University of Wellington, and participation was voluntary. Participants were provided with the option of reading a detailed information sheet prior to commencing the survey.

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[7] Because the research questions in Study 2 focus on dietary *identities*, for the purposes of the current study, categorization as a 'vegetarian' or 'vegan' was based on self-identification (rather than actual dietary behaviour). However, it is of interest to note that, consistent with previous research, many self-identified veg*an participants actually reported consuming some meat or animal products. For example, according to responses on the food diary measure, eight of the 64 self-identified vegetarians reported consuming some red or white meat in the last three days, while 30 reported consuming some seafood. Additionally, three of the seven self-identified vegans reported consuming some animal products. The average meat consumed in the last three days was significantly correlated with the dietary identification scale, $r(1307) = .33$, p < .01.

Measures

Unless otherwise specified, each item on the survey was measured on a Likert scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*), with 4 representing a neutral position (*Neither disagree or agree*).

Demographics. Participants completed items regarding their gender, age, education and ethnicity. Dietary identification was measured on Allen et al.'s (2000) single-item 10-point scale ranging from 1 (*Vegan*) to 10 (*Omnivore*), and also via the question, "Are you currently vegetarian/vegan?": 1 (*No*), 2 (*Yes, I'm vegetarian*), or 3 (*Yes, I'm vegan*). A food diary measure was included where participants reported the amount of different food types consumed over the last three days ("Over the past three days, how many servings (or cups) did you consume of each of the following food types?").

Attitudes toward vegetarians. A 20-item Attitudes Toward Vegetarians scale (ATVegetarians) was developed from the ATVS created by Chin et al. (2002). Several changes were made to the original ATVS. Three items were reworded to achieve a balance of positively-worded and negatively-worded items, in order to reduce the likelihood of response acquiescence (where participants can tend to agree with all items without taking into account the content of individual items; Paulhus, 1991). For example, the word 'not' was added to the following item: "Individuals who don't eat meat are *not* 'wimpier' than individuals who do eat meat". Based on my interpretation of discourses in Study 1, three additional items relating to social distance were included ("I'd prefer it if my partner was not a vegetarian", "It doesn't matter to me if my friends are vegetarian or not", and "Some of my best friends are vegetarian"). Items that appeared irrelevant or redundant were removed. Higher scores on the scale indicated a more negative attitude toward vegetarians.

Attitudes toward vegans. The 20-item Attitudes Toward Vegans (ATVegans) scale was very similar to the ATVegetarians scale. The only difference between the two scales was that the word 'vegetarian' was replaced with 'vegan' in the items on the ATVegans scale, in order to construct a specific measure of attitudes towards vegans that could be directly compared with the ATVegetarians scale. Higher scores on the ATVegans scale indicated a more negative attitude toward vegans.

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Right-wing authoritarianism. Six items were selected from the Altemeyer's RWA scale (1981; see also Sibley, 2009). Specific items were selected so that there would be a balance of pro-trait and con-trait items. The items include statements such as "Obedience and respect for authority are the most important virtues children should learn". The six-item version of the RWA scale was moderately reliable with a Cronbach's alpha of .69, and a mean inter-item correlation of .27.

Social dominance orientation. Six items were selected from Pratto et al.'s (1994) SDO scale (see also Sibley, 2009). Items included statements such as "Inferior groups should stay in their place". The six-item version of the SDO scale had a Cronbach's alpha of .80, and a mean inter-item correlation of .40.

Impression management. The survey included a short three-item version of the Impression Management scale (IM; Paulhus, 1984), in order to assess the level of social desirability in participant responses. Participants were asked to rate the extent to which they disagreed with the following statements: "There have been occasions when I have taken advantage of someone", "I sometimes tell lies if I have to", and "I sometimes try to get even rather than forgive and forget". A total score for each participant was found by averaging the three items. The three-item version of the IM scale had a Cronbach's alpha of .59 and a mean inter-item correlation of .33.

Attitudes towards same-sex civil unions. Chin et al. (2002) included a measure of homonegativity in their study, to measure attitudes towards gay men and lesbians. Their justification for this was to make comparisons between attitudes to vegetarians and attitudes towards another marginalised group in society. Although I did not include the same scale in the current study, I have included a single survey item investigating attitudes towards same-sex civil unions as a proxy measure of attitudes towards gay men and lesbians ("Below is a list of 'issues'. Read each one, and indicate how positive, or negative you feel about the idea that each expresses. There are no right or wrong answers – these are your opinions: Same-sex civil unions."). Attitudes towards same-sex civil unions were measured on a Likert-type scale ranging from 1 (*Strongly negative*) to 7 (*Strongly positive*).

Political conservatism. Personal identification as liberal or conservative was measured on a single-item scale ranging from 1 (*Liberal*) to 7 (*Conservative*).

Religious identification. The item, "Do you consider yourself to be a religious person?" was included as a proxy measure of religious involvement (participants answered *Yes* or *No*).

Dangerous worldview. A two-item short version of the Dangerous Worldview scale (DW; Duckitt, 2001) was included in Study 2b. Based on previous research (see Sibley, 2009), the selected items were "Despite what one hears about "crime in the street," there probably isn't any more now than there ever has been", and "There are many dangerous people in our society who will attack someone out of pure meanness, for no reason at all". The inter-item correlation of these two items was .30.

Competitive-jungle worldview. A two-item short version of the Competitive-Jungle Worldview scale (CJW; Duckitt, 2001) was also included in Study 2b. Based on previous research (see Sibley, 2009), the items included were "It's a dog-eat-dog world where you have to be ruthless at times", and "Life is not governed by the 'survival of the fittest'. We should let compassion and moral laws be our guide". The inter-item correlation for these two items was .33.

Procedure

The scales employed in the current study were included as part of the larger online *Brainscan* survey (Wilson, 2011), promoted as a nationwide survey investigating politics and psychology (a copy of the Sunday Star Times article advertising the survey can be found in Appendix B). The section of the survey utilised in the current study was available on the SurveyMonkey website for a period of two weeks in September, 2011, while the larger survey was available online for several months (around 5,900 participants completed the larger survey). The ATVegetarians and ATVegans scales were administered to participants using a between-subjects design; participants were randomly assigned to complete either the ATVegetarians or the ATVegans scale (during the survey, participants were asked to choose a number from 1 to 10, and these numbers were randomly assigned so that half of the numbers linked to one scale and half to the other scale). In total, 655 participants completed the ATVegetarians scale, and 671 completed the ATVegetarians scale. Following the survey, participants were provided an option to receive a summary of the results and more information about the survey, and the results from the survey were also serialised in the Sunday Star Times newspaper.

Results

The data were analysed using the software programme, SPSS Statistics 18. Items that were not phrased in the direction of the scale were reverse-scored prior to statistical analyses. I used an alpha level of .05 for all statistical tests. Where Levene's test indicated that equal variances couldn't be assumed, t-test interpretations were based on adjusted degrees of freedom.

Study 2a: Developing the ATVegetarians and ATVegans scales

Principal components analysis of the ATVegetarians scale

To begin, the ATVegetarians scale was examined for factorability. After listwise deletion of missing cases, the remaining sample size of 584 was considered highly suitable for a principal components analysis (PCA; 300 or more is generally recommended, Field, 2009). The sampling adequacy was established by the high result on the overall Kaiser-Meyer-Olkin measure (KMO) of .94 ('superb' according to Field, 2009), and the KMO values for individual items were all greater than .80 (Field, 2009). The correlations between items were of sufficient size to be included in a PCA, as demonstrated by Bartlett's test of sphericity, $\chi^2(190) = 4075.46$, $p < .001$ (according to Field, 2009, this result should be interpreted with caution as Bartlett's test is highly likely to be significant in large samples). The average inter-item correlations were between the recommended range of .15 and .50 (Robins, Fraley, & Krueger, 2009). No correlations in the correlation matrix were greater than .90 (multicollinearity is also generally not an issue when performing PCA; Field, 2009). All communalities were greater than .30 except for the item: "It's not ok to tease someone for being vegetarian", which had a communality of .28. All items were included in the PCA (with the possibility of later excluding the single item with low communality).

A PCA with an oblique rotation (Direct Oblimin) was performed. PCA was selected as the extraction method as the goal was to examine whether scale items measured a single construct, or if possible subscales could be identified. Oblique rotation was utilised as it was expected that the components extracted would be related (Field, 2009)[8]. The preliminary PCA extracted three components with eigenvalues greater than one, as indicated by Kaiser's criterion (Field, 2009). The first component explained

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[8] A replication of the current PCA using an alternative orthogonal rotation method (Varimax) demonstrated highly comparable results.

36.13% of the variance, the second 7.38%, and the third 5.77%. In combination, these three components explained 49.28% of the variance. Kaiser's criterion can tend to overestimate the number of components that should be included (Field, 2009), and an examination of the point of inflexion on the scree plot appeared to justify retaining only one component, or possibly two. The three components extracted from the initial analysis were not easy to interpret, as the majority of items on the third component cross-loaded onto the other two components. Taking into consideration the high level of variance explained by the first component, the point of inflexion on the scree plot, and the difficulty of interpreting three components; a solution with one or two components was considered likely to be a better fit than the three component solution.

A second PCA was conducted specifying only two components. In combination, these two components accounted for 43.51% of the variance. The oblique rotation produced a pattern matrix that showed the factor loadings, and also a structure matrix that represented the relations between the factors (Field, 2009) The pattern matrix was interpreted as the factors were more clearly defined than in the structure matrix (Field, 2009). This pattern matrix can be found in the second column of Table 3.1. Although five items cross-loaded on both components, in general it appeared that the first component represented pro-trait items, while the second component represented con-trait items. Therefore, I considered it appropriate to merge the two components into a single (highly reliable) component, representing a general attitude towards vegetarians.

A third PCA specifying only one component explained 36.13% of the total variance. The component matrix for this model can be seen in the last column of Table 3.1. The item: "It's not ok to tease someone for being vegetarian", had a component loading of .28 that was less than the recommended minimum of .32 (Tabachnick & Fidell, 2007). In conjunction with the low communality reported previously, I decided that this item would be excluded from the scale and further analyses.

Table 3.1

Component Loadings for Principle Components Analysis with Oblique Rotation of the

Attitudes Toward Vegetarians Scale

Item	Two Components		One Component
	Pro-trait	Con-trait	General attitude
Vegetarians use their eating habits to attract attention to themselves.	**.82**	-.03	**.76**
Vegetarians believe that they are better than others are.	**.81**	-.14	**.68**
Vegetarians are too idealistic.	**.81**	-.13	**.68**
Vegetarians are hypocritical.	**.78**	-.07	**.70**
Vegetarians preach too much about their beliefs and eating habits.	**.74**	-.11	**.63**
People who order vegetarian food often are just being cheap.	**.58**	.12	**.63**
I'd prefer it if my partner was not a vegetarian.	**.55**	-.03	**.51**
Vegetarians respect the rights of others who choose to eat meat.	**.53**	.09	**.57**
Vegetarians are overly concerned about gaining weight.	**.52**	.15	**.60**
Vegetarians appear NO more sickly and unhealthy than other people.	**.49**	**.34**	**.70**
Vegetarians are psychologically unhealthy.	**.47**	.29	**.65**
You can eat a balanced diet without meat.	**.44**	**.36**	**.67**
Vegetarian eating habits are harmful to the traditions of this country.	**.43**	**.31**	**.62**
It is perfectly OK for individuals to refuse to eat meat that they have been served.	.07	**.61**	**.50**
It doesn't matter to me if my friends are vegetarian or not.	.19	**.61**	**.61**
It's not ok to tease someone for being vegetarian.	-.12	**.57**	.28
Individuals who don't eat meat are NOT "wimpier" than individuals who do eat meat.	.01	**.55**	.39
Some of my best friends are vegetarian.	-.06	**.52**	.31
I would approve if my children turned out to be vegetarians.	**.32**	**.46**	**.63**
Refusing to eat meat is NOT just a phase.	**.38**	**.40**	**.64**
α	.89	.71	.90
Average inter-item correlation			.31
% variance explained	36.13	7.38	36.13

Note. Factor loadings > .30 are in boldface.

Principal components analysis of the ATVegans scale

The ATVegans scale was also examined for factorability following the same general procedure as with the ATVegetarians scale. After listwise deletion of missing items, the remaining sample size of 606 was sufficient for PCA (Field, 2009). The overall KMO (.92) and individual KMO (> .80) measures of sampling accuracy were high, and Bartlett's test of sphericity indicated that correlations between items were of sufficient size to support the use of PCA, $\chi^2(190) = 3439.68$, $p < .001$. All communalities were greater than .30, except the item: "Refusing to eat meat is NOT just a phase", which had a communality of .24.

The ATVegans scale was examined using a PCA with an oblique rotation. The initial analysis extracted three components with eigenvalues greater than one, in accordance with Kaiser's criterion (Field, 2009). The first component explained 31.26% of the variance, the second 7.88%, and the third 6.62%. Together, these three components explained 45.77% of the variance. Similar to the PCA for the ATVegetarians scale, the point of inflexion on the scree plot appeared to justify retaining one or possibly two components. The pattern matrix for the three component model was also not easy to interpret, as most items on the third component were cross-loaded onto the other two components. Therefore, alternative solutions of one or two components were explored.

The second PCA specifying two components explained 39.15% of the total variance, and could be interpreted in a similar fashion to the two component solution for the ATVegetarians scale. The first component appeared to relate to pro-trait items, while the second component appeared to relate to con-trait items (see the second column of Table 3.2). Therefore, it was also likely that the items in the ATVegans scale could be represented as a single (highly reliable) component.

The third PCA specifying a single component explained 31.26% of the total variance and resulted in loadings greater than .32 on all items except for the item: "Some of my best friends are vegans", for which the communality was .29. On further reflection, it is not surprising that this item did not load highly, as vegans make up a very small percentage of the NZ population, and therefore responses on the item may represent the high improbability of having vegan best friends, rather than being indicative of a particular attitude towards vegans. This item was excluded from the scale and from further analyses, and when the PCA was rerun, no further items loaded less than .32.

Table 3.2

Component Loadings for Principal Components Analysis with Oblique Rotation of the Attitudes Toward Vegans Scale

Item	Two Components		One Component
	Pro-trait	Con-trait	General attitude
Vegans are too idealistic.	**.78**	-.09	**.61**
Vegans preach too much about their beliefs and eating habits.	**.70**	-.11	**.53**
Vegans believe that they are better than others are.	**.69**	.08	**.67**
Vegans use their eating habits to attract attention to themselves.	**.68**	.16	**.72**
Vegans are hypocritical.	**.61**	.19	**.69**
Vegans respect the rights of others who choose to eat meat.	**.61**	-.03	**.51**
I'd prefer it if my partner was not a vegan.	**.51**	-.05	**.41**
Vegans are psychologically unhealthy.	**.46**	**.43**	**.75**
Vegans appear NO more sickly and unhealthy than other people.	**.42**	**.31**	**.62**
Some of my best friends are vegan.	**.31**	.02	.29
It is perfectly OK for individuals to refuse to eat meat that they have been served.	-.20	**.71**	**.39**
Individuals who don't eat meat are NOT "wimpier" than individuals who do eat meat.	-.12	**.61**	**.39**
It doesn't matter to me if my friends are vegan or not.	.18	**.60**	**.65**
It's not ok to tease someone for being vegan.	-.12	**.58**	**.36**
Vegan eating habits are harmful to the traditions of this country.	.20	**.54**	**.61**
You can eat a balanced diet without meat.	.15	**.54**	**.57**
People who order vegan food often are just being cheap.	.24	**.45**	**.57**
I would approve if my children turned out to be vegans.	.25	**.44**	**.57**
Refusing to eat meat is NOT just a phase.	.18	**.39**	**.47**
Vegans are overly concerned about gaining weight.	.29	**.39**	**.56**
α	.83	.79	.88
Average inter-item correlation			.26
% variance explained	31.26	7.88	31.26

Note. Factor loadings > .30 are in boldface.

Descriptive statistics and between-group comparisons

An composite score for each participant on the ATVegetarians scale or the ATVegans scale were calculated based on their average response across all items in the scale, and then a group average for each scale was calculated based on these individual scores. The ATVegetarians scale was positively skewed ($M = 2.87$, $SD = 0.93$, Skew = .29, $SE = .10$). A one-tailed t-test showed that attitudes towards vegetarians were significantly more positive than the neutral mid-point of 4, $t(654) = 31.09$, $p < .001$. The ATVegans scale was also positively skewed ($M = 3.07$, $SD = 0.87$, Skew = .19, $SE = .09$), and a one-tailed t-test showed that attitudes towards vegans were also significantly more positive than the neutral mid-point of 4, $t(670) = 25.81$, $p < .001$. Therefore, in the current sample, attitudes towards both vegetarians and vegans were generally positive.

Although attitudes toward vegetarians and vegans were generally positive, the average response on the ATVegans scale was significantly less positive than the average response on the ATVegetarians scale, $t(1311.00) = 3.99$, $p < .001$. This difference represented a small effect size, $r = .11$ (Cohen, 1992). As the main dissimilarity between the two scales was the substitution of 'vegetarian' with 'vegan', this result suggests that individuals respond to the labels of vegetarian and vegan as different target groups, and tend to have less positive attitudes towards vegans relative to vegetarians[9].

There appeared to be a gender difference in attitudes towards both vegetarians and vegans[10]. A factorial ANOVA indicated that the main effect of gender on attitudes was significant, $F(1, 1316) = 65.84$, $p < .001$, and the main effect of scale type was also significant, $F(1, 1316) = 13.35$, $p < .001$. However, the interaction effect between gender and scale type was non-significant, $F(1, 1316) = .20$, $p = .66$. Post-hoc t-tests revealed that the average response on the ATVegetarians scale was significantly less positive for males ($M = 3.16$, $SD = 0.96$) than females ($M = 2.72$, $SD = 0.09$), $t(650) = 5.82$, $p < .001$, and the average response on the ATVegans scale was also significantly less positive for males ($M = 3.32$, $SD = 0.84$) than females ($M = 2.93$, $SD = 0.85$), $t(666) = 5.65$, $p < .001$.

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[9] The reader may note that there was a slight variation between the scales, because different items were excluded during the principle components analysis. However, further tests that excluded the same items from both scales, or included all items, demonstrated that this variation did not influence the findings of a significant difference between the ATVegetarian and ATVegan scale means.

[10] The single participant identifying as Other was excluded from analyses involving the Gender variable

Responses on the 10-point Vegan-Omnivore scale ranged from 1 to 10, with the average score closest to the Omnivore end of the scale ($M = 8.60$, $SD = 2.20$). Responses on the Vegan-Omnivore scale showed that males ($M = 9.16$, $SD = 1.61$) identified as significantly more omnivorous than females ($M = 8.30$, $SD = 2.39$), $t(1216.63) = 7.72$, $p < .001$.

Multiple regression analysis of the ATVegetarians scale

The correlations between the ATVegetarians and ATVegans scales, and the predictor scales, are provided in Table 3.3. Similar to the results found by Chin et al. (2002), gender and RWA were significantly correlated with ATVegetarians and ATVegans. However, in contrast to the findings of Chin et al., in the current study the measures of religious involvement, political conservatism, and social desirability (as indicated by the IM scale) were also significantly correlated with both the ATVegetarians and ATVegans scales. The additional variables, SDO and dietary identification, were also both found to correlate highly with ATVegetarians and ATVegans.

With eight predictors and a sample size of 638, the ratio of cases to predictors was well above the minimum of 112 required for a multiple regression analysis (calculated as 104 plus the number of predictors; Tabachnick & Fidell, 2007). The normality probability plot and the scatterplot of residuals against predicted ATVegetarians scores indicated the assumptions of normality, linearity and homoscedascity were not violated (Field, 2009). The maximum Mahalanobis distance of 27.08 was not above the maximum value of 28.62 using a criterion of $p < .01$ (according to Barnett & Lewis, 1994). Four cases had a standardised residual greater than 3 (Field, 2009). However, none of these cases had a Cook's distance greater than 1, and so were not influencing the model to a large extent (Field, 2009). Consequently, no outliers were excluded from the analysis.

The data met the assumption of no multicollinearity, as the largest VIF values were not higher than 10, and none of the tolerance values were less than 0.20. Additionally, the correlation matrix was scanned for variables that correlated highly. All correlations between the DV and predictors were significant. The highest correlation was between the item measuring attitudes toward same-sex civil unions and RWA ($r = .60$). As the full RWA scale contains two items that refer directly to homosexuality, it is possible that this single-item was actually measuring a component of RWA (Whitley &

Lee, 2000). In view of the possibility that this single item may overlap with the RWA measure, it was excluded from the following regression analyses.

A hierarchical regression analysis was conducted in order to examine whether RWA, SDO and political conservatism made a unique contribution to the variation in ATVegetarians, after considering IM, gender, dietary identification and religious involvement (Field, 2009). The order of entry into the model was determined by theoretical importance of predictors, with the most important predictors being entered last so that their unique contribution could be examined while holding all other predictors constant (Tabachnick & Fidell, 2007). IM was entered into the model in the first step, so that it could be taken into account when examining the effects of other predictors. Gender, dietary identification, and religious involvement were entered into the model in the second step, as these variables are more demographic in nature, and as group membership variables they could be considered less theoretically important than the personality constructs. The third and final step involved the entry of political conservatism, RWA and SDO, so that the contribution of these predictors could be assessed on top of the other predictors.

The results of the hierarchical regression analysis involving ATVegetarians are provided in Table 3.4. When IM was entered into the model first, it accounted for 3% of the variation in ATVegetarians (as assessed using R^2) and the model was significant, $F(635) = 21.31, p < .001$. When gender, religious involvement and dietary identification were entered in the second step, all three variables were significant predictors of ATVegetarians, and together accounted for an additional 13% of the variation in ATVegetarians, $F(635) = 31.32, p < .001$. When political conservatism, RWA, and SDO were entered into the model, gender and religious involvement became non-significant predictors of ATVegetarians. This result suggests that at least one of these personality constructs potentially mediates the relationship between gender and ATVegetarians, and between religious involvement and ATVegetarians. The final model was significant, $F(635) = 48.05, p < .001$; the three personality measures accounted for an additional 18% of the variation in ATVegetarians, and in combination with the other predictors the total variance explained was 35%. The best predictor of ATVegetarians was RWA ($\beta = .27$), followed by personal dietary identification ($\beta = .23$), SDO ($\beta = .19$), IM ($\beta = -.15$) and political conservatism ($\beta = .11$).

Multiple regression analysis of the ATVegans scale

The multiple regression analysis involving the ATVegans scale and predictor variables (excluding the predictor item measuring attitudes towards same-sex civil unions) met the requirements for adequate sample size ($n = 647$), and there was no evidence of multicollinearity or problems with normality, linearity, and homoscedascity. One case had a standardised residual greater than 3. However, this case was not significantly influential in the model, as the Cook's distance measure was not greater than 1 (Field, 2009). The maximum Mahalanobis distance of 29.34 was greater than the recommended maximum of 28.62 (p < .01, Barnett & Lewis, 1994). However, the removal of the single outlier influencing the high maximum Mahalanobis distance did not have a significant effect on the model; therefore, it was not excluded from the analysis.

A hierarchical regression analysis was conducted with ATVegans as the dependent variable (see Table 3.4). The order of entry was the same as the hierarchical regression involving ATVegetarians. IM was entered into the model first and accounted for 5% of the variation in attitudes (as assessed using R^2), $F(646) = 30.63$, $p < .001$. Gender, religious involvement, and dietary identification were entered in the second step and were all significant predictors of attitudes, together accounting for an additional 11% of the variation, $F(646) = 27.73$, $p < .001$. When political conservatism, RWA, and SDO were entered into the model, political conservatism was a non-significant predictor, and gender and religious involvement became non-significant predictors. Again, this result suggests that the relationship between gender and ATVegans is mediated by RWA or SDO. Together, the personality variables accounted for an additional 12% of the variation, and in combination with the other predictors the total variance explained was 27%, $F(646) = 34.50$, $p < .001$. In the final model, the best predictor of ATVegans was RWA ($\beta = .28$), followed by personal dietary identification ($\beta = .21$), SDO ($\beta = .18$), and IM ($\beta = -.18$).

Table 3.3

Correlations between the Attitudes Toward Vegetarians Scale, Attitudes Toward Vegans Scale, and Predictors

Scale	M	SD	1	2	3	4	5	6	7	8	9	10
1. Gender (Male = 1)	1.34	0.48	-									
2. Vegan-Omnivore	8.60	2.19	.19**	-								
3. Religious Involvement (Yes = 1)	1.18	0.39	.03	.00	-							
4. Impression Management	4.44	1.21	-.09**	-.07**	.04	-						
5. Attitudes Toward Same-Sex Civil Unions	2.97	1.85	.32**	.14**	.28**	.04	-					
6. Liberal-Conservative	3.43	1.56	.17**	.19**	.19**	-.04	.45**	-				
7. Right-Wing Authoritarianism	2.76	1.00	.19**	.11**	.25**	.06*	.60**	.52**	-			
8. Social Dominance Orientation	2.58	1.05	.29**	.14**	.06*	-.15**	.39**	.44**	.45**	-		
9. Attitudes Toward Vegetarians[1]	2.87	0.93	.21**	.32**	.11**	-.17**	.37**	.38**	.43**	.40**	-	
10. Attitudes Toward Vegans[2]	3.07	0.87	.21**	.29**	.10*	-.21**	.33**	.24**	.37**	.37**	-	-

Note. *$p < .05$, ** $p < .01$. [1] $n = 655$, [2] $n = 671$, all other N's from 1317 to 1326.

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Table 3.4

Summary of Hierarchical Regression Analyses Predicting Attitudes Toward Vegetarians and Attitudes Toward Vegans

Predictor	Attitudes toward Vegetarians					Attitudes toward Vegans				
	B	*SE B*	β	R^2	ΔR^2	*B*	*SE B*	β	R^2	ΔR^2
Step 1				.03***	.03***				.05***	.05***
Constant	3.46	.14				3.75	.13			
Impression Management	-.14	.03	-.18***			-.15	.03	-.21***		
Step 2				.17***	.13***				.15***	.11***
Constant	2.18	.19				2.69	.18			
Impression Management	-.11	.03	-.15***			-.13	.03	-.19***		
Gender	.30	.07	.15***			.27	.07	.15***		
Vegan-Omnivore	.12	.02	.28***			.10	.02	.25***		
Religious Involvement	.30	.09	.13***			.25	.09	.11**		
Step 3				.35***	.18***				.27***	.12***
Constant	1.14	.19				1.89	.19			
Impression Management	-.11	.02	-.15***			-.13	.03	-.18***		
Gender	.10	.07	.05			.11	.07	.06		
Vegan-Omnivore	.10	.01	.23***			.08	.01	.21***		
Religious Involvement	.07	.08	.03			.09	.08	.04		
Liberal-Conservative	.06	.02	.11**			-.03	.02	-.06		
Right-Wing Authoritarianism	.24	.04	.27***			.25	.04	.28***		
Social Dominance Orientation	.17	.03	.19***			.15	.03	.18***		

Note. *p < .05, ** p < .01, *** p<.001.

RWA and SDO as mediators of gender differences in ATVegetarians

An interesting result of both hierarchical linear regressions was that when gender was first entered into the model, it was a significant predictor of attitudes towards vegetarians and vegans. However, in the second step when RWA and SDO were added to the regression, gender as a predictor variable became non-significant, while RWA and SDO remained highly significant. This result implies that RWA and/or SDO may mediate gender differences in attitudes towards vegetarians and vegans. In other words, males may have been less positive towards vegetarians and vegans than females, because the males in this study tended to report slightly higher levels of RWA and SDO. Past research has consistently identified that men tend to be higher in social dominance than women (Pratto, Stallworth, & Sidanius, 1997), although some argue that this difference is moderated by gender identification (Wilson & Liu, 2003).

Therefore, mediation analyses were performed to investigate RWA and SDO as mediators of gender differences in attitudes toward vegetarians and vegans (female was coded as 0, and male coded as 1). I followed the steps for multiple mediation formulated by Preacher and Hayes (2008), using their SPSS macro (available online at www.quantpsy.org). To begin with, the data were examined to find out if the assumptions for mediation analyses were met (MacKinnon, 2008). As recommended, all variables of interest were found to be intercorrelated. For the following analyses, only cases with responses on all variables were included.

For the ATVegetarians scale, in the first regression equation ATVegetarians was regressed on gender. As recommended for mediation analyses (MacKinnon, 2008), the independent variable, Gender, was found to be significantly related to the dependent variable, ATVegetarians ($B = .44$, $t(652) = 5.82$, $p < .001$). To examine the extent to which the gender differences in ATVegetarians can be explained by the variables SDO and RWA, three further regression equations were performed. For these equations RWA was regressed on gender; SDO was regressed on gender; and ATVegetarians regressed on gender, SDO, and RWA. Gender was significantly related to the mediator variable RWA ($B = .38$, $t(652) = 4.65$, $p < .001$), and also the mediator variable SDO ($B = .62$, $t(652) = 7.60$, $p < .001$). When Gender was held constant, ATVegetarians was significantly related to both RWA ($B = .28$, $t(652) = 8.19$, $p < .001$), and SDO ($B = .21$, $t(652) = 6.12$, $p < .001$).

The value of the adjusted effect ($B = .19$, $t(652) = 2.78$, $p < .01$) was significantly less than the total effect, by a value of .24 ($SE = .04$, $z = 6.05$, $p < .001$). However, because the adjusted effect for the gender difference in ATVegetarians remained significant when RWA and SDO were included as mediators, there was evidence for partial rather than total mediation. Using normal theory tests (Preacher & Hayes, 2008), the separate indirect effects for RWA ($B = .11$, $SE = .03$, $z = 4.05$, $p < .001$) and SDO ($B = .13$, $SE = .03$, $z = 4.78$, $p < .001$) were found to be statistically significant, and also totalled to .24. The two mediating effects did not differ significantly ($B = -.02$, $SE = .04$, $z = -.65$, $p = .52$, ns). Bootstrapping methods based on 1000 samples achieved comparable results, and the confidence intervals from this analysis can be found in Table 3.5. The complete mediation model with unstandardized regression estimates and associated standard errors for gender differences in ATVegetarians can be seen in Figure 3.1.

Table 3.5

Indirect Effects of Gender on Attitudes Toward Vegetarians through RWA and SDO

	Unstandardized Estimate	95% Bias Corrected Confidence Interval	
		Lower	Upper
Total	.24	.16	.34
RWA	.11	.06	.18
SDO	.13	.08	.22
Contrast of RWA and SDO	-.02	-.11	.06

Note. $n = 652$; 1000 bootstrap samples
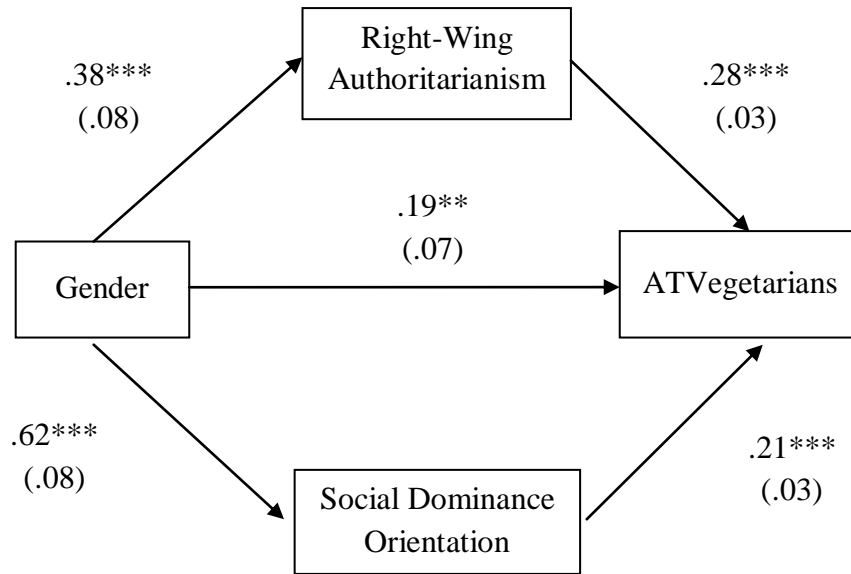
Figure 3.1. Unstandardized regression estimates and associated standard errors for the Gender to Attitudes Toward Vegetarians mediation model.

RWA and SDO as mediators of gender differences in ATVegans

Similar to the ATVegetarians mediation analysis, Gender was found to be significantly related to ATVegans ($B = .39$, $t(667) = 5.60$, $p < .001$), RWA ($B = .42$, $t(667) = 5.36$, $p < .001$), and SDO ($B = .65$, $t(667) = 7.92$, $p < .001$). When gender was held constant, ATVegans were significantly related to both RWA ($B = .22$, $t(667) = 6.14$, $p < .001$), and SDO ($B = .18$, $t(667) = 5.51$, $p < .001$).

The value of the adjusted effect ($B = .18$, $t(667) = 2.64$, $p < .01$) was significantly lower than the total effect, by a value of .21 ($SE = .03$, $z = 3.22$, $p < .001$). Again, there was evidence for partial rather than total mediation, as the adjusted effect for the gender difference in ATVegans remained significant when RWA and SDO were included as mediators. Using normal theory tests (Preacher & Hayes, 2008), the separate indirect effects for RWA ($B = .09$, $SE = .02$, $z = 4.05$, $p < .001$) and SDO ($B = .12$, $SE = .03$, $z = 4.53$, $p < .001$) were both statistically significant. However, the two mediating effects did not differ significantly ($B = -.02$, $SE = .04$, $z = -.83$, $p = .41$). Similar results were found using bootstrapping methods based on 1000 samples, as demonstrated by the confidence intervals in Table 3.6. The complete mediation model for gender differences in ATVegans can be seen in Figure 3.2 (again, female was coded as 0, and male coded as 1).

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Table 3.6

Indirect Effects of Gender on Attitudes Toward Vegans through RWA and SDO

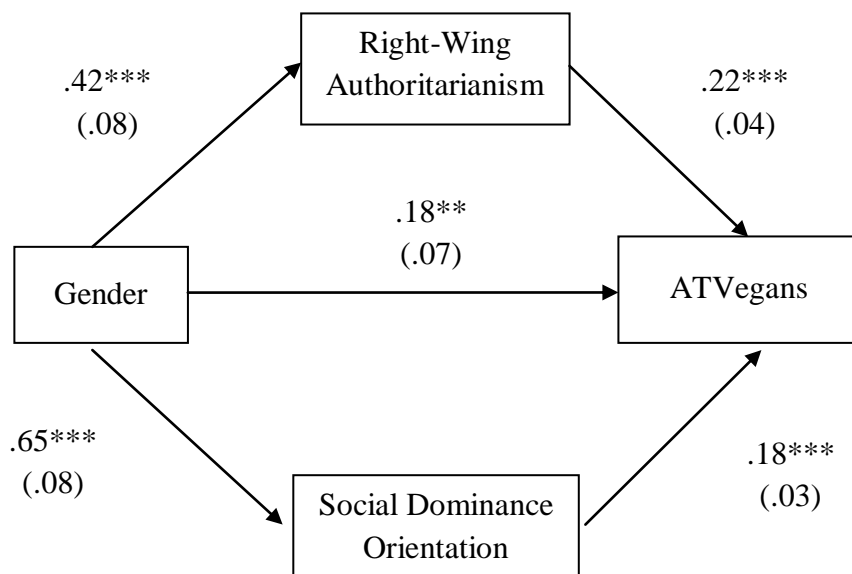| | Unstandardized Estimate | 95% Bias Corrected Confidence Interval | |
		Lower	Upper
Total	.21	.14	.29
RWA	.09	.05	.15
SDO	.12	.07	.19
Contrast of RWA and SDO	-.03	-.11	.04

Note. $n = 667$; 1000 bootstrap samples

Figure 3.2. Unstandardized regression estimates and associated standard errors for the Gender to Attitudes Toward Vegans mediation model.

Summary

Study 2a demonstrated that the ATVegetarians and ATVegans scales were reliable and valid measures of both attitudes towards vegetarians and attitudes towards vegans

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respectively, that vegetarians may be viewed more positively than vegans, and that RWA and SDO were both significant predictors of attitudes towards both vegetarians and vegans. Additionally, RWA and SDO partially mediated the gender differences in attitudes towards both vegetarians and vegans. The aim of Study 2b, therefore, was to further explore the psychological antecedents of the relationships between RWA, SDO, and attitudes towards vegetarians and vegans. Additional data was drawn from the Sunday Star Times survey dataset in order to test a dual-process motivational model (Duckitt, 2001; Duckitt, et al., 2002) of attitudes towards vegetarians and vegans.

Study 2b: Testing Duckitt's Dual-Process Motivational Model of Outgroup Attitudes

Although RWA and SDO *both* tend to predict prejudice towards outgroups, these two variables are usually only moderately correlated (Altemeyer, 1998; Duckitt, 2001; McFarland & Adelson, 1996; Pratto, et al., 1994; although RWA and SDO have been found to be more highly correlated in societies with a strong left-right contrast; e.g., Roccato & Ricolfi, 2005). Duckitt and colleagues have proposed a Dual-Process Model (DPM) of ideology and prejudice, in which RWA and SDO are conceptualised as relatively independent ideological attitude dimensions, representing two basic motivational goals (Duckitt, 2001; Duckitt, et al., 2002). The DPM can be seen in Figure 3.3. The first motivational goal is the motivation to maintain social stability and social cohesion, while the second motivational goal is the motivation to maintain inequality and intergroup dominance (Duckitt, 2001).

Duckitt (2001) suggests that these two motivational goals develop from broad views of the world that have been made chronically salient for certain individuals, due to their prior social experiences and personality traits. A view of the world as a dangerous place (e.g., with high rates of criminality and bad people) activates the motivation for social security and protection from threats, as opposed to individual freedom (which manifests as the ideological attitude of RWA; Duckitt, 2001). In contrast, a view of the world as a competitive jungle (e.g., characterised by a scarcity of resources, and in which the strong succeed and the weak are defeated) leads to the motivation to maintain ingroup dominance, as opposed to egalitarianism (which manifests as the ideological attitude of SDO; Duckitt, 2001). Social worldviews are suggested to be the mechanism that connects personality traits and experiences in social contexts to the ideological attitudes of RWA and SDO (Perry, Sibley, & Duckitt, 2013). A recent meta-analysis demonstrated that

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dangerous and competitive worldviews were strong and consistent predictors of RWA and SDO (Perry, et al., 2013), and a longitudinal test supported the proposition that the worldviews are conceptually prior to the development of ideological attitudes (Sibley, Wilson, & Duckitt, 2007b).
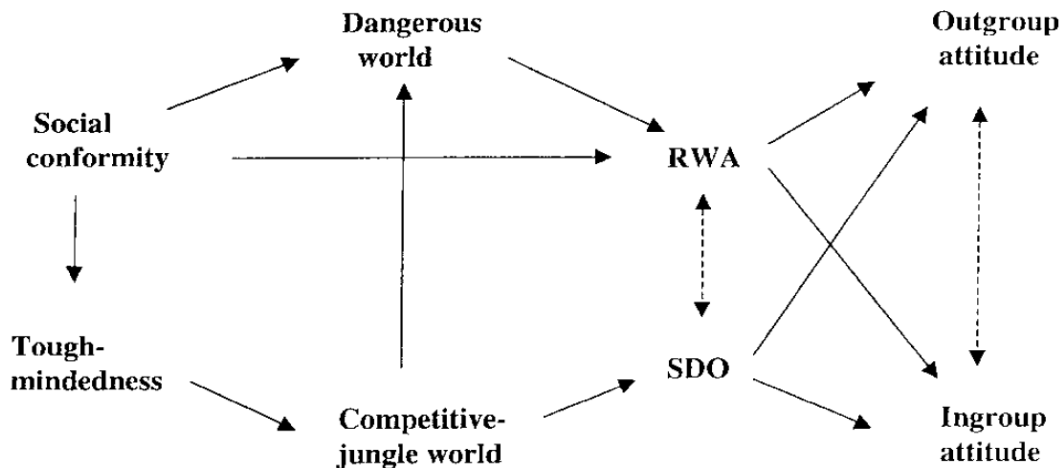
Figure 3.3. A dual-process motivational model of ideology and prejudice. Adapted from "The psychological bases of ideology and prejudice: Testing a dual process model." By J. Duckitt, C. Wagner, I. du Plessis, and I. Birum, 2002, *Journal of Personality and Social Psychology, 83*(1), p. 77. Copyright 2002 by the American Psychological Association.

There has been considerable empirical support for the utility of the DPM in predicting a variety of intergroup attitudes (Duckitt & Sibley, 2006; Duckitt & Sibley, 2007; Duckitt et al., 2002; Sibley, Wilson, & Duckitt, 2007a). The DPM predicts that outgroup dislike will be differentially associated with the two ideological motivations, depending on how the groups are perceived (Duckitt & Sibley, 2007). For example, Duckitt (2006) has demonstrated that RWA, but not SDO, predicts negative attitudes towards deviant groups that threaten social conventions, such as drug dealers and rock stars. In contrast, SDO, but not RWA, predicts negativity towards conventional but low status groups, such as housewives and beneficiaries. Both RWA and SDO predict negative attitudes towards groups that may be seen as both deviant and low status or competitive, such as feminists. These findings were replicated in a later study: RWA predicted attitudes towards groups perceived as dangerous, SDO predicted attitudes to

groups seen as derogated, and both RWA and SDO predicted attitudes towards groups perceived as dissident (Duckitt & Sibley, 2007).

Though the DPM has been employed in studies examining attitudes to traditional targets of prejudice and discrimination, it has not been tested in the prediction of attitudes towards groups based on their dietary practice and identification. In the current study, it was hypothesised that RWA would mediate a positive relationship between a dangerous worldview and increasingly negative attitudes towards veg*ans. Veg*ans could be viewed as threatening social stability, by challenging social norms regarding dietary practices, and also challenging normative beliefs about the status of nonhuman animals (Adams, 2003; Joy, 2010). In the context of Aotearoa New Zealand, where meat and dairy exports form a significant part of the national economy (Statistics New Zealand, 2006) and where the consumption of animal products is associated with the dominant national identity (Potts & White, 2008), veg*anism could also be interpreted as threatening to the economy and cultural traditions.

It was also anticipated that attitudes towards veg*ans would be associated with the motivation to maintain group dominance. Specifically, it was expected that SDO would mediate a positive relationship between a competitive jungle worldview and increasingly negative attitudes towards veg*ans. Because of the associations between meat consumption, power, and dominance, veg*ans may be viewed as rejecting the symbolic power associated with meat (Adams, 1990; Allen, 2005; Fiddes, 1991) and as noted above, the economic reliance on meat and dairy production in Aotearoa New Zealand. Additionally, if veg*ans are viewed as members of a social movement that is attempting to challenge the dominance of meat consumption, or as part of the wider animal advocacy movement that challenges the dominance of humans over nonhuman animals, then they may be perceived as dissidents. Veganism in particular could be interpreted as opposing and challenging the dominant ideology that supports the exploitation and consumption of nonhuman animals (Joy, 2010).

The following analyses employed structural equation modelling (SEM) to test two models of the hypothesised links between social worldviews, ideological attitudes, and attitudes towards vegetarians and vegans. Prior to the analyses, I separated the data corpus into two separate datasets based on whether participants completed the ATVegetarians scale ($n = 655$) or the ATVegans scale ($n = 671$). In both analyses, all constructs were

modelled as latent variables. For the worldview latent variables, the manifest variables were simply the measured items for each scale. For the ideological attitudes latent variables (RWA and SDO), the six measured items were randomly parcelled into three manifest variables. For the outgroup attitudes latent variables, the 20 items in each scale were randomly parcelled into four manifest variables. Reciprocal direct effects were included in the DPM between RWA and SDO, as Duckitt suggests that these variables "would be expected to impact reciprocally on each other due to pressures toward cognitive consistency, at least in more highly ideologized socio-political systems such as New Zealand." (2001, p. 59).

Model fit was assessed utilising the recommendations of Byrne (2010). A non-significant chi-square value generally indicates a good model fit. However, the chi-square statistic is highly sensitive to large sample sizes (Byrne, 2010). In large samples, if the chi-square is significant and the χ^2/df is greater than two, it is appropriate to examine other goodness-of-fit indices. The GFI, NFI, and CFI indices should be close to 1, and values higher than .95 are considered good. For the RMSEA, values between .05 and .08 indicate a good fit. The standardised RMR should be less than .05 (Byrne, 2010).

Structural equation model of attitudes towards vegetarians

The following analysis tested the DPM in the prediction of attitudes toward vegetarians. Table 3.7 displays the means and standard deviations for each variable in the current analysis, and the correlations between these variables. The social worldviews, ideological attitudes, and outgroup attitude variables were all significantly correlated in the predicted directions.

I conducted latent variable structural equation modelling with maximum likelihood estimation using the statistical program AMOS 19. Because the analysis was investigating a model of outgroup attitudes, participants who identified themselves as vegetarian ($n = 29$) or vegan ($n = 6$) were excluded from the analysis. After listwise deletion of missing data, the sample size for the ATVegetarians dataset was 617.

The results of the structural equation model are presented in Figure 3.4. The model for ATVegetarians was a satisfactory fit to the data, $\chi^2 = 237.52$, $df = 70$, $p < .001$, $\chi^2/df = 3.39$, GFI = .95, CFI = .95, RMSEA = .06, SRMR = .05 (Byrne, 2010). On the standardised residual covariances matrix no other potential pathways were greater than

the suggested cut-off point of 2.58 (indicating that adding pathways would not improve the model significantly; Byrne, 2010), and the additional paths suggested by the modification indices (such as between error terms) did not make made theoretical sense. Therefore, no paths were added to the model. All pathways in the model were significant, and in total the model explained 29% of the variance in ATVegetarians, while dangerous worldview scores explained 51% of the variance in RWA, and competitive jungle worldview scores accounted for 63% of the variance in SDO.

Bootstrapping using 2000 samples was conducted to obtain significance tests for the indirect effects in the model (Jose, 2013). The standardized indirect effect of a dangerous worldview on attitudes towards vegetarians via RWA was statistically significant ($B = .24$, $SE = .05$, lower 95% CI = .16, upper CI = .33, $p < .001$) .The standardized indirect effect of a competitive jungle worldview on attitudes towards vegetarians via SDO was also statistically significant ($B = .24$, $SE = .05$, lower 95% CI = .15, upper CI = .34, $p < .001$).

Table 3.7

Descriptive Statistics and Correlations between Attitudes Toward Vegetarians and Other Variables

Variable	1	2	3	4	5
1. Dangerous Worldview	-				
2. Competitive-Jungle Worldview	. 29**	-			
3. Right-Wing Authoritarianism	. 41**	.26**	-		
4. Social Dominance Orientation	. 25**	.44**	.44**	-	
5. Attitudes Towards Vegetarians	.28**	.29**	.43**	.40**	-
M	4.26	3.25	2.75	2.57	2.87
SD	1.44	1.24	1.02	1.04	0.93
α	.47	.50	.70	.79	.90
Average Inter-item Correlations	30**	.34**			

Note. ** $p < .01$. $n = 655$.

Figure 3.4. Standardised regression weights and factor loadings for the dual-process model predicting attitudes toward vegetarians.

Note: *p < .05. ** p < .01. ***p < .001. n = 617.*

Structural equation model of attitudes towards vegans

The following analyses tested a DPM of attitudes towards vegans. Table 3.8 shows the means and standard deviations for each variable and the correlations between these variables. Again, participants who identified as either vegetarian ($n = 35$) or vegan ($n = 1$) were excluded from the analysis. With listwise deletion of missing data, the final sample size was 630.

Table 3.8

Descriptive Statistics and Correlations between Attitudes Toward Vegans and Other Variables

Variable	1	2	3	4	5
1. Dangerous Worldview	-				
2. Competitive-Jungle Worldview	.26**	-			
3. Right-Wing Authoritarianism	.41**	.24**	-		
4. Social Dominance Orientation	.27**	.52**	.47**	-	
5. Attitudes Towards Vegans	.15**	.28**	.34**	.34**	-
M	4.24	3.27	2.77	2.58	3.07
SD	1.43	1.29	0.98	1.06	0.87
α	.42	.53	.71	.80	.88
Average Inter-item Correlations	.26**	.37**			

Note. ** $p < .01$. $n = 671$.

The structural equation model predicting ATVegans is shown in Figure 3.5. The model was a reasonable fit to the data, $\chi^2 = 190.28$, $df = 70$, $p < .001$, $\chi^2/df = 2.72$, GFI = .96, CFI = .96, RMSEA = .05, SRMR = .04 (Byrne, 2010). All the pathways were significant, and the model explained 22% of the variance in ATVegans. Bootstrapping analyses based on 2000 samples identified a significant standardized indirect effect of a dangerous worldview on attitudes towards vegans via RWA ($B = .18$, $SE = .04$, lower 95% CI = .11, upper CI = .27, $p < .001$) .The standardized indirect effect of a competitive jungle worldview on attitudes towards vegans via SDO was also significant ($B = .25$, $SE = .05$, lower 95% CI = .17, upper CI = .35, $p < .001$).
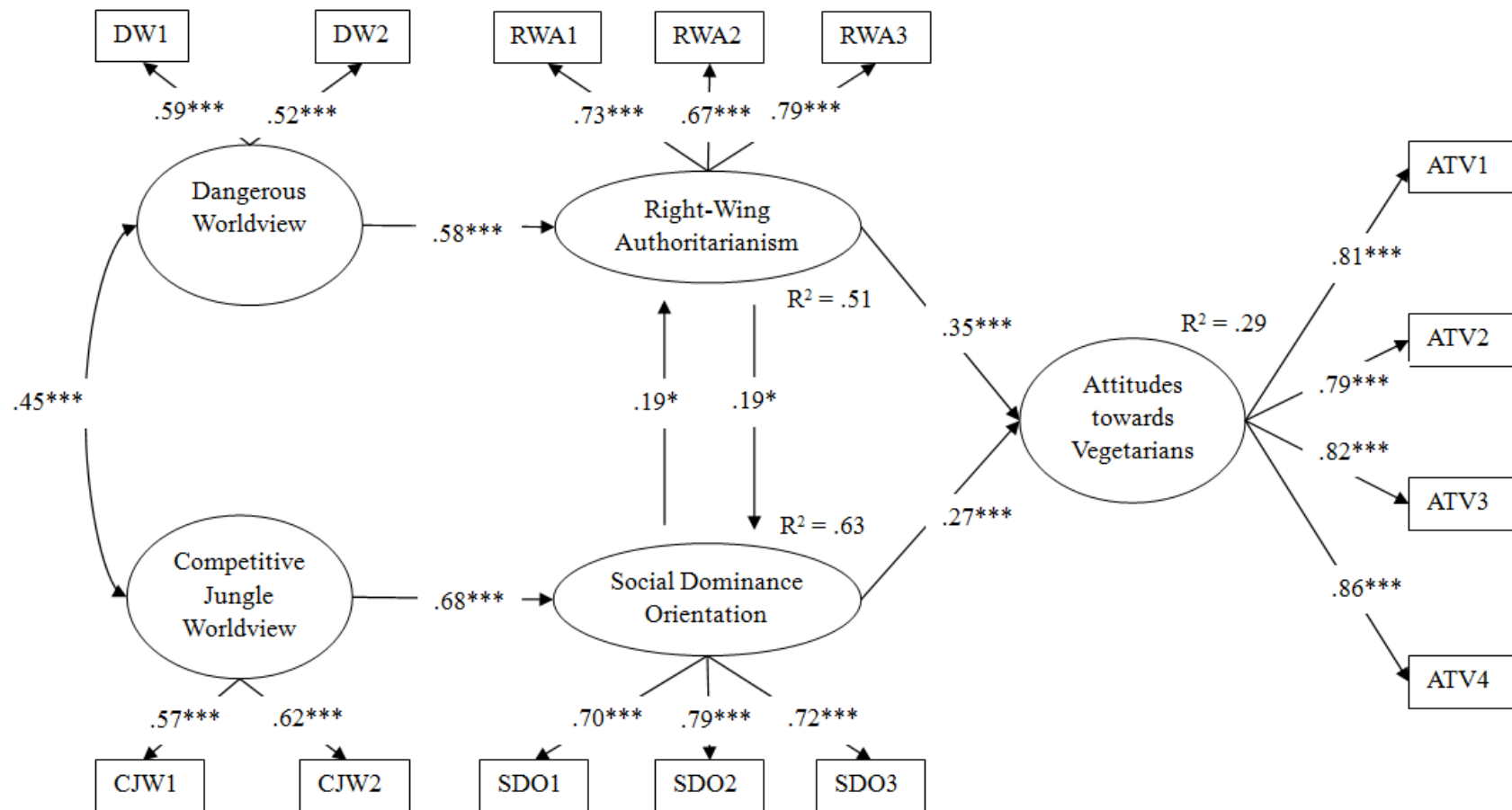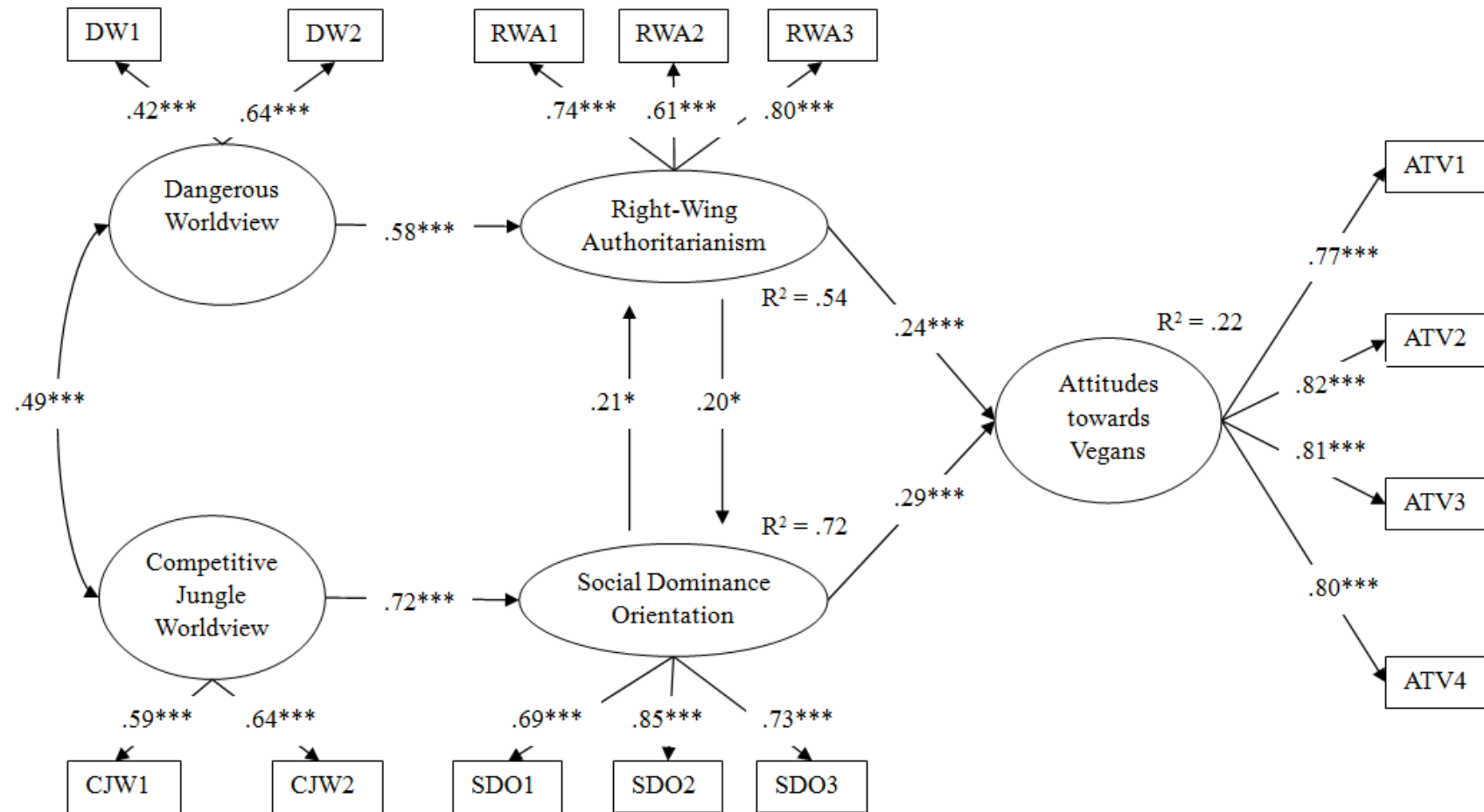
Figure 3.5. Standardised regression weights and factor loadings for the dual-process model predicting attitudes toward vegans.

*Note: *p < .05. ** p < .01. ***p < .001. n = 630.*

Discussion

The goal of Study 2 was to examine the psychological and ideological bases of attitudes towards vegetarians and vegans. In Study 2a, I began by constructing two scales to measure attitudes towards vegetarians and vegans (adapted from Chin, et al., 2002). Principle components analyses indicated that the items within each of these scales were best represented as one factor, which I interpreted a general attitude towards vegetarians for the ATVegetarians scale, and a general attitude towards vegans for the ATVegans scale.

In the current large sample drawn from the general population of Aotearoa New Zealand, attitudes towards both vegetarians and vegans were generally positive. This result is similar to the findings of Chin et al. (2002), despite their suggestion that this result could be attributed to the makeup of their restricted sample population. However, in the current study, attitudes towards vegans were significantly less positive than attitudes towards vegetarians. This finding supported my first hypothesis, and was consistent with my analysis of the discourses in Study 1, where I suggested that vegans were often contrasted with vegetarians in more negative terms. This finding also suggests that researchers should not aggregate these two groups in research.

There was a significant gender difference in both attitudes towards vegetarians and attitudes towards vegans. Specifically, male participants tended to be less positive towards vegetarians and vegans than female participants. This finding supported my second hypothesis, and was consistent with the previous findings of Chin et al. (2002). There was also a significant gender difference on a measure of dietary identification, where males tended to identify as more omnivorous than females. Multiple mediation analyses were performed to examine the role of RWA and SDO in explaining gender differences in attitudes towards vegetarians and vegans. These results of these analyses demonstrated that gender differences in attitudes were partially mediated by RWA and SDO. These findings have interesting implications for research regarding the associations between meat and masculinity (e.g., Rothgerber, 2013; Rozin, et al., 2012; Ruby & Heine, 2011), as it has been suggested that gender differences in meat consumption may be due to the associations between meat, power and dominance (Rozin, et al., 2012). The current findings suggest that men may tend to be less positive towards vegetarians and vegans partly because they tend to express higher levels of SDO and RWA than women.

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In Study 2b, additional data from the Sunday Star Times survey (Wilson, 2011) was drawn upon to test two dual-process motivational models of attitudes towards vegetarians and attitudes towards vegans. The results supported the utility of Duckitt and colleagues' DPM in accounting for variation in attitudes towards groups based on dietary identity (Duckitt, 2001; Duckitt, et al., 2002). Overall, the combination of variables in the DPM accounted for 29% and 22% of the variation in attitudes to vegetarians and vegans respectively. In other research, the DPM has typically been shown to account for a relatively larger proportion of the variation in outgroup attitudes, such as anti-minority ethnic attitudes, generalised prejudice, or sexist attitudes (e.g., Duckitt, 2001; Duckitt, et al., 2002; Sibley, et al., 2007a). Therefore, the smaller proportion of variance explained in the current study may imply that vegetarians and vegans are less salient target groups, that attitudes towards these groups are less ideologically motivated than more traditional research targets, or that other factors not included in the current study might contribute to attitudes towards dietary groups.

The structural equation models supported the hypotheses that attitudes towards both vegetarians and vegans would be associated with a motivation to maintain group security, and a motivation to maintain group dominance. As predicted, RWA was positively associated with increasingly negative attitudes toward vegetarians and vegans, and mediated a positive relationship between a dangerous worldview and increasingly negative attitudes. SDO was also positively related to increasingly negative attitudes toward vegetarians and vegans, and mediated a positive relationship between a competitive-jungle worldview and increasingly negative attitudes. The association between RWA and increasingly negative attitudes toward vegetarians supports the findings of Chin et al. (2002). However, while Chin and colleagues (2002) only assessed attitudes towards vegetarians, the current study identified a similar association between RWA and attitudes towards vegans.

Implications

Duckitt (2006) identified a differential mediation of intergroup attitudes based on the type of target group involved. Attitudes towards groups viewed as deviant but not subordinate were predicted by RWA, but not SDO; whereas attitudes towards groups viewed as subordinate but not deviant were predicted by SDO, but not RWA. The current findings demonstrate that *both* RWA and SDO predict increasingly negative attitudes to

veg*ans, which supports my hypothesis that veg*ans may be seen as both deviant and dissident. This pattern of associations in the prediction of attitudes towards veg*ans is similar to the prediction of attitudes towards protestors and feminists, as identified by Duckitt and Sibley (2007). It is possible that veg*ans are viewed as members of dissident groups, and form a symbolic threat to the social norms of the dominant culture in Aotearoa New Zealand.

The current research therefore provides an interesting extension to past research on individual difference explanations of intergroup attitudes. Past research in this area has generally focused on more salient social categories, such as ethnicity, gender, or sexual orientation. Dietary identity is a much less salient group identity, especially for those who do not personally identify as vegetarian or vegan. The current findings suggest that Duckitt and colleagues' (2002) dual-process model of ideology and prejudice can be extended to groups based on their dietary identification, and proponents of ethical consumption or lifestyle-based social movements may be interesting targets for research into intergroup attitudes.

How do the current findings relate to the proposed concept of *vegudice* (Iacobbo & Iacobbo, 2006)? On average, attitudes towards both vegetarians and vegans were generally positive. However, Duckitt and colleagues' (2002) dual-process model of ideology and prejudice appeared to fit the data well. Recently, some researchers have argued that psychology has focused overly on the presence of negativity towards outgroups (and an associated need for prejudice reduction), at the expense of understanding the identity processes of collective action (for a review, see Dixon, Levine, Reicher, & Durrheim, 2012). It has been proposed that in some contexts, prejudice reduction methods may have the inadvertent consequence of reducing motivations to challenge inequality in disadvantaged group members (Dixon, Tropp, Durrheim, & Tredoux, 2010). Though veg*ans clearly differ from these studies in that they are not considered a historically disadvantaged group, it is interesting to consider whether the current research implies that there should be a focus on promoting prejudice reduction and harmony between 'veg*ans' and 'omnivores', or whether it may be more important to emphasise collective identification as vegetarian or vegan, in order to encourage motivations to enact social change (as suggested by Maurer, 2002).

Strengths, limitations, and future directions

One strong point of Study 2 was the large dataset of 1326 individuals. I was fortunate to be able to incorporate my survey into a broader study of social and political attitudes that recruited participants through a national newspaper. This allowed for a more diverse and representative sample, and greater statistical power to identify patterns in the dataset. While the sample obtained was considerably more diverse than a typical university-based convenience sample, one limitation was that the sample was still unrepresentative in being disproportionately female, NZ European, and highly educated. Once again, however, the DPM has been tested across a range of populations with similar results (Duckitt, 2001; Duckitt, et al., 2002). The current study utilised a cross-sectional correlational design, and therefore future research employing longitudinal data may better establish the hypothesised causal links in the dual-process models (e.g., Sibley et al. 2007b).

Another limitation was the omission of a measure of attitudes towards individuals who are not vegetarian or vegan. Without this measure it was not possible to locate attitudes towards vegetarians and vegans relative to attitudes towards non-veg*ans, or to examine the potential motivational basis of attitudes towards those who consume meat. As evident in the literature review in Chapter One (and by my own decisions in the current study), many researchers examining attitudes towards dietary groups have employed a categorical distinction between vegetarians and *omnivores,* implying that the 'omnivore' label may designate a social category developed in opposition to vegetarians (Allen, et al., 2000; Ruby, 2012; Ruby & Heine, 2011). Additionally, in the context of online discourses regarding vegetarians and vegans in Study 1, several commenters explicitly adopted a 'meat-eater', 'omnivore', or 'carnivore' identity.

Research on attitudes towards individuals who eat meat is an interesting area for future research. It is possible that meat consumption may be becoming moralised in Western cultures (Rozin, 1997). For example, Ruby and Heine (2011) identified that omnivores are viewed as less virtuous than vegetarians. Additionally, in Study 1, a small number of commenters described individuals who eat meat as ignorant or lacking in compassion (see, for example, Extract 2.21). However, when investigating attitudes towards individuals who eat meat, it is important to consider the appropriateness of assigning participants to a social category that they may not necessarily identify with. For

example, the range of responses on the Vegan-Omnivore scale in Study 2 indicates that it may not be appropriate to label all non-vegetarians as 'omnivores'; many individuals who reported eating meat located themselves on a continuum towards vegetarianism, rather than identifying explicitly as an 'omnivore'. Additionally, Joy (2010) has argued that current labels for the dominant group (of non-veg*ans) do not adequately communicate the specific ideological beliefs underlying the choice to consume meat in Western societies. For example, 'omnivore' is a biological term (that arguably also applies to veg*ans), while 'meat eater' is solely a description of a behaviour that does not communicate the ideological foundations of that behaviour (unlike vegetarianism or veganism; Joy, 2010).

It would be particularly interesting to examine the motivational basis of veg*an attitudes towards non-veg*ans in future research. However, if the individual differences approach of the current study was extended to examine the motivational basis of veg*an attitudes towards non-veg*ans, it would also be important to consider whether 'omnivores' are a relevant outgroup for veg*ans. For example, if veganism is adopted as resistance to animal exploitation, who would be the target of this resistance? Previous research suggests that despite the common perception that veg*ans view meat-eaters negatively, this is not reflected in their reported attitudes (Minson & Monin, 2012), and children who choose to adopt veg*anism for ethical reasons do not generally express negative attitudes to others who eat meat (Hussar & Harris, 2010).

A third limitation of the current study is that it is possible that the participants in the current study perceived the outgroup attitude scales to be measuring prejudice towards veg*ans, and modified their responses accordingly in order to avoid appearing prejudiced. This prospect is supported by the evidence that impression management remained a significant predictor of attitudes to vegetarians and vegans, even when all other predictors were included in the hierarchical regression. Therefore, future research might also examine implicit attitudes towards vegetarians and vegans with an implicit associations test (e.g., Greenwald, McGhee, & Schwartz, 1998), and could also include behavioural measures of attitudes towards veg*ans.

The current study employed short measures of some scales due to space constraints. In particular, the use of two-item measures of a dangerous worldview and a competitive-jungle worldview may have made these measures less reliable. At the same

time, other research testing the DPM has used similar sets of items to measure the same constructs (e.g., Perry & Sibley, 2013). It is acknowledged that a large amount of the variance in attitudes toward vegetarians and vegans still remains unexplained in the current model, and it is possible that other models including additional variables could also be a good fit to the data. For example, McFarland (2010) argues that empathy and principled moral reasoning explain additional variance in levels of generalized prejudice, on top of the effects of RWA and SDO.

A potential direction for future research could be to manipulate the salience of perceived threat versus perceived competitiveness, in order to further establish the distinct causal contribution of these factors to increasingly negative attitudes towards veg*ans. Future research could also examine moderators of the pathway linking competitive-jungle worldviews, SDO, and attitudes towards veg*ans. In the current study, I have argued that individuals motivated to maintain social inequality have increasingly less positive attitudes towards vegetarians and vegans, because they perceive vegetarians and vegans to be challenging human dominance over nonhuman animals. However, it could also be possible that individuals motivated to maintain social inequality perceive vegetarians and vegans as weak and of low social status, because of the perceived rejection of the symbolic power of meat and associated rejection of hegemonic masculinity (Adams, 1990; Fiddes, 1991; Luke, 2007). It is not possible to differentiate between these two possibilities with the current dataset, and therefore, future research could include measures of speciesism and attitudes towards women as potential moderators of the association between SDO and attitudes towards veg*ans. It would also be informative to vary the target descriptions; for example, by describing targets as 'veg*an men' or 'veg*an women', or as 'health veg*ans' versus 'ethical veg*ans' (Jabs, et al., 1998).

While the current research tested two DPMs of *attitudes* towards vegetarians and vegans, previous research has also identified that RWA and SDO are associated with dietary *behaviour* (Allen, et al., 2000). Future research could combine these avenues of research to test a DPM of dietary behaviour, including justifications for meat consumption as potential moderators of the associations between RWA, SDO, and dietary behaviours.

Applications

The current findings suggest that individuals who express low levels of RWA and SDO have increasingly positive attitudes towards vegetarians and vegans. Therefore, it is likely that veg*an advocacy would be most successful for this audience group. This would support past research suggesting that vegetarians tend to be lower in RWA and SDO than omnivores (Allen, et al., 2000), and research demonstrating that increasing awareness of the symbolic associations between meat and dominance can reduce positivity towards meat in individuals who are low in SDO (Allen & Baines, 2002). However, in order to broaden the appeal of veg*anism to different audiences, veg*an advocates may also want to consider possible alternative ways to frame vegetarianism and veganism that would appeal to individuals motivated by a need for social stability, or by a desire to maintain group dominance. For example, Feygina, Jost and Goldsmith (2010) have proposed that framing environmental behaviour as patriotic and consistent with the status quo could be a potential strategy for promoting environmentally friendly behaviour in individuals motivated to maintain the status quo.

Conclusion

In summary, Study 2 demonstrated that a dual process motivational model of ideology and intergroup attitudes (Duckitt, 2001) can be applied to predict attitudes towards vegetarians and vegans. This previously unexplored application of the dual-process model suggests that two distinct ideological motivations are linked to increasingly negative attitudes towards vegetarians and vegans; the motivation to maintain social norms and group stability, and the motivation to maintain group dominance. These findings provide a good starting point for further research regarding the role of ideological motivations in reactions to vegetarianism and veganism (as well as other anti-consumption or lifestyle-based movements), and could be used to explore potential strategies for the advocacy of plant-based diets.

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Chapter Four

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Understanding Visions of Plant-Based Futures and Support for Social Change

Introduction to Study 3

In the preceding chapters, I investigated some of the social and ideological factors influencing attitudes towards vegetarians and vegans in Western cultures, and discussed how these factors may function to support the status quo of meat consumption. Though these studies are useful for understanding how the status quo is maintained, they do not provide much information about how social change could be promoted in this area. Therefore, for my third study I decided to investigate visions of plant-based future societies, drawing on recent research aimed at encouraging climate change mitigation (with the aim of highlighting opportunities for the promotion of social change towards plant-based diets). I employed a realist mixed methods approach to exploring visions of plant-based future societies in a sample of first-year university students in Aotearoa New Zealand. I first conducted a thematic analysis of an open-ended survey item that asked participants to imagine how vegetarian, vegan, and plant-based future NZ societies would be different to today. I then conducted multiple linear regression analyses to examine the relationships between different societal dimensions of plant-based future societies, and current support for policies promoting plant-based diets.

Collective futures and social change

Visions of a better future society are argued to play an important role in motivating people to engage in social change in the present (Bain, Hornsey, Bongiorno, & Jeffries, 2012; Bain, et al., 2013). For example, effective leaders frequently employ inspiring visions of the future to engage and motivate others (Berson, Shamir, Avolio, & Popper, 2001). Although there are potentially countless ways to imagine what the future might be like, Bain et al. (2013) suggest that most visions of future society are able to be reduced to the following basic dimensions: societal development, societal dysfunction, and changes in individual traits and values. Furthermore, Bain et al. argue that some of these collective future dimensions specifically form the "active ingredients" (p. 523) that inspire individuals to support social change in the present. To provide evidence for this hypothesis, Bain et al. conducted a meta-analysis of eight studies assessing perceptions of

different future scenarios. The scenarios described futures in which there had been law changes regarding climate change, abortion, or the legalisation of marijuana; or in which there had been changes to the population levels of social groups, such as atheists, Christians, and Muslims. Although there was some variation across scenarios, in general, the strongest predictor of current intentions to engage in social change was the expectation that a future society would have more warm and caring people (Bain et al., 2013).

Bain et al. (2012) investigated whether framing the future in terms of specific collective dimensions could encourage present-day pro-environmental behaviours. The authors argued that views about climate change are increasingly debated in ideological terms, rather than in terms of scientific evidence. Environmental advocacy that attempts to persuade climate change sceptics that climate change is real may therefore not be the most useful strategy for attracting support for pro-environmental policies. Bain et al. (2012) examined the relationship between beliefs about the social consequences of pro-environmental action and intentions to engage in pro-environmental behaviour in a sample of climate change sceptics. Participants reported more pro-environmental intentions when they believed that pro-environmental policies would *also* be likely to make people in society more benevolent, and would encourage societal development.

In their subsequent experiment, Bain et al. (2012) assigned participants to read a paragraph describing climate change in one of three ways: in terms of the danger of climate change to the environment and human health, the likely effect of pro-environmental changes on interpersonal warmth in society, or the effect of pro-environmental changes on societal development. Participants then rated their willingness to support pro-environmental policies. The warmth and development future frames resulted in more pro-environmental intentions than the real/danger frame, and this effect was particularly strong for climate change sceptics (Bain et al., 2012). The authors concluded that for climate change sceptics, it may be more useful to focus on the potential positive societal outcomes of pro-environmental policies (such as increased warmth and development in society) rather than attempting to convince them that climate change is real and threatening.

In addition to positive visions of future society, beliefs about the way that society is most *likely* to develop also appear to play a role in motivating support for social change

(Kashima, et al., 2009). Individuals in Western societies generally understand social change as the linear development from traditional society to modern society; a belief that has been labelled the "folk theory of social change" (Kashima, et al., 2009, p. 227). More specifically, there is a perception that traditional societies tend to be high in warmth, but low in competence, whereas modern societies are perceived as higher in competence, but as having less warmth. Kashima et al. (2009) identified that, for individuals who believed that policies can influence society, the perception that a future modern society would be less communal was associated with greater support for policies that promoted communality.

Plant-based futures and Western cultures

Utopian visions of future society may also play a role in shaping attitudes towards plant-based diets. In Western utopian literature, vegetarian future societies are often attributed characteristics such as better relationships with animals, lower rates of violence, and increased support for feminism (Belasco, 2006). Other works characterise individuals in utopian vegetarian future societies as having greater control over animalistic instincts, higher levels of purity, and as being more efficient (Belasco, 2006). However, vegetarianism can also be imagined as the outcome of a dystopian future. For example, Parry (2009) discusses Margaret Atwood's dystopian novel, *Oryx and Crake*, in which the future population consists of a new engineered type of human who is essentially vegetarian. Parry suggests that the author constructs the few remaining *real* humans (in contrast to the new humans) as naturally desiring meat. Therefore, a vegetarian future society can be constructed as the positive natural development of humanity, but also as an undesirable, unnatural development.

How do individuals in meat-centred Western cultures envision the future of meat consumption? Vinnari and Tapio (2009) surveyed beliefs about the future of meat consumption among 177 consumers and 39 experts in Finland. Most participants reported an expectation of business as usual, in which no major changes to levels of meat consumption were expected. However, a small number of participants anticipated that there could be widespread vegetarianism in the future (Vinnari & Tapio, 2009). Potts and White (2008) interviewed vegetarians and cruelty-free consumers in Aotearoa New Zealand about their perceptions of the future of animal agriculture in the nation. Participants reported pessimistic, pragmatic and utopian visions of the future including

predictions of better animal welfare on farms, a shift to crop-based farming, or even the outlawing of meat consumption (Potts & White, 2008).

The current study

The current study expands on previous research by exploring visions of plant-based futures in a NZ-based student sample, consisting predominantly of individuals who consume meat and animal products. As discussed in Chapter One, Aotearoa New Zealand as a nation has a historical and contemporary emphasis on animal agriculture and meat consumption (Potts & White, 2008). Given the economic investment in animal agriculture, the recommended widespread adoption of plant-based diets by advocacy groups could be interpreted as a potential economic threat to Aotearoa New Zealand. Additionally, as discussed in Chapter One, vegetarianism has been suggested to be contrary to some of the values and traditions associated with the dominant national identity, and some vegetarians in Aotearoa New Zealand have reported being described as 'unpatriotic' (Potts & White, 2008). Research suggests that perceptions of the cultural and historical collective continuity of the ingroup are associated with positive psychological outcomes (Sani, Bowe, & Herrera, 2008). A plant-based future Aotearoa New Zealand may therefore be interpreted as threatening the collective continuity of the ingroup, due to the historical myths associating meat consumption with the dominant national identity (Anderson, 2006; Bell, 1996).

In Study 3, my general aim was to explore perceptions of possible vegetarian, vegan, and plant-based future NZ societies. The specific research questions were: a) what dominant themes emerge when participants imagine a future NZ society in which most of the population consumes plant-based, vegetarian, or vegan diets? b) For participants who do not identify as vegetarian or vegan, which collective futures dimensions are the best predictors of current support for policies promoting plant-based diets? c) Does the dietary label used to frame the future (e.g., plant-based, vegetarian, or vegan) moderate the relationship between collective future dimensions and current support for plant-based policies? d) Does describing a higher prevalence of vegetarians or vegans in the future influence non-vegetarian attitudes towards vegetarians and vegans (i.e., do outgroup attitudes differ between groups that have been asked to imagine a general future, a plant-based future, a vegetarian future, or a vegan future)?

To examine these research questions, I employed a convergent parallel mixed methods design involving both qualitative and quantitative methods, via the use of a questionnaire that included both open and closed-ended items (Teddlie & Tashakkori, 2009). In this research design, the responses to the open-ended item allowed for a richer understanding of perceptions of the different future scenarios, while the closed-ended items allowed for statistical tests of the relationships among variables (Teddlie & Tashakkori, 2009). The qualitative and quantitative studies were linked in the overall discussion section by examining how the results of Study 3b could be understood in more depth by reference to the themes identified in Study 3a.

As indicated by the findings of my first two studies, there may be important differences in understandings of the terms 'plant-based', 'vegetarian', or 'vegan'. Some advocacy organisations have employed the term 'plant-based' instead of 'vegetarian' or 'vegan' in their advocacy because they argue that this term is less threatening (Maurer, 2002). Researchers in Australia have also proposed that the public is more likely to consider plant-based diets that contain some meat than to consider vegetarian or vegan diets, due to their reported enjoyment of eating meat (Lea, et al., 2006). As yet, there appear to have been no studies comparing these three labels as potentially different ways of framing the dietary patterns of a future society. To examine whether these labels communicate different future societal outcomes to participants, I employed an experimental between-subjects design, where the future frame label was the independent variable with four levels: control (in which participants were simply asked to imagine the future), plant-based (where almost all people consume plant-based diets), vegetarian (where almost all people are vegetarian), or vegan (where almost all people are vegan).

Study 3a consisted of a thematic analysis of responses to a single open-ended survey item (Braun & Clarke, 2006). This item was presented to participants at the start of the survey so that responses would not be influenced by the closed-ended items in the quantitative section. Participants were asked to imagine how a future scenario would be different to today (depending on the future frame that they had been assigned to) and to write down their initial thoughts. Study 3a was designed to explore the outcomes that participants freely associated with plant-based, vegetarian, or vegan futures, and to provide a more in-depth understanding of how participants view these futures.

Study 3b was a correlational cross-sectional design employing multiple linear regressions to examine which collective future dimensions were the best predictors of current support for plant-based policies in non-vegetarians. Envisioning societal benefits as resulting from widespread veg*anism in the future may be one way of gaining support for plant-based policies in individuals who are not personally inclined to adopt veg*anism. Based on the research by Bain et al. (2013), I predicted that for the plant-based, vegetarian, and vegan future frames, an expected increase in benevolence in society (i.e., increased warmth and morality) would be the strongest predictor of current support for plant-based policies. I also predicted there would be no relationships between variables in the control frame. Because the multiple linear regressions were carried out separately for each of the four future frames, additional multi-group tests were conducted to examine whether the label used to describe the future moderated the relationship between collective futures dimensions and support for plant-based policies (i.e., whether the dimensions that predicted support for social change differed depending on whether the future was described as plant-based, vegetarian, or vegan). This analysis was exploratory and therefore I did not construct any specific directional hypotheses.

I was also interested in whether the act of imagining a future where vegetarians or vegans were now in the majority would directly influence non-vegetarians' attitudes towards vegetarians and vegans, relative to a control condition. Research suggests that when a majority ingroup has an expectation of becoming a minority group in the future, attitudes towards current minority groups can become more negative (Outten, Schmitt, Miller, & Garcia, 2012). For example, thinking about a future United States where Whites are no longer in the majority has been shown to increase the negativity of White Americans' attitudes towards ethnic minority groups (Outten, et al., 2012). In the context of plant-based futures, it appears unlikely that there is a salient 'meat-eater' identity that would be threatened by imagining a future where vegetarians and vegans are now the majority. However, given the strong associations between the NZ national identity, farming, and meat consumption (Potts & White, 2008), it is possible that imagining vegetarians and vegans as the majority may threaten the dominant national identity. I predicted that for non-veg*ans in Aotearoa New Zealand, imagining a future where vegetarians or vegans are now in the majority would increase negative attitudes towards these groups (relative to a control condition). Between-group comparisons were conducted to test this prediction, in which the independent variable was the label used to

describe the future, and the dependent variables were short measures of the ATVegetarians and ATVegans scales from Study 2.

Method

Participants

Participants were 506 first-year psychology students, who completed the survey voluntarily in exchange for course credit. There were 351 females (69%) and 155 males (30.5%), who ranged in age from 17 to 43 ($M = 19.21$, $SD = 2.43$). The majority of the sample identified as NZ European (70.7%), and 6.3% identified as Māori. Two participants identified as vegan (0.4%), 29 participants identified as vegetarian (5.7%), 11 participants reported they did not eat meat (2.2%), and 434 participants (85.3%) reported that they ate meat (33 participants did not answer this question). According to responses to the open-ended question, there were 111 participants in the general future condition, 123 in the plant-based future condition, 119 in the vegetarian future condition and 117 in the vegan future condition (39 did not answer this question). Participants who identified as vegetarians or vegans (or who reported that they did not eat meat) were included in Study 3a, but were excluded from Study 3b (specific sample sizes will be reported in the respective results sections).

Measures

Demographic items Participants provided information about their gender, age, and ethnicity. Participants also reported their dietary identification in two ways: on a scale from 1 (*Vegan*) to 10 (*Omnivore*), and by selecting one of the following four options to describe themselves: 1 (*I eat meat*), 2 (*I don't eat meat*), 3 (*I'm vegetarian*), or 4 (*I'm vegan*).

Open-ended item Four different future frames were employed for the open-ended question: a) Think about New Zealand society in 2050; b) Think about New Zealand society in 2050, where almost all people consume primarily plant-based diets; c) Think about New Zealand society in 2050, where almost all people are vegetarian and do not consume meat, chicken or fish (but may still consume dairy and eggs); d) Think about New Zealand society in 2050, where almost all people are vegan and do not consume any animal products, such as meat, dairy, or eggs. Instructions for this item were: "Spend a

minute thinking about how this future would be different from today, and then write a short paragraph summarizing your initial thoughts". A space for a short paragraph was provided.

Likelihood of the future scenario Participants indicated how likely it was that the future they had been asked to imagine would actually occur. Responses were recorded on a single item from 1 (*Not at all likely*) to 7 (*Very likely*).

Attitudes towards vegetarians and attitudes towards vegans Six items from the ATVegetarians scale and six items from the ATVegans scale were included in the current study (items were selected based on the highest-loading items of the factor analyses in Table 3.1 and Table 3.2, and both of the short versions contained the same items). An example item is, "Vegetarians use their eating habits to attract attention to themselves". Responses were recorded on a scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*), and a higher score indicated a more negative attitude. Over the four future frames, the reliability of the ATVegetarians scale ranged from .69 to .78, and the reliability of the ATVegans scale ranged from .66 to .82.

Collective futures dimensions There were nine collective future dimensions based on 46 items created by Bain et al. (2013; an updated version of the items was provided by P. Bain, personal correspondence, June 11, 2013). The words used to create these scales can be found in Appendix C. Three dimensions pertained to the individual traits of Warmth (six items), Morality (six items), and Competence (six items). Participants indicated whether they thought these traits would be more or less typical in the future, on a scale from -5 (*Much less typical*) to 5 (*Much more typical*). Four dimensions pertained to the values of Conservation (three items), Self-Enhancement (three items), Openness to Change (three items), and Self-Transcendence (three items). Participants indicated whether they thought these values would be more or less important in the future, on a scale from -5 (*Much less important*) to 5 (*Much more important*). Two dimensions measured the societal characteristics of Dysfunction (seven items) and Development (eight items). On these scales, participants indicated whether they thought each societal characteristic would be more or less common in the future, on a scale from -5 (*Much less common*) to 5 (*Much more common*). Reliabilities for the future dimensions scales ranged from .65 to .88, with the exception of Self-Enhancement (for which reliabilities ranged from .44 to .54). For the dimensions with only three items, the mean

inter-item correlations were .40 for Conservation, .28 for Self-Enhancement, .71 for Openness to Change, and .71 for Self-Transcendence.

Policy support for plant-based, vegetarian, and vegan diets Six items measured support for governmental policies promoting plant-based, vegetarian, or vegan diets. The two statements indicating policy support were: "I would support governmental policies that promote plant-based/vegetarian/vegan diets", and "I would support policies to increase the availability of plant-based/vegetarian/vegan food options in schools, cafeterias, hospitals, and prisons". Responses were made on a scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*). The reliability of this scale ranged from .87 to .89 across the four future frames.

Procedure

The survey was presented to participants on a computer during their first tutorial session in a first-year psychology course, as part of a mass testing program. Ethical approval for the study was granted by the School of Psychology Ethics Committee at Victoria University of Wellington. Participants read an informed consent form and provided their consent before continuing on to the survey. Participants first provided demographic information, and were then randomly assigned (via a function in the software programme) to answer a survey tailored to one of the four future frames. At the beginning of the survey, participants spent a few minutes imagining the future scenario, and provided a short paragraph summarizing their thoughts on how this future might be different from today. Participants then rated this future society on the nine collective futures dimensions (Bain et al. 2013), and completed items measuring their attitudes towards vegetarians and vegans, and their support for policies promoting plant-based diets. The survey was also available online for participants who did not attend the tutorial.

Results

Study 3a: Imagining Plant-Based Futures

Of the 509 participants, 470 (92.5%) completed the open-ended survey item. In Study 3a I excluded participants in the control frame (as their responses were not specific to plant-based, vegetarian, or vegan futures), but kept all other participants in the dataset, as I wanted to explore a wide variety of visions of the future scenarios and expected that

there would be some overlap between the visions of vegetarians and non-vegetarians. After excluding participants in the control frame, the sample size was 371. The length of written responses ranged from one to 230 words, and most participants wrote three to four sentences. I converted the written responses to the open-ended item into a Microsoft Word document, and then imported this document in NVivo 9 for analysis.

The thematic analysis involved searching for recurring themes or patterns across responses to the open-ended survey item (Braun & Clarke, 2006). As mentioned in Study 1, this analysis can be employed flexibly from either realist or social constructionist frameworks (Braun & Clarke, 2013). For the current study I employed a primarily realist and descriptive approach, where it was assumed that written responses reflected what the participants thought about the topic, rather than examining what participants were *doing* with their use of language (Braun & Clarke, 2006)[11]. I chose this approach because the responses in the dataset were not naturally occurring, and were constrained by the question posed and the space allowed; therefore, they may not have the level of detail recommended for a social constructionist approach (Braun & Clarke, 2013). This approach also allowed for connections to be made between the qualitative and quantitative aspects of the current study, as both had underlying realist assumptions.

I began the analysis by reading through the data looking for general patterns, and recorded my initial thoughts in a log book. I then coded the data systematically at the semantic level, examining the surface meanings in participant responses. I developed the codes in an inductive bottom-up approach, paying close attention to the data and looking for repeated units of meaning (usually one to two sentences). However, my process of developing themes was also somewhat theoretically driven, as I expected the responses to be related to the collective future dimensions of traits, values, societal development and societal dysfunction, developed by Bain et al. (2013). The analysis was a recursive process, where codes were created and then refined as the analysis went along. Working up from the data allowed codes to be included in the analysis that may have been missed by a purely theoretical approach.

I created codes for the entire dataset, and then began to group these codes into themes. This was also a recursive process, where I created preliminary themes and then

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[11] The epistemological position for the thematic analysis in Study 3 therefore differs from the position taken in Study 1. Although both analyses involved looking for patterns of meaning across the responses, Study 1 was informed by social constructionist theory, discursive psychology, and rhetorical psychology.

returned to the dataset to examine whether the themes fit the data well. When deciding what 'counts' as a theme, Braun and Clarke (2006) suggest that higher prevalence may indicate a theme; however, there is no defined limit on how many times a theme needs to occur in a dataset in order to be considered important. For this study, I took into account the number of times a theme appeared in the dataset, as well as whether the theme contributed something important in relation to the research question. For example, health was a prominent theme, but I was particularly interested in how individual health outcomes were framed as impacting society in general. I focused on describing the dominant broad themes rather than examining a specific theme in depth, and I also noted patterns in the expression of themes.

For the following discussion I have grouped the dominant themes into two main sections: societal development or dysfunction, and changes to individual traits or values in society (similar to the dimensions proposed by Bain et al. 2013). Due to the experimental manipulation, participants answered slightly different questions (i.e., were asked to imagine vegetarian, vegan, or plant-based futures). However, during the analysis it became apparent that there was a great deal of similarity in the responses and dominant themes across the future frames. Therefore, I eventually decided to merge my analysis of the future scenarios and refer to the imagined plant-based, vegetarian, and vegan societies more generally as 'plant-based future societies' throughout my analysis (highlighting points of difference when necessary).

I identified five broad themes in the data. The themes regarding societal development and dysfunction were: a) changes to public health, b) changes to the environment, and c) changes to the economy and the dominant NZ culture. The themes regarding changes to individual traits and values were: a) individuals as more caring, peaceful and communal; and b) individuals as more moral, judgemental and miserable. The information provided in parentheses following each extract describes the participant's gender, age, dietary identification, and the future frame that they were assigned to.

Changes to public health

The most prevalent theme in the dataset regarded predicted changes to public health. This theme was present in almost half of the codes that I assigned to the dataset. Many participants stated that animal products were essential for health, and therefore

expected that populations of plant-based future societies would be less healthy (especially a vegan society). These participants anticipated that plant-based societies would have increased rates of nutritional deficiencies resulting in a range of negative health outcomes, such as individuals becoming fatigued, weaker, less muscular, more vulnerable to disease, less intelligent, and emotionally unstable. Extract 4.1 provides an example of the predicted declines in public health associated with the widespread omission of animal products from diets. Some participants foresaw particularly pessimistic consequences, such as increases in infertility, declines in life expectancy, and even the extinction of the human species. Extract 4.2 demonstrates the associations between vegetarian diets, malnutrition, and problems with reproduction.

Extract 4.1

The population of New Zealand would, on the whole, be weaker and more vulnerable to sickness and injury. This is because of the basic need of humans to consume animal products in order to get muscle and bone strength and also to boost general immunity. (male, 20, eats meat, vegan future)

Extract 4.2

Humans would become iron deficient and anaemic which may cause problems for future reproduction. (female, 20, eats meat, vegetarian future)

Many participants expected that plant-based future societies would need to develop solutions to address the perceived nutritional shortcomings of plant-based diets. For example, participants frequently anticipated that nutritional supplements would be required in plant-based future societies in order to prevent malnutrition (see Extract 4.3). Some participants suggested that genetic modification of plants could be employed to create plant-based diets that are nutritionally complete (as can be observed in Extract 4.4).

Extract 4.3

I don't understand how humans would be surviving; we need animal protein to survive. Therefore something else must have been developed as a supplement for animal protein. (female, 19, eats meat, vegan future)

Extract 4.4

A plant based diet would not supplement all dietary requirements so these plants may be genetically modified to do so. (female, 18, eats meat, plant-based future)

A small number of participants predicted that in order for members of plant-based societies to be able to survive solely on plant-based diets, there would need to be physiological changes to human bodies (described as 'evolving'). Meat and dairy were frequently referred to as the only sources of certain vitamins (for example, Extract 4.5 demonstrates an association of meat with protein, and dairy with calcium), and a predicted need for physiological changes in the future appeared to be linked to the assumption that because humans are omnivores, they require both plant *and* animal products to survive.

Extract 4.5

Humans may become weaker due to a lack of proteins and calcium to remain healthy. This could be due to the culling of meat which contains the protein and the dairy which has the calcium. Humans may evolve to produce the protein and calcium etc over a number of years. (female, 18, eats meat, vegan future)

Some participants predicted that the nutritional inadequacies of plant-based diets would not just impact individuals, but would also have wider dysfunctional consequences for society. For example, participants expected that vitamin supplements would be necessary, but also expensive, and therefore poorer people in plant-based societies would not be able to afford to maintain their health, and may have to resort to 'thefts' (as illustrated by Extract 4.6). These comments appeared to suggest that maintaining plant-based diets (in particular vegan diets) may be an elitist practice.

Extract 4.6

A lot of the population would be malnourished most likely the poor which would lead to famine and excess thefts happening. All vitamins, proteins and carbohydrates required by the body would have to be introduced to the human body as a pill or supplement maybe even as a syrup or form of injection (female, 22, eats meat, vegan future)

While many participants predicted that populations of plant-based future societies would experience declines in health, nearly as many participants predicted that these

populations would be *healthier*. Most of the participants who predicted positive health outcomes described reductions in rates of obesity, cancer, heart disease, and diabetes; while a few participants also predicted improvements in energy levels, mental health, and life expectancy. Extract 4.7 provides an example of the predicted positive impacts of a vegan diet on health. Plant-based future societies were often expected to have a reduction in the consumption of fast food and processed foods, which was also predicted to improve health (as shown by the reference to 'manufactured foods like mcdonalds' in Extract 4.8).

Extract 4.7

If everyone was vegan, i would think that the average living age for humans would grow. Less humans would be dying from obesity, diabetes, heart problems and other illnesses that are caused by dairy and fatty products. We as the human race would be more healthier. (female, 18, eats meat, vegan future)

Extract 4.8

Humans will have a lot less detrimental health diseases caused primarily by their unhealthy eating habits and manufactured foods like mcdonalds. (female, 19, eats meat, plant-based future)

A number of the participants who predicted health improvements still specified that these improvements would be conditional on having nutritional supplements available. For example, the author of Extract 4.9 qualifies the association between plant-based diets and better health with the condition, 'as long as one supplements'.

Extract 4.9

Seems good. Vegetarian/vegan diets are healthier as long as one supplements, it eliminates the excess negative fats that cause heart disease etc, resulting from meat consumption. (male, 19, eats meat, plant-based future)

As previously described by Wilson, et al. (2004; and as also discussed in Study 1) the impacts of plant-based diets on public health were frequently posed as a dilemma between potential positive and potential negative health outcomes. Many participants predicted a co-occurrence of reduced obesity, but increased malnutrition, as illustrated by Extract 4.10. The author suggests that in a vegan future 'perhaps this rate [of obesity]

would decrease", but that this future would also likely result in 'vaccinations being compulsory'.

Extract 4.10

The health of New Zealanders could benefit from such change but also be harmed by such idea. The idea of obesity is real and a problem that we face today so therefore if we did not consume animal products perhaps this rate would decrease. However, this may give rise to other health problems as humans cannot obtain all the nutrients we need simply by eating a vegan diet. This may lead to more serious health problems and certain vaccinations being compulsory to the NZ public to counter react to being vegan and supplying us with the right nutrients. (female, 18, eats meat, vegan future)

Although the frequent prediction of a reduction in obesity levels was framed as a positive outcome, I would argue that comments such as these may be a cause for concern for advocates of plant-based diets. In the current dataset, the idea that rates of obesity will decline in response to the adoption of plant-based diets appeared to fit well with the perception that plant-based diets are nutritionally incomplete and restrictive (rather than suggesting that these diets are healthier), as these themes were frequently mentioned together. Several researchers have proposed an association between eating disorders and vegetarianism, and research has identified that semi-vegetarians (though not necessarily full vegetarians) tend to be at higher risk of disordered eating (Timko, et al., 2012). It is also possible that advocacy messages associating the adoption of plant-based diets with losing weight are linked to wider anti-fat attitudes in Western cultures, and the attribution of obesity to individual responsibility (Crandall et al., 2001). For example, one participant commented that "majority of people would not be overweight and maybe more active and not be so lazy" (female, 20, eats meat, vegetarian future).

In summary, participants expressed a range of views on expected health outcomes, ranging from increased rates of malnutrition, to improvements in health. The variety of comments regarding changes to public health in plant-based future NZ societies is perhaps not surprising, given that vegetarian advocacy groups tend to emphasise the health benefits of plant-based diets (New Zealand Vegetarian Society, n. d.; Maurer, 2002), while meat and animal product industries also tend to stress the importance of animal products for health (Beef and Lamb New Zealand, 2014).

As part of my reflective process, I attempted to locate these comments within the wider societal context. As a child growing up in Aotearoa New Zealand, I remember being convinced that vegetarianism was risky for health, and that veganism was potentially life-threatening. In particular, I remember an advertising campaign by Beef and Lamb New Zealand in the 1990s, which unambiguously conveyed a message regarding the nutritional inadequacy of vegetarian meals. In these advertisements, it was implied that 'vegetarian' meals would need to be impossibly large in order to provide enough daily iron intake (these campaigns can currently still be accessed on the website for Beef and Lamb New Zealand at www.beeflambnz.co.nz). In these advertisements, enormous vegetarian meals were presented in direct contrast to regular-sized meals containing red meat. At present, advertising materials on the industry website still claim that "The New Zealand Ministry of Health suggests vegetarians and vegans need about 80% more iron in their diet than those eating meat" (Beef and Lamb New Zealand, 2014). Additionally, it appears the distinction between industry advertisements and public health campaigns is sometimes blurred. For example, a recent "Iron Awareness Week" campaign to raise awareness of high rates of iron deficiency in Aotearoa New Zealand was sponsored by Beef and Lamb New Zealand (Beef and Lamb New Zealand, 2014).

Changes to the environment

The second dominant theme was predicted impacts on the environment in plant-based future societies. This theme was present in approximately one third of the total codes assigned to the dataset. Many participants imagined that plant-based futures would have widespread environmental degradation, predominantly resulting from increased urbanisation and the overconsumption of resources. Some participants hypothesised that plant-based future societies may have developed out of necessity because environmental degradation had caused the animals that are currently consumed to become extinct. This notion can be seen in Extract 4.11.

Extract 4.11

I think that a main reason for people to be eating plant based diets would be because millions of species will be becoming extinct due to climate change and a lack of resources to keep these animals alive. So the world will be very different in

the future because the world will be way over its carrying capacity and the animals will be the first to die off. (female, 18, eats meat, plant-based future)

Food shortages and habitat destruction were common concerns reported by participants. Many participants expected that more plants would be required in order to feed populations of plant-based future societies (this concept could be linked to the perceptions of the nutritional inadequacy of plant-based diets in the "Changes to public health" section), and because the human population would also be likely to increase in the future, there would likely be food shortages and starvation. This prediction is demonstrated in Extract 4.12. An increase in crop farming was also predicted to result in a loss of native habitats (such as a loss of 'rain forests' in a vegetarian future, as reported in Extract 4.13).

Extract 4.12

If people in New Zealand were to all become vegans, there would be a lot of people starving. Consuming vegetables requires you to eat a lot of it in order for us to be considered physically healthy. There won't be enough going around for everyone to have their fair share of vegan products. In 2050, the world would have probably doubled its population, thus making the issue of only eating vegan products worse (Too many people, not enough food). (male, 18, eats meat, vegan future)

Extract 4.13

I think that there would be no animal farm, but vast crops. The rain forests would probably all be wiped out because we would need to make room for the tonnes and tonnes of plant material that would to be produced to support the needs of everyone. (female, 22, eats meat, vegetarian future)

Although some participants reported that plant-based societies may have arisen due to the extinction of animal species, another common prediction was that declining meat consumption in plant-based societies would result in an *overpopulation* of farmed animals. Increases in these animal populations were expected to impact negatively on the environment and contribute to food shortages, as it was predicted that there would not be enough resources to feed both the human and nonhuman animal populations. This concept can be seen in Extract 4.14, where the author describes the predicted increase in animals

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combined with a greater requirement for land in order to feed humans, as a 'challenging situation' in a vegetarian future.

Extract 4.14

There would be more animals such as cows who consume grass. We would also need this land to provide us with vegetables and this would become a more challenging situation, as the amount of animals would increase due to vegetarianism. (male, 18, eats meat, vegetarian future)

Extending the prediction of an overpopulation of animals in plant-based futures, some participants suggested that plant-based future societies would be likely to upset the 'food chain' and damage ecosystems (as demonstrated in Extract 4.15). A few participants argued that if humans were no longer eating animals, animal populations would need to be controlled via alternative means to 'keep the numbers down' (see Extract 4.20). Therefore, these comments appeared to employ the notion of balance to suggest that human consumption of animals plays a role in maintaining the current balance of ecosystems.

Extract 4.15

There would be an abundance of animals including those three food groups. This may be detrimental depending what our ecosystem is in 2050 but either way the food chain may have a possibility of reconfiguring and not necessarily for the better.(female, 18, eats meat, vegan future)

In contrast to the predictions discussed above of negative environmental outcomes in plant-based future societies, a large number of participants predicted that plant-based future societies would potentially *improve* the environment. Predicted positive outcomes included a reduction in greenhouse gas emissions, an increase in land available for growing food, an increase in native habitats, and the recovery of endangered species. For example, the author of Extract 4.16 predicted reduced carbon emissions in a plant-based future, and the author of Extract 4.17 hypothesised that in a vegan future, land previously supporting animal agriculture could be repurposed for producing food or restoring habitats.

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Extract 4.16

Hopefully CO2 emissions would reduce as a result of a smaller meat industry (male, 28, doesn't eat meat, plant-based future)

Extract 4.17

There would be a lot less land need for rearing edible animals and it would instead be used for growing plants for food or replanting native species of plants in an attempt to restore the native environment. (male, 19, eats meat, vegan future)

In addition to positive environmental outcomes, many participants predicted positive wider societal developments. For example, the authors of Extracts 4.18 and 4.19 predicted that vegetarian and vegan future societies would be more sustainable, with a greater emphasis on recycling, reducing waste, and growing food locally.

Extract 4.18

In 2050, farms would have just set up sustainable farms, we would be strongly grouped together, because land for farming would be important. You would probably see more rooftop gardens. (male, 19, eats meat, vegan future)

Extract 4.19

Recycling will be huge; sustainability of products will be more than sought, rather a government-imposed requirement. Some food may be extremely high-tech and synthetic; a lot of food will be made chemically (in a sustainable manner) with little wastage, or self-grown. (female, 19, eats meat, vegetarian future)

As with the theme regarding changes in health, some participants framed the potential environmental changes from plant-based societies as a dilemma, predicting that both positive and negative environmental outcomes could result from the widespread adoption of plant-based diets. For example, the author of Extract 4.20 predicted that a vegan future would likely result in an overpopulation of farm animals, but 'on the other hand', currently endangered species might have a chance to recover. Again, this author emphasised the importance of balance versus imbalance in regards to animal populations.

Extract 4.20

The world would be overpopulated by animal, leaving little plant life. Since there would be no point in killing animals for food, there would be an influx of domesticated farm animals i.e. cows and pigs, as today these have been bread for food purposes. The only way we could keep the numbers down would be to kill them but not for their meat, but rather their skin or for purely fun or sport. It seems like a wasteful future society. On the other hand it could mean that previously endangered species are able to repopulate, and by 2050 we could have reached the point where predators in the animal kingdom have balanced out the numbers of animals so there is no influx. In which case in terms of animal population it looks like a pretty balanced world to live in. I still believe my first point would be the reality however. (female, 18, eats meat, vegan future)

In summary, the current study suggests that participants perceive a range of potential positive and negative environmental outcomes in plant-based future societies. Although there is growing evidence to support the environmental benefits of plant-based diets over meat-based diets (e.g., Baroni, et al., 2006; Stehfest, et al., 2009; Steinfeld, et al., 2006), many participants suggested that plant-based diets would be likely to have a *negative* impact on the environment. The responses in the current study could be compared to the findings of another recent study, in which advocating a reduction in meat consumption for environmental reasons was not well received by participants, and for some, drawing attention to this link appeared to be counterproductive (de Boer, Schösler, & Boersema, 2013).

Changes to the economy and the dominant NZ culture

The third dominant theme involved predicted impacts on the NZ economy. This theme was mentioned in around a quarter of the codes that I assigned to plant-based futures. Most participants mentioning this theme expressed concern that the widespread adoption of plant-based diets in Aotearoa New Zealand would negatively impact the economy. A few participants expected that not only would members of plant-based future NZ societies avoid *consuming* animal products, but they would also not be willing to *farm* animals. Therefore, it was expected that animal agriculture industries would decline and there would be a large reduction in the exportation of animal products. These predictions

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were associated with wider negative consequences for society. Extract 4.21 illustrates the predictions that a vegetarian future would negatively impact the economy, and that members of a vegetarian society would not farm animals.

Extract 4.21

I think the NZ Economy would have a HUGE [emphasis in original] negative affect due to the fact that Farming and Agriculture may not exist, as there would be no selling of meat in NZ. Even though exporting is possible, if everybody values vegetarianism, most likely they would not own farms to export meat out. Therefore our country would be poorer and society may not be supported as well as it is today. (male, 18, vegetarian, vegetarian future)

Participants associated the predicted economic decline from a lack of demand of meat and dairy with negative societal outcomes, such as higher rates of poverty and unemployment. In particular, many participants expressed concerns about a predicted loss of jobs in industries related to the production and distribution of animal products. As potential solutions to the expected economic decline, participants proposed that farmers would convert from animal agriculture to producing crops. Others suggested that animal products might continue to be exported, if *only* NZ society adopted plant-based diets. Some participants proposed that if the rest of the world continued to consume meat and dairy, there could even potentially be improvements to the economy. The author of Extract 4.22 states that the 'majority of the income in New Zealand comes from farming and dairy', and therefore a vegan future would exhibit economic decline and job losses. However, the author also suggests a possible alternative scenario, where the economy might improve as long as the rest of the world is not vegan.

Extract 4.22

There would be more people out of jobs, such as dairy farmers, sheep and beef farmers, those in the freezing works and everyone else throughout the supply chain that makes it possible to get the food on to the shelves for New Zealanders to consume. The farming industry would die down and there wouldn't be an economic growth within NZ because majority of the income in New Zealand comes from farming and dairy. However if it was only the New Zealand society that went vegan, we would be able to produce more dairy and animal products for

the international market which could grow economy and mean more international exposure. (female, 19, eats meat, vegan future)

In the theme regarding changes to the economy, there were some predictions specific to a *vegetarian* future society. This plant-based society was described as likely to still include the production and consumption of milk, and therefore may not result in major economic changes. Extract 4.23 provide an example of the expectation of no major changes to the economy in a vegetarian society, as it was predicted that dairying would increase to replace meat production.

Extract 4.23

As the demand on livestock deviates away from meat produce, and towards dairy, this opens up more space for crop production. Which is much more economically efficient. In this area we would experience a rise in economic wealth. But then our export of some of the best meat in the world (NZ lamb) will also decrease, we will be losing that industry. Overall, I shouldn't expect much of a difference. (male, 18, eats meat, vegetarian future)

In contrast to the health and environment themes, there were relatively few comments regarding *positive* changes to the economy in plant-based futures. Many of the participants who imagined declines in animal agriculture industries still expected that farming would be important to the NZ economy in the future, as there would simply be a shift to crop farming. However, one participant imagined that plant-based futures may be a 'catalyst for major economic change', including a shift towards technology (see Extract 4.24, this extract was also framed as a dilemma between economic change and economic stability); while another participant suggested that plant-based futures would result in an increased diversification of the economy. Extract 4.24 also mentions a common statement that plant-based diets would be unlikely to change society.

Extract 4.24

I am skeptical as to whether such a change would have a major impact, positive or negative on the health or personal lifestyles of individuals. However, given the central position of meat and dairy farming in the New Zealand economy, it is possible this change in diet could be a catalyst for major economic change, maybe involving a shift away from agriculture and towards technology based industries.

On the other hand, provided the rest of the world's diet remains the same, demand for exports would still be strong. On the whole I don't think that a change in diet would, in itself, create much change in society as a whole. (male, 21, eats meat, plant-based future)

One feature that was apparent in many comments was an implied dominant NZ collective identity, via the frequent uses of words such as 'our', 'we', and 'us'. Many of the comments regarding expected economic decline and job losses in plant-based futures seemed to imply that widespread plant-based diets would be opposed to the national interests of Aotearoa New Zealand. Similar to the suggestions of Potts and White (2008), these comments appeared to demonstrate associations between farming, meat consumption, and patriotism in Aotearoa New Zealand. Ankeny (2008) suggests that meat industry advertisements in Australia construct meat-eating as a moral imperative, based on appealing to personal and social identities such as loyalty to the nation and the responsibility to be a good mother. Given the responses in the current study, it appears than an investigation into the use of nationalist discourses in animal industry materials in Aotearoa New Zealand could be a useful addition to the current study. Several participants explicitly predicted that plant-based futures would be unlikely because of the associations between meat and the dominant NZ culture. For example, the author of Extract 4.25 states that 'meat is also part of the Kiwi culture', and the author of Extract 4.26 argues that 'our culture is so meat and animal based'.

Extract 4.25

New Zealand thrives off the farming industries. People being vegetarians is unrealistic.   Meat is also part of the Kiwi culture. Sunday roasts will never be gone! (female, 18, eats meat, vegetarian future)

Extract 4.26

I think that it wont happen to be honest, especially in New Zealand where our culture is so meat and animal based. (female, 18, eats meat ,vegetarian future)

The predicted loss of 'Kiwi' culture in plant-based futures may be a concern for advocates of plant-based diets. Research suggests that individuals value the collective continuity of their ingroup, and perceive links between the past, present, and future of their ingroup (Sani, et al., 2008). In the context of Aotearoa New Zealand, social change

towards plant-based diets may be interpreted as threatening the collective continuity of the dominant NZ national identity. If the associations between the national identity and meat consumption are robust, it may be more effective to downplay the national identity when advocating plant-based diets. Alternatively, it may be useful to emphasise the aspects of the national identity that are consistent with the adoption of plant-based diets. Some potential opportunities for framing plant-based diets as consistent with the NZ identity were suggested by participants in the study by Potts and White (2008), including an emphasis on a close relationship with nature, and being open-minded and independent thinkers. These themes were also identified in some of the responses of participants in the current study (see the upcoming discussion of changes to individual traits and values).

Aotearoa New Zealand is a bicultural nation with multicultural influences and it is likely that some cultural groups have more plant-based dietary patterns (Statistics New Zealand, 2014). However, in the current study, the dominant NZ culture that participants referenced appeared to be strongly associated with the production and consumption of animal products. In previous research, Sibley, Hoverd and Liu (2011) identified two dominant understandings of the NZ identity, one monocultural, and the other pluralistic. I found it interesting that very few participants discussed cultural diversity in plant-based future NZ societies. On reflection, I wonder whether my framing of the future as plant-based, vegetarian, or vegan constructed a monocultural image of a future Aotearoa New Zealand, since variations in food choices can play a role in the expression of cultural identities (Lupton, 1996). One participant appeared to point out this possibility, in their comment, "There would be a less diverse culture" (female, 18, eats meat, plant-based future). Another participant suggested that "the concept of veganism as ideal is particularly frustrating as on a global scale it is not feasible at all and erases the people who are *actually* starving right now in places where you could not grow crops." (female, 28, eats meat, vegan future), emphasising that plant-based diets may be best suited to particular regions, rather than as a widespread practice or ideal.

Individuals as more caring, peaceful and communal

In addition to describing changes in societal development and dysfunction, many participants described changes to individual traits and values. The most common prediction regarding changes in individual traits and values in plant-based futures was an expected increase in care and respect for animals and the natural environment.

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Participants frequently predicted an increased sense of harmony between humans, animals, and the environment. For example, the author of Extract 4.27 predicted that individuals in a vegan future would extend concern for the wellbeing of animals to include the environment.

Extract 4.27

Individual human values will be different, I think they will be more appreciative to the environment because they care for animals and their wellbeing therefore nature. (female, 19, vegetarian, vegan future)

Many participants expected that there would be an increased concern for the welfare of farmed animals in plant-based future societies (a large proportion of the participants mentioning animal welfare personally identified as vegetarian or vegan). For example, the author of Extract 4.28 predicted increased 'respect for animals' and better animal welfare outcomes in a vegetarian future. One participant predicted that there would be less objectification of animals; that they would be "seen as living things rather than next Sundays meal" (male, 20, eats meat, vegan future).

Extract 4.28

We would be in more harmony with our environment, having more respect for animals and other elements of nature whom we share the planet with. We would have more animals being allowed to roam free. Products such as free range eggs would be the only form of produce (rather than caged eggs for example). (female, 18, vegetarian, plant-based future)

The better treatment of animals in plant-based futures was frequently associated with the development of a more peaceful society and the better treatment of other humans (for example, see Extract 4.29). Several participants described individuals in plant-based futures as happier, kinder, and more peaceful. The author of Extract 4.30 describes individuals in a plant-based future as 'more tolerant and open-minded'.

Extract 4.29

Treatment of animals and human equality must be better if we are actively protecting animals. (female, 19, eats meat, vegan future)

Extract 4.30

Assuming this came about through social change, and a slow change in the opinions of people regarding the consumption of meat (both ethically and health), I would say overall we might be a more tolerant and opened minded people. (male, 21, eats meat, plant-based future)

Some participants also described an increased sense of community in plant-based futures. For example, the author of Extract 4.31 describes 'a strong sense and involvement of community' in a plant-based future, in addition to widespread concern for the environment. Another participant suggested "we would be a collective society" (gender unknown, 18, eats meat, vegetarian future).

Extract 4.31

This future would involve most or all people living lives which are concerned with nature and the environment. There would have to be some kind of unifying principles which guide this such as a strong sense and involvement of community. (male, eats meat, 21, plant-based future)

The concept of increased communality in individuals appeared to be related to a perception that life would be simpler, and that individuals would 'appreciate the smaller things in life' (see Extract 4.32). Descriptions of a simpler, more communal society involved individuals growing their own food and local trade (as described in Extract 4.33). These values can also be linked to the sustainable society comments discussed in the section, "Changes to the environment".

Extract 4.32

I feel people would be happier and healthier. Nature would be more appreciated as it would be the main food source. There would not be such an influence from big companies as people would be more likely to appreciate the smaller things in life. (female, 19, eats meat, plant-based future)

Extract 4.33

We grow our own food, we don't go down to the market to buy food. Home grown takes on a new meaning we trade food instead of buy it. (male, 18, eats meat, plant-based future)

Given that the widespread adoption of animal-based diets is a relatively recent occurrence (Spencer, 2000), the expectation of life being simpler in a plant-based future may be related to an assumption that 'modern' societies tend to have animal-based diets, while more 'traditional' societies tend to have plant-based diets. According to the folk theory of social change, most individuals imagine the future as proceeding from traditional to modern, and from individuals characterised by high warmth and low competence, to individuals characterised by high competence and low warmth (Kashima et al., 2009). Very few participants in the study by Kashima et al. (2009) perceived the future as progressing from modern to traditional. If plant-based futures are viewed as less modern and more communal societies, perhaps this could be part of the reason why many participants described these futures as unlikely (i.e., perhaps plant-based futures do not fit within Western folk expectations of how the future is likely to develop). However, the notion that individuals will become more community-oriented and collective in plant-based future societies is also a potentially useful concept for advocates of plant-based diets. Kashima et al. (2009) suggest that individuals who expect the future to be less communal (and who believe that policies can bring about social change), are more favourable to social policies that are likely to increase communality in society. Promoting increased community through the growing and sharing of fruits and vegetables in plant-based futures could be a potentially effective strategy for advocating plant-based policies, especially for individuals who are concerned about a decline in community in the future.

Individuals as more moral, judgemental and miserable

Another dominant theme regarding changes to individual traits and values was predictions of individuals becoming more civilised and moral in the future. Positive moral outcomes predicted to occur in plant-based future societies included valuing good health, and becoming more civilised, purer, self-controlled, less violent and less greedy (as illustrated by Extract 4.34 and Extract 4.35). One participant proposed that future individuals would view the members of current-day society as immoral and cruel.

Extract 4.34

New Zealand will be more civilized, not as greedy as I have heard meat and make people more aggressive. (female, eats meat, 23, vegetarian future)

Extract 4.35

There may be a shift in violence as well, as there is often the idea held that vegans are less violent people, therefore may be an overall decrease in violence and deviance. (female, 18, eats meat, vegan future)

The prediction that people may be more moral in plant-based futures was not always viewed as a desirable outcome. Some participants imagined that individuals in plant-based future societies could be overly moralizing and judgemental of others who eat meat. For example, Extract 4.36 demonstrates both positive and negative characterisations of vegetarians: as 'empathetic', but also as 'overly politically correct and unfairly judgmental'.

Extract 4.36

Being vegetarian is usually a sign that you have a good conscience and are empathetic. This means NZ in 2050 will be quite a good place to live in. Although, many vegetarians are also likely to be overly politically correct, and unfairly judgmental of those who eat meat. (male, 20, eats meat, vegetarian future)

Some participants predicted that plant-based futures would most likely arise from necessity or force, rather than voluntary choice, and therefore could involve a potentially totalitarian society with restrictions to personal freedom. For example, the author of Extract 4.37 questions why members of a vegetarian society would no longer be eating meat, and attributes this change to the actions of individuals who view meat consumption as 'morally unacceptable' as forcing vegetarianism on others. Several participants reported that they personally would miss meat and would not wish to live in a plant-based society (for example, the author of Extract 4.38 argued that 'death sounds more promising than vegan').

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Extract 4.37

Why are they not eating meat? Is it because it has become morally unacceptable? There will always be people that say doing things are wrong and others not allowing them to force their life style on them. (male, eats meat, 20, vegetarian future)

Extract 4.38

First of all... that will never happen, well let's hope so. If it does... death would sounds better than that. Being a vegan it's almost sounds like being a robot. Lack of freedom of choice. Death sounds more promising than vegan... (female, 18, eats meat, vegan future)

Therefore, in contrast to the descriptions of a happier, more peaceful society in the previous section ("Individuals as more caring, peaceful and communal"), some participants imagined a bleak, boring and tasteless future, and predicted that people in a plant-based future society would be more miserable. For example, the author of Extract 4.39 describes food in a vegan future society as 'bland', and argues that there would be 'no more enjoyment from eating'. Again, an association between vegan diets and weight-loss appeared to be linked to the perception of restriction and a loss of pleasure; the author suggests obesity would not exist, but also states 'I'd rather be unhealthy and happy than miserable and healthy'. Cole (2008) argues that veganism is often constructed as ascetic, and that it is important for advocates to demonstrate that plant-based diets can be hedonistic, rather than restrictive or lacking in pleasure.

Extract 4.39

It would suck. There would be no more enjoyment from eating – food would be bland and/or taste awful [...] Food would no longer be creative – how much can you really do with just vegetables? Nothing! I spose we'd still have fruit, but sometimes that just can't beat a good slice of cake, or chocolate, or chocolate cake! Maybe there would be no such thing as fat though. That doesn't mean to say skinny = healthy. But I'd rather be unhealthy and happy than miserable and healthy. (female, 19, eats meat, vegan future)

Overall, in regards to expected changes in traits and values, participants predicted that individuals in plant-based future NZ societies could be more benevolent and happy, but also potentially more moralizing and miserable. The valence of predictions regarding changes to individual traits appeared to be dependent on perceptions of *why* widespread changes to dietary behaviour had occurred. Participants who foresaw the voluntary adoption of plant-based diets as arising from associated widespread changes in values and social norms predicted more positive traits in individuals. In contrast, participants who foresaw plant-based futures as arising from coercion or necessity predicted more negative traits. These contrasting predictions are illustrated by Extract 4.40, where the author describes a vegetarian future as the potential outcome of a 'radical totalitarian government regime', a 'turn for the worse' regarding farming, or a 'largescale change of culture' (described as 'unlikely').

Extract 4.40

For this to have occurred, some radical totalitarian government regime would have had to be installed, or a catastrophic turn for the worst with our cattle/sheep farming and meat imports, or perhaps an unlikely and very largescale change of culture for New Zealanders in terms of values/ethics/connection to nature (male,19, eats meat, vegetarian future)

Summary

The open-ended item asking participants to imagine a plant-based, vegetarian, or vegan future New Zealand in 2050 resulted in a variety of predictions regarding the nature of these future societies. Responses ranged from utopian to dystopian predictions, as well as predictions of no change at all. Over a third of participants reported predictions of negative outcomes, such as a bleak, dystopian future in which plant-based diets had become a necessity due to environmental degradation or had been imposed by a totalitarian government. These comments tended emphasise declines in public health, environmental degradation, threats to the economy, changes to the dominant NZ culture, and increasingly unhappy, judgemental, and moralizing individuals. In contrast, about a quarter of participants predicted positive outcomes including images of a utopian harmonious future where plant-based diets had been voluntarily adopted by the population. These comments focused on improvements in public health, increased

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sustainability, harmony with the environment, and increased positive traits such as kindness, compassion, and communality. Several participants predicted no change at all, while a small proportion of participants framed their responses as a dilemma between potential positive and negative outcomes. In general, although many participants viewed plant-based futures as potentially improving society, these futures were also commonly described as highly unlikely in the context of Aotearoa New Zealand.

The widespread adoption of plant-based diets was framed by some participants as an issue of national interest; widespread veg*anism was perceived as likely to be damaging to the economy and detrimental for the dominant NZ culture. These comments differed considerably from the individualistic discourses identified in Study 1. Previous discursive research has highlighted how hunting has been defended as being important to the national identity in Britain (Wallwork & Dixon, 2004), and how attempts to address climate change in Australia have been criticised as negatively affecting national interest and the dominant 'way of life' (Kurz, Augoustinos, & Crabb, 2010). It may therefore be useful to examine the discourses framing plant-based diets as threatening the national interest of Aotearoa New Zealand from a more discursive perspective.

Study 3a provides several insights into the variety of different perceptions of plant-based, vegetarian and vegan futures, and is a useful counterpart to the quantitative analyses in Study 3b. One limitation to Study 3a is that the open-ended question at times elicited small and sometimes vague responses, and therefore could be argued to not provide appropriately rich data for a qualitative analysis (Braun & Clarke, 2013). However, it is also possible that the comments simply represented what participants thought about the topic, and I would suggest that the inclusion of a qualitative question provided information regarding perceptions of plant-based futures that would not have been gained from the closed-ended survey alone (as others have also argued; see Vitale, Armenakis, & Feild, 2008).

Another limitation is that the thematic analysis approach separated codes from the context in which they were mentioned. Although I discussed the themes as if they were distinct patterns of meaning, most participants expressed more than one theme in their response, and often the responses were constructed as a mixture of good and bad outcomes. Many participants reported dilemmas in their perceptions of plant-based futures: plant-based diets may be healthier, but also less healthy; could be better for the

environment, but also worse for the environment; could be better for animals, but also worse; and may create nicer people, but also judgemental and miserable people. For example, Extract 4.41 provides illustrates a perceived dilemma between potential environmental benefits, and potential negative impacts on health. The dilemmatic quality of many comments in the current study suggests that this topic may be suitable for a social constructionist analysis of common sense ideological dilemmas (similar to Study 1).

>Extract 4.41

>It will be both good and bad. The good thing is that we then start protecting, remaining and improving the environment. However, since animal products are good sources of essential energy and nutrition, it will be likely that human's health might be decreased at some point. (female, 18, eats meat, vegan future)

In Western contexts, plant-based diets are typically framed as individual behaviours or lifestyle choices. However, I would argue that the current thematic analysis demonstrates that many individuals associate the widespread adoption of plant-based diets with a range of wider positive and negative societal outcomes. While the current thematic analysis provided an illustration of the various societal outcomes associated with plant-based futures, it was not possible to identify which of these outcomes tend to be most strongly associated with support for social change to bring about these futures. This was the focus of Study 3b, in which I investigated the collective futures dimensions as potential predictors of support for plant-based policies, across the four different future frames.

Study 3b: Collective Futures Dimensions and Support for Plant-Based Policies

Data preparation and descriptive statistics

For the following quantitative analyses, the sample was limited to participants who reported that they ate meat ($n = 424$). An alpha level of .05 was employed for all statistical tests, and missing data points were excluded listwise from the analyses. The analyses involving the collective futures dimensions followed the analytic approach previously used by Bain et al. (2013). The means and standard deviations for the collective future dimensions in each future frame can be found in Table 4.1, and the zero-

order and partial correlations between collective future dimensions and plant-based policy support can be found in Table 4.2.

The results in Table 4.1 suggest that on average, it was expected that traits of warmth, competence, and morality would be more typical in plant-based, vegetarian, and vegan futures than in present-day society. It was also expected that there would be a greater importance placed on self-enhancement, openness to change, and self-transcendence, while the value placed on conservation was not expected to change. Plant-based, vegetarian, and vegan futures were expected to have increased levels of development, but similar levels of dysfunction to present-day society. The zero-order and partial correlations in Table 4.2 highlight the importance of dysfunction in a vegetarian future (as this variable remained highly significant, even when controlling for development) and warmth in a vegan future (as this also remained highly significant even when controlling for competence and morality).

Between-group comparisons

Attitudes towards vegetarians and vegans A two-way mixed ANOVA was conducted to examine potential differences in the within-subjects variable of attitudes towards vegetarians and vegans, across the between-subjects variable of the four future frames. The main effect of attitude scale was significant, $F(1,419) = 173.42$, $p < .001$. A Bonferroni corrected post hoc test indicated that, on average across all future frames, non-vegetarian attitudes toward vegans ($M = 3.54$, $SD = 1.05$) were significantly less positive than attitudes toward vegetarians ($M = 3.10$, $SD = 1.19$), $p < .001$. The main effect of future frame was also significant, $F(3,419) = 3.12$, $p < .05$. Bonferroni corrected post hoc tests indicated that average attitudes towards veg*ans were significantly less positive in the vegan future frame ($M = 3.27$, $SD = 1.09$) than in the plant-based future frame ($M = 3.14$, $SD = 1.05$), $p < .05$, and the vegan future frame was also approaching a significant difference to the vegetarian future frame ($M = 3.22$, $SD = 0.96$), $p = .08$. However, the control future frame ($M = 3.35$, $SD = 1.14$) did not differ significantly from the other future frames. The interaction effect of Attitude Scale x Future Frame was also non-significant, $F(3,460) = 1.14$, $p = .33$. These results are displayed in Figure 4.1.

Table 4.1

Means and Standard Deviations for Collective Future Dimensions in Control, Plant-Based, Vegetarian, and Vegan Futures

Future Frame	Traits			Values				Society	
	Warmth	Competence	Morality	Conservation	Self-enhancement	Openness to change	Self-transcendence	Dysfunction	Development
Control	-.22	.56***	-.30*	-.65**	1.69***	1.48***	.65**	.58**	1.44***
	(1.66)	(1.47)	(1.38)	(1.91)	(1.57)	(1.93)	(2.26)	(1.87)	(1.61)
Plant-based	.78***	1.00***	.62***	.12	1.00***	1.23***	1.00***	-.07	1.18***
	(1.67)	(1.50)	(1.65)	(2.06)	(1.55)	(2.22)	(2.20)	(2.06)	(1.51)
Vegetarian	.63***	.52***	.37*	.12	.57***	.87***	.96***	.05	.79***
	(1.58)	(1.19)	(1.54)	(1.76)	(1.53)	(2.16)	(2.08)	(1.56)	(1.54)
Vegan	.41*	.56***	.51**	.07	.79***	.67**	1.03***	-.12	.84***
	(1.73)	(1.35)	(1.60)	(1.75)	(1.55)	(2.14)	(2.07)	(1.88)	(1.75)

Note: Significance values indicate that the average score was significantly different from the 'same as today' midpoint of zero.

*$p < .05$, **$p < .01$, ***$p < .001$.

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Table 4.2

Zero Order and Partial Correlations between Collective Future Dimensions and Plant-Based Policy Support

Future Frame	Dysfunction		Development	
	Zero order	Control for development	Zero order	Control for Dysfunction
Control	.16	.18	.04	.09
Plant-based	-.25*	-.24*	.10	.07
Vegetarian	-.47**	-.45***	.23*	.16
Vegan	-.05	-.05	.20*	.20*

Future Frame	Warmth		Competence		Morality	
	Zero order	Controlling for Comp & Moral	Zero order	Controlling for Warmth & Moral	Zero order	Controlling for Comp & Warmth
Control	.04	.12	-.02	-.03	-.03	-.11
Plant-based	.22*	.13	.21*	.09	.17	-.08
Vegetarian	.31**	.03	.32**	.19	.31**	.07
Vegan	.31**	.41***	.16	.05	.08	-.33**

Future Frame	Conservation		Self-Transcendence		Openness to Change		Self-Enhancement	
	Zero order	Controlling for other values	Zero order	Controlling for other values	Zero order	Controlling for other values	Zero order	Controlling for other values
Control	.10	.12	-.01	-.10	.07	.11	-.05	-.09
Plant-based	.25**	.21*	.12	-.14	.20*	.16	.12	-.06
Vegetarian	.30**	.21*	.08	.11	.18	.06	.08	-.08
Vegan	.13	.07	.20*	.05	.20*	.19	-.05	-.26**

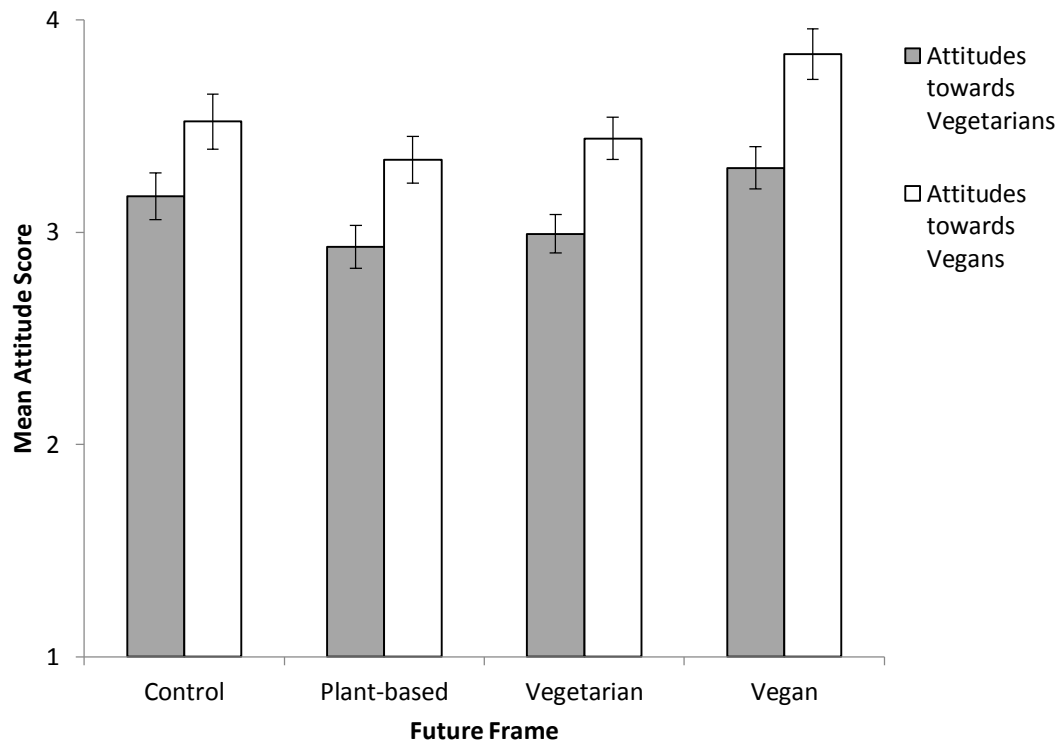*Note: *p < .05, **p < .01, ***p < .001.*

Figure 4.1. Attitudes towards vegetarians and vegans across the four future frames (a higher score indicates a less positive attitude, and error bars represent standard errors)

Perceived likelihood of the future scenario A one-way between-subjects ANOVA was conducted to compare the effect of future frame on the perceived likelihood of the future occurring. Levene's test indicated that the variances were unequal, $F(3,419)$ = 7.74, $p < .001$, therefore a Welch test with adjusted degrees of freedom was employed. This test indicated that there was a significant difference between the frames, $F(3,232.19)$ = 42.93, $p < .001$. Post-hoc Games-Howell tests indicated that participants perceived the control future frame ($M = 4.41$, $SD = 1.22$) as significantly more likely to occur than a plant-based future ($M = 3.05$, $SD = 1.66$), a vegan future ($M = 2.66$, $SD = 1.48$), and a vegetarian future ($M = 2.55$, $SD = 1.56$). There were no other significant differences between the plant-based, vegetarian, or vegan futures in terms of perceived likelihood to occur.

Multiple linear regressions

Multiple linear regressions were employed to test the hypothesis that increased warmth and morality in the future would be the strongest predictors of current support for plant-based policies. Prior to the multiple linear regression analyses, the dataset was split

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between the future frames so that a separate regression model would be obtained for each future frame. The predictors were the collective futures dimensions (Warmth, Competence, Morality, Conservation, Self-enhancement, Openness to change, Self-transcendence, Dysfunction, and Development; Bain et al. 2013), and the outcome variable was Policy Support (the average of the six items measuring support for policies that promote plant-based, vegetarian and vegan diets).

The data were examined for multicollinearity, independent errors, outliers, heteroscedasticity, and non-linearity. The data met the assumptions for heteroscedasticity, and non-linearity, and no outliers were identified. For the control and plant-based frames, the assumption of independent errors measured by the Durbin-Watson statistic was not met (as the statistic was < 1; Field, 2009). In each future frame, there was also evidence of potential collinearity between the Warmth and Morality scales, as these scales were highly correlated (> .8 in each future frame). Additionally, the average VIF in the plant-based and vegetarian future frames was slightly higher than desirable (> 5; Field, 2009).

The results from the multiple regression analyses differed across the four future frames. The collective futures dimensions did not explain a significant amount of the variance in policy attitudes in the control future frame, $R^2 = .10$, $F(9,87) = 1.02$, $p = .43$, and also did not explain a significant amount of the variance in policy attitudes in the plant-based future frame, $R^2 = .14$, $F(9,94) = 1.64$, $p = .12$. The multiple linear regression for the vegetarian future frame was significant, and the parameter estimates and model statistics for this future frame can be seen in Table 4.3. In the regression model for a vegetarian future, the only significant predictor was societal dysfunction. Therefore, when participants imagined a mostly-vegetarian future society, the strongest predictor of current support for plant-based policies was an expected decrease in societal dysfunction (or alternatively, a predicted increase in dysfunction was the strongest predictor of decreased support for plant-based policies).

Table 4.3

Predictors of Plant-Based Policy Support in the Vegetarian Future Frame

Future Frame	Predictor	B	$SE\ B$	β
Vegetarian	Constant	3.81	.13	
	Warmth	.04	.16	.06
	Competence	.15	.11	.15
	Morality	-.07	.16	-.09
	Conservation	.12	.07	.17
	Self-enhancement	.01	.11	.01
	Openness to change	.10	.08	.16
	Self-transcendence	-.10	.09	-.17
	Dysfunction	-.37	.09	-.46***
	Development	.04	.09	.04

*Note: *$*p < .05$, **$p < .01$, ***$p < .001$. Model statistics: $R^2 = .30$, $F(9,102) = 4.79$, $p < .001$

      The multiple linear regression analysis for the vegan future frame was also significant. Parameter estimates and model statistics can be seen in Table 4.4. For this future frame, the strongest predictor of current support for plant-based policies was an expectation of increased warmth in a vegan future society (or alternatively, an expectation of decreased warmth in a vegan future predicted decreased support for plant-based policies). Morality was also a significant predictor of support for plant-based policies, in the opposite direction to warmth. However, this result should be interpreted with caution, given the high correlation of the warmth and morality scales. It is likely that the significant result may be a spurious outcome due to multicollinearity (subsequent analyses omitting the morality scale resulted in a reduced amount of variance explained by the regression model, but the significance of the parameter estimates remained highly comparable to the model that included morality). An expectation of decreased self-enhancement in a vegan future was also a positive predictor of support for plant-based policies (though this was a weaker predictor than warmth, and it should also be acknowledged that this scale also exhibited low reliability).

Table 4.4

Predictors of Plant-Based Policy Support in the Vegan Future Frame

Future Frame	Predictor	*B*	*SE B*	β
Vegan	Constant	3.72	.13	
	Warmth	.44	.11	.67***
	Competence	.04	.10	.05
	Morality	-.34	.12	-.48**
	Conservation	.07	.08	.11
	Self-enhancement	-.18	.09	-.25*
	Openness to change	.03	.09	.06
	Self-transcendence	.00	.09	.00
	Dysfunction	.02	.06	.04
	Development	.12	.07	.18

*Note: *$p < .05$, **$p < .01$, ***$p < .001$. Model Statistics: $R^2 = .26$, $F(9, 96) = 3.66$, $p < .01$

Future frame as a moderator of the relationship between collective future dimensions and policy support

As indicated by the parameter estimates in Tables 4.3 and 4.4, there appeared to be dissimilarity between the vegetarian and vegan future frames in terms of which dimensions were the strongest predictors of plant-based policy support. It is therefore possible that the relationship between the collective future dimensions, and support for plant-based policies, was moderated by the dietary label used to describe the future. To examine whether the overall regression models differed significantly between the frames, the models were compared with Fischer's r-to-z transformation using an online calculator (Garbin, n. d.). There were no significant differences between the R^2 for the models, $z = .392$, $p > .05$; therefore, the combination of predictors predicted plant-based policy support equally well for the vegetarian and vegan future frames.

Comparisons of the parameter estimates between the vegetarian and vegan future frames were performed by running the regression as a structural equation model in AMOS

19, and then conducting a multi-group moderation using the critical ratios test of group differences in the Stats Tools Package (Gaskin, 2012). This test indicated that vegetarian and vegan future frames differed significantly on the dimensions of warmth and dysfunction (see Table 4.5). More specifically, the relationship between an expected decrease in dysfunction and support for plant-based policies was significant for a vegetarian future, but was not significant for a vegan future. Conversely, the relationship between an expected increase in warmth and support for plant-based policies was significant for a vegan future, but was not significant for a vegetarian future.

Table 4.5

Z-Scores for the Comparison of Parameter Estimates across Vegetarian and Vegan Future Frames

	Vegetarian Future		Vegan Future		
Predictor	Estimate	*p*-value	Estimate	*p*-value	z-score
Warmth	.04	.77	.43	.00	2.05**
Competence	.15	.15	.05	.62	-0.75
Moral	-.07	.65	-.36	.00	-1.47
Conservation	.12	.07	.07	.32	-0.49
Self-Enhancement	.01	.94	-.18	.03	-1.38
Openness to change	.10	.24	.03	.76	-0.60
Self-Transcendence	-.10	.25	-.00	.97	0.81
Dysfunction	-.37	.00	.01	.83	3.74***
Development	.04	.69	.11	.09	0.67

*Note: *$p < .05$, **$p < .01$, ***$p < .001$.

Discussion

The aim of Study 3b was to examine which collective future dimensions of plant-based, vegetarian, and vegan futures predict support for policies that might bring about those futures. I predicted that increased warmth in society would be the strongest predictor of support for plant-based policies in the plant-based, vegetarian, and vegan

future frames (but not the control frame). The collective futures dimensions predicted support for plant-based policies in two of the four future frames, and my hypothesis was only supported in the vegan future frame condition.

In the vegetarian future frame, the strongest predictor of policy support was an expected decrease in societal dysfunction. This suggests that the widespread adoption of vegetarianism may be viewed as potentially improving the dysfunctional aspects of current society. Drawing from Study 3a, it appears that vegetarianism was viewed as likely to reduce dysfunction primarily in terms of improving health and reducing environmental degradation. An alternative explanation for the current findings is that widespread vegetarianism may have been viewed by some participants as likely to increase societal dysfunction, and was therefore associated with reduced support for plant-based policies. Drawing from Study 3a, an expectation of increased societal dysfunction in a vegetarian future may have involved perceptions of threats to the economy, or increasing rates of malnutrition.

In the vegan future frame, the strongest predictor of current support for plant-based policies was an expectation of increased warmth in individuals in a vegan future society. Drawing on the responses in Study 3a, it could be argued the perception of increased warmth in a vegan future may be linked to the reported associations between veganism and caring for animal and nature (or alternatively, perceptions of decreased warmth in a vegan future may have been associated with decreased support for policies; for instance, if there was a perception that vegan futures would have moralising and judgemental individuals). Morality was also a significant predictor of support for plant-based policies in the vegan future frame. However, this relationship was in the opposite direction to warmth. Bain et al. (2013) have debated whether warmth and morality are separate dimensions, or whether they should be merged under the collective term of benevolence, as most previous studies have found that both warmth and morality tended to be highly correlated and positively associated with support for social change. Therefore, it appears likely the finding of an association between increased morality and decreased policy support in the current study was likely due to multicollinearity between the warmth and morality scales. Further research would be necessary to examine whether this finding can be replicated.

As predicted, the collective future dimensions were not associated with support for plant-based policies in the control frame. However, contrary to my hypothesis, the collective futures dimensions also did not predict policy support in the plant-based future frame. There are several possible explanations for the non-significant regression model in the plant-based future frame. Firstly, there may have been insufficient power to detect an effect in this condition, due to the small sample size and the large number of predictors in the model (Field, 2009). Green (cited in Field, 2009) suggests that the minimum sample size for a regression involving nine predictors should be between 113 and 122. However, the sample sizes in the current study ranged from 99 to 112. Bain et al. (2013) also mentioned in their discussion that the dimension of Social Dysfunction may require a larger sample size in order to detect an effect. It is possible that a significant result may have been identified in the plant-based future frame in a larger sample. Secondly, it is possible that the 'plant-based diet' label may simply not have connotations of wider effects on society, unlike the vegetarian and vegan labels. For example, the term 'plant-based' may be interpreted predominantly as an individual dietary behaviour, whereas the terms 'vegetarian' and 'vegan' tend to be associated with a particular set of values, beliefs and worldviews, that may be seen as more likely to impact society. The term 'plant-based diet' may also have an ambiguous meaning, implying a vegetarian diet to some individuals, and a diet containing small amounts of meat to others.

On average, participants viewed a plant-based, vegetarian, or vegan future NZ society as significantly less likely to occur in comparison to their perception of the future in general, reflecting many of the comments in Study 3a that described these futures as 'highly unlikely'. Additionally, my hypothesis that attitudes towards vegetarians and vegans would be more negative in plant-based, vegetarian, and vegan futures relative to a control condition was not supported. However, attitudes to veg*ans were significantly less positive in the vegan future frame than in the plant-based future frame. Across the four frames, attitudes towards vegans were again significantly less positive than attitudes towards vegetarians, providing additional support for the findings of Study 2a. An additional strength to the current findings is that they involve within-subjects comparisons rather than between-subjects comparisons.

Overall, the findings of the current study reinforce the findings of Bain et al. (2013), who identified that benevolence in the future was the strongest predictor of current support for social change (and who also identified reduced societal dysfunction as

a strong predictor in several studies). In future research, the results of the current study could be utilised to design an experimental manipulation examining whether framing plant-based futures in terms of reduced dysfunction or increased warmth can increase support for policies supporting plant-based diets.

Strengths, limitations and future directions

A major strength to Study 3 is the use of both qualitative and quantitative research methods. The use of mixed methods has become more prevalent in recent years, as the debate shifted from which is the best strategy, qualitative or quantitative, to a recognition of the strengths and weakness of both approaches and the usefulness of incorporating both in a research project (Creswell & Plano Clark, 2007; Teddlie & Tashakkori, 2009). In the current study, the qualitative analysis contributed illustrative examples that enhanced the findings of the quantitative analysis.

A potential limitation to the current study is that the items for the dependent variable were all worded in the same direction (a higher score indicating stronger agreement). This is problematic because of the potential for acquiescence response bias (Paulhus, 1991), and future research should develop a dependent measure that includes both pro-trait and con-trait items. Additionally, the outgroup attitude scales were consistently presented as attitudes towards vegetarians first, and attitudes towards vegans second. Future research should counterbalance the order of presentation of the outgroup attitude scales. Another limitation is that the self-enhancement collective future dimension scale exhibited low reliability. However, this result may have been due to the limited number of items in the scale, and it appeared that the mean inter-item correlation for the scale was of reasonable size.

Caution should be taken in generalizing the findings of the current study. Firstly, the study was based on a convenience sample consisting of first-year psychology students in New Zealand. This type of sample is often described as one of the "least representative populations" in the world (Henrich, Heine, & Norenzayan, 2010, p. 61). Perceptions of plant-based future societies are likely to vary considerably between different cultures. For example, there is evidence that moral motivations for vegetarianism vary significantly between cultures (Ruby, et al., 2013). It would therefore be useful to replicate this research in a more representative sample, and in non-Western populations.

The responses in Study 3a suggested that widespread changes to plant-based, vegetarian or vegan diets in Aotearoa New Zealand were viewed as highly unlikely, in part due to the current national emphasis on animal agriculture. Therefore, a potential limitation related to this question is the suggested time frame of 30 years for the widespread adoption of plant-based diets. Given that the overwhelming majority of NZ society currently consumes meat and animal products, and that the production of these products is considered a significant part of the economy, it is possible that this time frame would have been too short to be viewed as plausible. Future research may benefit from employing a longer time period.

It may also be more effective for future research to employ a context that is not so strongly associated with meat consumption. For example, perhaps a more local setting could be employed, such as a particular region of the country, or the students' university (e.g., "Imagine your university in 2050, where most of the students now consume plant-based diets"). Given the findings in Study 2 of an association between ideological attitudes and reduced positivity towards veg*ans, it also is possible that individual differences on dimensions such as RWA and SDO may mediate the relationships between collective futures dimensions and support for plant-based diets. As Bain et al. (2013) have also identified, this would be an informative area for future research.

Applications

Bain and colleagues' (2012) strategy of employing visions of a more benevolent future to promote pro-environmental behaviour may be a useful strategy for engaging support for policies that promote plant-based diets. While advocating the health and environmental benefits of plant-based diets is important, the responses in Study 3a suggested that many participants in the current study debated that plant-based diets were actually healthy or good for the environment, and many participants framed these outcomes as dilemmas. Perhaps, as Bain et al. (2012) recommended for climate change advocacy, it would be more useful to avoid the debates about the impacts of plant-based diets on health and the environment, and instead focus on the potential positive societal outcomes that could result from the widespread adoption of plant-based diets (such as increased warmth). In the current study, the strongest predictor of support for plant-based policies in a vegetarian future was decreased dysfunction. Vegetarian advocates may therefore benefit from focusing on how vegetarianism could help combat dysfunction in

society. In regards to veganism, the strongest predictor of support for plant-based policies in a vegan future was increased warmth. In advocating veganism, it may be useful to emphasise the potential relationships between caring for animals and the environment, and increased warmth and concern for other humans.

The finding that a *plant-based* future was not significantly related to any of the collective futures dimensions also has some interesting implications. The term 'plant-based diet' has been argued to be more acceptable to a wider range of individuals (Lea & Worsley, 2003). However, employing this label to describe a future society did not appear to evoke support for plant-based policies to the same extent as the 'vegetarian' and 'vegan' labels. If the 'plant-based' label does not inspire visions of a better future (or communicates ambiguous visions), then perhaps it is not as useful for advocacy as the other labels. Future research is necessary to examine whether the non-significant findings for the plant-based future frame can be replicated.

Given the perception of some participants in Study 3a that plant-based futures conflict with the dominant NZ culture, it is likely that advocating veg*an versions of familiar meals could be useful, such as those specified in the 'low openness to change' dimension of Wilson and Allen's (2007) figure locating preferences for different meals on Schwarz's two value dimensions.

Conclusion

In summary, Study 3a provided a rich illustration of the benefits and costs that participants imagined would arise in plant-based, vegetarian, and vegan futures, while Study 3b expanded these findings by providing evidence regarding which societal dimensions and future frames most strongly predict current support for plant-based policies. In a vegetarian future, an expectation of reduced dysfunction most strongly predicted support for plant-based policies; whereas in a vegan future, an expectation of increased warmth most strongly predicted support for policies. The findings of Study 3a and Study 3b in combination demonstrated that even individuals who are not currently vegetarian or vegan can perceive some positive outcomes to result from the widespread adoption of plant-based, vegetarian, or vegan diets. However, these studies also suggested that many individuals view plant-based futures as relatively unlikely to occur in the context of Aotearoa New Zealand. Future research may examine whether manipulating

the salience of the collective future dimensions of increased warmth and reduced dysfunction can function to increase support for social change towards plant-based diets.

Chapter Five

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Conclusions

I began this thesis with the broad (and rather ambitious) aim of understanding why there are so few vegetarians and vegans in the Western cultural context, and particularly in Aotearoa New Zealand. In my research, I applied current social psychological theories to the investigation of perceptions of dietary behaviours and identities. My specific research questions were: 1) how are vegetarian and vegan identities constructed and negotiated in everyday online discussions? 2) what explains individual differences in attitudes towards vegetarians and vegans? 3) how do individuals in Western cultures perceive plant-based futures? and 4) what role might visions of the future play in motivating support for social change towards plant-based diets? I adopted both social constructionist and realist paradigms in the studies in my research programme, and also incorporated a variety of methods including a social constructionist thematic analysis, a quantitative investigation of intergroup attitudes and ideological motivations, a realist thematic analysis, and a quantitative investigation of the relationships between collective futures and support for social change (including an experimental manipulation of future frames). In the following section, I will review the main themes that emerged from my three research studies, and will discuss potential implications of this research for the advocacy of plant-based diets.

Constructing 'vegetarian', 'vegan', and 'omnivore' identities

In my analysis of online discourses about vegetarians and vegans, I interpreted four main themes from the data: a focus on liberal individualist discourses, an emphasis on rationality over emotions, debates about health and the 'natural' diet, and debates about the human-animal relationship. These discourses were often presented as ideological dilemmas, including personal choice versus social responsibility, rationality versus emotion, hypocrisy versus extremism, and humans as similar to or distinct from animals (Billig, et al., 1988; Marcu, et al., 2007; Wilson, et al., 2004). It appeared that similar discursive strategies were able to be employed to defend veg*anism _or_ meat consumption, such as appealing to scientific evidence or accusing others of intolerance or hypocrisy. Two dominant constructions of veg*ans were apparent in the dataset: 'personal choice' veg*ans, who were constructed in positive terms, and 'militant' or 'extreme'

veg*ans, who were constructed negatively (Edley & Wetherell, 2001). Additionally, some non-veg*an participants adopted an opposing identity of 'meat-eater', 'omnivore', or 'carnivore' when expressing their arguments. In defending against potential criticisms of intolerance or extremism, veg*ans employed strategies such as denying moral motivations for veg*anism, and emphasising personal choice (especially prior to expressing pro-veg*an arguments). In general, given the dominant ideology of liberal pluralism, it appeared difficult to present oneself positively as an advocate of vegetarianism or veganism in online contexts, without being vulnerable to dismissal as 'extremist'.

Past research on attitudes towards individuals based on their dietary behaviour has tended to limit the target groups to vegetarians and omnivores (Chin, et al., 2002; Minson & Monin, 2012; Ruby & Heine, 2011; Sadalla & Burroughs, 1981). However, my research suggests that 'vegetarian' and 'vegan' targets are viewed differently, and vegans are viewed less positively than vegetarians. This observation was evident in each of my three studies. For example, in the online discourses included in Study 1 there were several instances of vegans being contrasted with vegetarians in more negative terms (for an example, see Extract 2.11). In Study 2, there was evidence that vegans were viewed significantly less positively than vegetarians, based on a between-subjects comparison. In Study 3, within-subjects comparisons again indicated that vegans were viewed significantly less positively than vegetarians.

In my research, both attitudes towards vegetarians and attitudes towards vegans appeared to be unidimensional constructs (i.e., involving an evaluation of 'good' and 'bad'). Although attitudes towards both vegetarians and vegans were generally *positive*, my research also suggested that psychological theories of ideology and prejudice could be applied to vegetarians and vegans as social groups. These findings are of interest to social psychologists, as most research on intergroup attitudes has focused on the categories of gender, ethnicity, religion or sexual orientation (Crandall & Warner, 2005). In my discussion of Study 2, I proposed that future research could also explore the motivational basis of 'veg*an' attitudes towards 'omnivores'.

Maintaining the cultural status quo

A dominant theme in my research was the role of social and ideological factors in maintaining the status quo of animal-based diets in Western cultures. In Study 1, although

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I emphasised the flexible and argumentative nature of discourses about veg*anism and meat consumption (Billig, 1996; Potter, 1996), I also argued that there appeared to be a predominance of liberal individualist discourses focusing on the importance of personal choice over collective responsibility, and an emphasis on diets containing 'humane' meat as the most 'natural', 'balanced' and 'reasonable' option (see also Wilson, et al., 2004). These discourses functioned to constrain discussions about veg*anism to individual behaviours, and allowed for the construction of veg*an advocacy as an illegitimate intrusion into the private sphere of consumption.

Adopting a realist approach, in Study 2 I drew on theories regarding the role of individual dispositions in the maintenance of the status quo and social hierarchies, in order to examine the psychological foundations of attitudes towards vegetarians and vegans (Altemeyer, 1998; Duckitt, 2001; Pratto, et al., 1994). One of the findings was that attitudes towards both vegetarians and vegans were predicted by the dimension of the dual-process model representing the ideological motivation to maintain the status quo and social cohesion (the pathway linking a dangerous worldview, Right-Wing Authoritarianism, and attitudes towards deviant outgroups; Duckitt, 2001; Duckitt, et al., 2002). I argued that the association between this ideological motivation and attitudes towards veg*ans was most likely due to a perception that veg*ans represent a challenge to dominant cultural traditions, especially in the context of Aotearoa New Zealand.

The perception that veg*anism challenges the status quo was also a feature of participants' responses in Study 3a. In this study, I conducted a thematic analysis of responses to an open-ended item asking students to imagine a plant-based, vegetarian or vegan future NZ society in 2050. I identified three dominant societal-level themes (changes to health, the environment, and the economy), and two individual-level themes (individuals as more caring, peaceful and communal, and individuals as more moral, judgemental, and miserable). Some participants predicted that there would be no change to society, and many others imagined positive societal outcomes in plant-based futures. However, a large proportion of participants described the widespread adoption of plant-based diets in Aotearoa New Zealand as likely to result in negative outcomes. In these responses, the widespread adoption of plant-based diets was predicted to result in economic decline (due to the loss of animal-related industries), environmental degradation (as a result of an increase in animal populations), and a malnourished population (due to the perceived inadequacy of plant-based diets). These discourses suggested that for some

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individuals, widespread veg*anism was viewed as contrary to the interests of Aotearoa New Zealand as a nation.

Maintaining human dominance over nonhuman animals

Another dominant theme in my research was the concept of a hierarchical relationship of human dominance over animals. I argued that perceptions of veg*ans were often related to debates about 'human nature' and the human-animal relationship. For example, in Study 1, discourses about vegetarians and vegans often involved constructions of the human-animal divide, and many examples of justifications for meat consumption included hierarchical themes, such as 'humans are at the top of the food chain' (see Extract 2.22). Human superiority justifications for meat consumption have also been identified in previous research (Rothgerber, 2013). In Study 2, I identified that attitudes towards both vegetarians and vegans were predicted by a second dimension of the dual-process model representing a motivation to maintain social inequality (linking a competitive-jungle worldview, Social Dominance Orientation, and attitudes towards low-status or dissident outgroups; Duckitt, 2001; Duckitt, et al., 2002). I suggested that the significant associations in this pathway of the dual-process model were most likely due to veg*ans representing the rejection of human dominance over other animals as a low-status group. I also identified that Social Dominance Orientation was a significant partial mediator of the gender difference in attitudes towards vegetarians and vegans, wherein men tended to be less positive towards these groups than women.

Recent research has identified a relationship between Social Dominance Orientation and environmental attitudes, in which individuals expressing higher Social Dominance Orientation have been shown to be more supportive of environmental exploitation (Milfont, Richter, Sibley, Wilson, & Fischer, 2013). Milfont et al. (2013) note that, in contrast to most social relationships analysed by Social Dominance theorists, the human-nature relationship exists exclusively in one direction, as the natural environment cannot engage in collective resistance to domination. In a similar way, nonhuman animals are not able to engage in collective resistance to exploitative relationships (though they frequently express individual resistance). From the perspective of Social Dominance Theory, regarding these the one-sided relationships of human dominance over animals and nature, it could be hypothesised that advocacy groups such as environmentalists, vegans and animal rights activists (among others), represent a

source of hierarchy-attenuating legitimizing myths that oppose these exploitative relationships (Milfont, et al., 2013; Pratto, et al., 1994). An area for future research could be to explore whether members of these advocacy groups include nonhuman animals and/or nature as part of their ingroup (perhaps facilitating the development of ideological motivations to resist dominance and exploitation).

Though somewhat outside the scope of this thesis, it would be informative to investigate the role of beliefs in a human-animal divide in the development of a competitive-jungle worldview. In recent years, psychological researchers have started to develop links between prejudice towards human groups, dehumanization, and perceptions of a human-animal divide (Dhont, et al., 2014). For example, there is evidence that emphasising that animals are similar to humans can actually reduce negative perceptions of human groups, such as immigrants (Costello & Hodson, 2010). This has led some researchers to develop an "interspecies model of prejudice" (Costello & Hodson, 2012, p. 3). Philosophers have also problematized the 'animal' category in humanist ethics, arguing that emphasising a human-animal divide allows for the potential demotion of human groups to the status of animals, and thus contributes to violence in society (Deckha, 2012; Wolfe, 2003). In the dual-process model, if a competitive-jungle worldview is conceptually prior to the development of Social Dominance Orientation (Duckitt, 2001; Duckitt, et al., 2002), then perhaps emphasising animals as similar to humans could function to counter the development of a competitive-jungle worldview, and subsequently Social Dominance Orientation.

Promoting support for social change

Study 2 suggests that perceptions of vegetarianism and veganism in Western cultures may be partly explained by ideological motivations. The evidence of the role of individual differences in shaping perceptions of veg*ans implies that it is important to tailor veg*an advocacy strategies to specific target audiences. In their investigation of perceptions of the future of meat consumption, Vinnari and Tapio (2009) also highlighted the importance of tailoring advocacy strategies to particular consumer groups. Additionally, the variation in my findings between the labels of 'plant-based',' vegetarian', and 'vegan', could imply that the decision of which *label* to employ in advocacy may also need to be varied depending on the target audience.

The finding of an association between a motivation to maintain social stability, and less positive attitudes towards veg*ans, raises the question of how to advocate plant-based diets to individuals who are motivated to maintain the status quo. Recent cross-cultural research indicates that vegetarianism as *behaviour* can potentially arise from quite divergent motivations. For example, Ruby et al. (2013) identified that vegetarianism in India tends to be associated with conservative values such as purity and ingroup loyalty, in contrast to vegetarianism in North America, which was more commonly associated with liberal values of care and fairness. In regards to environmental advocacy, Feygina et al. (2010) have proposed that framing environmental behaviour as consistent with dominant traditions and the status quo could be a useful strategy for engaging support for social change in individuals with high system-justification beliefs. Therefore, potential strategies for advocating plant-based diets to individuals motivated to maintain the status quo could include arguing that plant-based diets are consistent with cultural traditions, or perhaps advocating purity-based reasons for veg*anism (similar to those identified in the study by Ruby et al., 2013).

In the context of Aotearoa New Zealand, given the economic and cultural investment in animal agriculture, it appears that it might be difficult to persuade the government to endorse plant-based diets (in order to produce a form of "system-sanctioned change", Feygina, et al., 2010, p. 335), or to convincingly argue that adopting plant-based diets demonstrates 'patriotism'. However, in interviews with veg*ans, Potts and White (2008) identified some potential consistencies between veg*anism and the dominant NZ identity. Drawing from their research, perhaps plant-based diets could be framed as consistent with the dominant NZ identity, due to the historical emphasis on environmental conservation, animal welfare, and valuing independent autonomous thinking (in terms of resisting the influences of more powerful nations).

In Study 3, I investigated the relationships between visions of vegetarian, vegan, or plant-based futures; collective futures dimensions; and support for policies promoting plant-based diets (drawing on the work by Bain, et al., 2013). In the context of Aotearoa New Zealand, I argued that the widespread adoption of plant-based diets appeared to be interpreted by some individuals as threatening the collective continuity of local and international representations of the 'New Zealand' national identity (i.e., associated with the production of meat and dairy; Potts & White, 2008). However, multiple regression analyses indicated that even individuals who do not personally identify as vegetarian or

vegan can still perceive positive societal consequences resulting from widespread adoption of plant-based diets. The specific positive consequences appear to differ as a function of the dietary label used to describe the future. For a vegetarian future, the strongest predictor of support for social change was the belief that widespread vegetarianism will reduce dysfunction in society. For a vegan future, the strongest predictor of support for social change was the belief that widespread veganism will increase individual traits of warmth in society. This study therefore provided some potential strategies for engaging support for plant-based diets. I suggested that future research could experimentally manipulate the salience of different future dimensions in the context of plant-based futures, in order to further establish whether these dimensions can directly motivate support for social change.

Bain et al. (2013) suggest that although collective futures dimensions research could be useful for to developing effective rhetorical strategies for advocacy, policy makers could also think about how the policies they wish to promote could actually *contribute* to a more warm and benevolent future. Likewise, perhaps veg*an organisations could think about how the widespread adoption of veg*anism could create a warmer and less dysfunctional society. Individualistic discourses on 'ethical consumption', personal choice, and individual responsibility could be expanded in order to make greater connections between veg*anism, caring for other people, and wider challenges to social injustice in the capitalist industrial food system. Some organisations have already begun to do this, such as the Food Empowerment Project (Food Empowerment Project, n.d.), which promotes awareness of issues of food access, environmental racism, and workers' rights, in addition to promoting veganism.

Lifestyle-based social movements

Throughout this thesis I have argued that veg*anism should be considered a social movement of interest to social psychologists researching the processes of social stability and social change. However, there are some important differences between veg*anism and other social movements (such as feminism or environmentalism) that should be mentioned. Firstly, I want to be careful not to over-emphasise the role of social and ideological influences on food choices. It is important to acknowledge that factors such as habit, income and availability influence consumption behaviours, and eating is also a deeply personal and embodied practice tied to personal as well as social identities

(Lupton, 1996). Secondly, identifying as 'veg*an' is currently based on material consumption, meaning that there are physical limitations to differing individuals' ability to be 'veg*an' (in contrast to adopting a social movement identity that is not based on consumption). I would suggest that currently the veg*an social movement could be viewed as similar to green consumerism (e.g., Moisander, 2001).

The current research suggests that social psychological theories examining identity processes and intergroup phenomena can be extended to consumer-based identities that attempt to politicise consumption and advocate consumer resistance to dominant ideologies (Cherrier, 2009). Cherrier (2009) suggests that two types of identities are involved in anti-consumerism: 'hero' identities (based on an ethical stance), and 'project' identities (based on self-expression). For project identities, "consumer resistance does not emerge from promoting an objective truth on environmental degradation or social inequalities but from promoting discursive fields in everyday life as a source for self-reflection and self-expression" (Cherrier, 2009, p. 189). The Vegan Society currently defines veganism as a lifestyle attempting to exclude products of animal exploitation and cruelty (The Vegan Society, n.d.). It would be interesting to examine how the veg*an movement might adapt to the development of postmodern societies, in which it is not expected that it is possible to discover ethical 'truths' (Cherrier, 2007). As the veg*an movement develops, project identities may be one way to avoid accusations of attempting to know a universal 'truth' about human-animal relations (this notion could be linked to the discourses in Study 1 emphasising 'personal choice' as the basis for veg*anism).

Linking the Three Approaches: Ideology and Power

A concept that I have alluded to throughout this thesis, but have not yet explicitly discussed, is the role of power and ideology in the context of veg*anism as a social movement. Different psychological approaches have different perspectives on power and ideology. For example, Foucauldian discourse analysts examine power in discourse, while other researchers conceptualise power and ideology in terms of elite forces dictating the cognitive structures of subordinate groups (Augoustinos, Walker, & Donaghue, 2012; Jost, et. al., 2008). Van Dijk (1998) argues that ideology should be investigated from a variety of perspectives, including society, cognition and discourse. Van Dijk proposes that ideology is both located in individual cognitive structures, and is constructed and transformed through social interaction and discourse. I would suggest that van Dijk's

perspective appears most closely related to the approach I have taken in the current thesis, in which I have examined everyday discourses, ideological motivations, and visions of changes to society.

Study 1 had a different conceptualization of 'ideology' to the second and third studies. In Study 1, it was argued that ideology is based in the ideological dilemmas of common sense, and therefore the focus of research should be on the dilemmatic features of everyday discourses (Billig, et al., 1988). Although this study emphasised the human agency involved in the argumentative and flexible deployment of common sense notions, it also highlighted the potential for ideological critique by examining the constraints on what is considered 'common sense' and 'natural', in regards to meat consumption and veg*anism (Billig, 1991). Study 2 involved a more mainstream approach to ideology. Social Dominance theorists conceptualise ideology as different kinds of legitimizing myths that support or challenge social hierarchies; unlike in Marxism there is no 'truth' to be uncovered by escaping ideology, instead there are "hierarchy-enhancing" and "hierarchy-attenuating" legitimizing myths (Sidanius & Pratto, 2004, p. 324). Therefore, in Study 2, ideology was conceptualised as a system of social beliefs or legitimizing myths that function to maintain the status quo of meat consumption, but that also form the basis of the ideological resistance of veg*anism (Duckitt, 2001; Pratto, et al., 1994).

In Study 3, I moved away from the focus on the role of ideology in maintaining the status quo to examine the role of utopian visions in motivating social change; in particular, the relationship between visions of plant-based futures and support for social change. Ricoeur (1986) argues that ideology serves the function of maintaining social stability, while utopias function as a critique of the status quo, and promote social change. It has been suggested that environmental issues such as climate change have recently become ideologically biased, and therefore researchers have begun to explore potential alternatives for framing the advocacy of pro-environmental behaviours (Bain, et al., 2012). My results in Study 2 suggest that ideological motivations also play a role in perceptions of veg*ans. Therefore, similar to the suggestions of Bain et al. (2012), emphasising visions of positive societal outcomes in plant-based futures may be a potential way to sidestep the ideological connotations of veg*anism, in order to inspire support for social change in individuals who are not convinced that eating meat is unhealthy or morally wrong (Maurer, 1995).

Strengths, Limitations and Future Directions

A major strength of the current research is the use of mixed methods, and the opportunity to triangulate the themes of the different research findings (Creswell, 2014). My research design included an exploratory sequential mixed methods design for Study 1 and Study 2, where the explorative social constructionist thematic analysis in Study 1 was drawn upon to develop the realist quantitative survey in Study 2 (Creswell, 2014). I also employed a convergent parallel mixed methods design in Study 3, where the realist qualitative and quantitative analyses of Study 3a and Study 3b were conducted at roughly the same time, and the findings of both studies were used to inform the discussion (Creswell, 2014).

Each of my three studies had a number of limitations, which were mentioned in the discussion sections of each chapter. I will briefly cover the main limitations. Firstly, discursive approaches tend to be very rich and in-depth, and therefore it is potentially difficult to do justice to the data, especially when analysing a dataset as large as the set that I included in Study 1. In retrospect, I feel that the use of greater specificity in my approach to collecting data for Study 1 may have provided a more nuanced and coherent analysis, rather than attempting to mix an examination of very broad themes with a discussion of the use of discursive strategies.

Secondly, Study 2 was limited by the lack of a measure of attitudes towards the majority group, and by the use of cross-sectional correlational data. Although the dual-process model is argued to involve causal links between variables, it was not possible to examine this hypothesis with the current dataset. Future research employing longitudinal data would be a useful extension of Study 2 (e.g., Sibley et al., 2007b).

Thirdly, a major limitation of Study 3 was the use of a convenience sample of first-year psychology students in Aotearoa New Zealand (for a more in-depth analysis, see the discussion section of Chapter Four). A useful area for future research would be to employ a more representative sample from Aotearoa New Zealand, and also to extend the current research to non-Western populations (as previously recommended by Ruby, 2012; see also Ruby et al., 2013). In Aotearoa New Zealand, the economic forces of animal agricultural industries may have the ability to shape discourses regarding meat consumption and veg*anism (Nestle, 2002). Therefore, it would be particularly informative to replicate Study 2 and Study 3 in nations without such an historical and

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economic emphasis on animal agriculture, in order to make comparisons with the current research.

Personal Reflection

While conducting and presenting research from my thesis, I have at times felt anxiety about presenting myself as an objective academic, while also approaching this area of research as an advocate of plant-based diets (Shapiro & DeMello, 2010). However, as Subašić, Reynolds, Reicher, and Klandermans (2012) have argued in regards to potential accusations of bias directed at academic researchers of social change: "we are always inescapably political …the issue isn't whether we are political or not, but whether we want to make our politics explicit" (p. 65). I have presented this thesis as explicitly advocacy oriented, and throughout my research process I attempted to be mindful of how my perspective might influence my research decisions. I also made use of opportunities to discuss the philosophical assumptions underlying different approaches to psychological research with my supervisor. As a result, I have developed a more critical perspective on my own assumptions as a researcher.

On reflection, I realised that at several points in my research I made decisions based on the assumption that negative 'attitudes' towards vegetarians and vegans were problematic, and likely to have a negative impact on veg*an advocacy. For example, the theoretical approach for my second study drew on the literature regarding the ideological basis of prejudice, and therefore may have implied that advocates for social change need to focus on reducing disharmonious relations in the area of dietary identities. However, more recently, researchers have criticised the heavy emphasis on prejudice reduction in prejudice research, and have argued for greater consideration of its role in the complex relations between intergroup processes and social change (Dixon, Durrheim, Kerr, & Thomae, 2013; Dixon, et al., 2012). For example, Wright and Baray (2012) suggests that promoting prejudice reduction may be more beneficial for the *dominant* group than the subordinate group, and may in fact decrease subordinate group members' motivations to engage in collective action to challenge social injustice.

In relation to my research, it is not clear whether promoting more positive views of vegetarians and vegans should necessarily be the focus of a movement that aims to challenge the dominant status of meat consumption and the exploitation of animals. In a

review of minority influence in organisations, Nemeth and Goncalo (2010) emphasised the importance of dissenters, and also noted that "minorities did not have the luxury of both 'winning friends' and influencing people" (p. 19). In meat-centred Western cultures, it appears likely that individuals questioning the appropriateness of eating other animals would engender negative responses, and therefore promoting 'peace and harmony' may not be appropriate in this context. On the other hand, it also does not appear useful to emphasise strong boundaries between 'us' and 'them' in terms of 'vegans' and 'omnivores', when attempting to recruit individuals to a social movement[12]. In future research, I would aim to incorporate more insights from social identity theory (Tajfel & Turner, 1979) and self-categorisation theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), as these would likely be valuable approaches to understanding the processes of social identity formation and social change in this area (see also Simon, Loewy & Stürmer, 1998; van Zomeren, Postmes, & Spears, 2008).

I have also questioned the assumptions underlying my decisions to limit my sample to 'non-vegetarians' in Study 2 and Study 3. Aotearoa New Zealand is a legally bicultural society with a number of different cultural groups in addition to Māori and Pākehā (Hayward, 2012, July 13). It is likely that different cultures would have a variety of perspectives on the topics of meat consumption, veg*anism, plant-based diets and the human-nonhuman relationship. Therefore, there may be an issue with assuming that a sample of 'meat eaters' obtained within Aotearoa New Zealand would have an homogenous perspective on veg*anism. Potts and White (2008) note that their investigation into the experiences of vegetarians in Aotearoa New Zealand did not include any self-identified Māori participants (due to the primarily Pākehā orientation of the vegetarian organisations included in the study). Therefore, an addition to the literature may be to explore Māori perspectives on plant-based diets and mainstream veg*an organisations, and the experiences of Māori vegetarians and vegans in Aotearoa New

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[12] Simonsen (2012) has raised issues with the moral vegetarianism approach, in that it may result in the creation of a 'good' vegetarian subject position that is reliant on the rejection of the 'bad' subject position of 'meat-eater'. As an alternative, Simonsen proposes that what it means to be 'vegan' could function in a similar way to the concept of 'queer'; rather than being based on enforcing strict boundaries or attempting to normalize veganism, veganism could be based on the rejection of the legitimacy of such boundaries and dualisms. Hall (2013) has also argued that queer vegetarians highlight the instability of boundaries and identity categories, and suggests queer vegetarianism therefore has the potential to disrupt social norms regarding the human-nonhuman divide. Although I am still new to these concepts, a queer vegan approach speaks to me on a personal level, as it connects my veganism with my experiences of trying to figure out my identity as non-heterosexual (and how this interacts with my forms of privilege such as being white, able-bodied, and cisgender). Discourses around queer veg*anism could be an interesting area for future research.

Zealand. As Simonsen (2012) and Bailey (2007) point out, organizational attempts to 'normalize' veganism in the United States have tended to construct a particular conception of the 'typical' veg*an (who, according to some veg*an advocacy groups, would be white, thin, and middle class; Simonsen, 2012). Future research might investigate the discourses of veg*an advocacy in Aotearoa New Zealand.

A future area for research could also involve investigating how identifying as a vegetarian or vegan is experienced by individuals with intersecting social identities within a particular societal context. For example, as discussed in Chapter One, while vegetarian men may experience being viewed as less masculine (Rozin, et al., 2012; Ruby & Heine, 2011), Merriman (2010) also suggests that female vegetarians may experience more negative reactions due to sexist assumptions about their ability to make autonomous decisions. Reactions towards vegan sexuals also appear to incorporate a mix of factors, such as reactions to dietary deviance, sexual deviance, and the maintenance of heteronormative masculinity (Potts & Parry, 2010). Therefore, some research that I would like to have added to my current thesis includes examining the discourses of mainstream veg*an advocacy in Aotearoa New Zealand, investigating different cultural perspectives on veg*anism, and researching how veg*anism might intersect with other social justice movements and social identities.

Conclusion

In the current thesis I have investigated the role of discourse and argumentation in constructing vegetarian and vegan identities online, the ideological bases of attitudes towards vegetarians and vegans, perceptions of potential plant-based futures, and the relationship between collective futures dimensions and support for social change towards plant-based diets. Each of my studies contribute to the literature on the psychology of meat consumption and vegetarianism, as well as providing previously untested applications of the theoretical areas of ideological dilemmas of common sense (Billig, et al., 1988), ideological motivations and intergroup attitudes (Duckitt, et al., 2002), and collective futures dimensions (Bain, et al., 2013). This research has also highlighted potential applications for the advocacy of plant-based diets. As previously suggested by Rozin (2006) and Ruby (2012), I would argue that seemingly 'everyday' areas of life, such as meat consumption, vegetarianism and veganism, can be rich and stimulating areas for psychological research.

Afterword

As I conclude this thesis, I would like to briefly mention a recent article published in *Current Directions in Psychological Science* titled, "The Psychology of Eating Animals" (Loughnan, Bastian, & Haslam, 2014). This article, along with a growing amount of additional recent research, seems to suggest that the previously 'unmarked pole' of consuming animals (Wilson et al. 2004) may be becoming marked as a topic of interest for researchers in mainstream psychology (see also Bratanova, Loughnan, & Bastian, 2011; Dhont & Hodson, 2014; Dhont, et al., 2014; Rothgerber, in press; Ruby, 2012; Wilson & Allen, 2007). Many of these recent articles include some form of comparison between 'vegetarians' and 'omnivores'. Therefore, now may be an opportune time to further explore the social meanings of these categorizations, and to conduct further research on social identity and intergroup processes in this area. It may also be useful to examine how the increased attention to the psychology of meat consumption might function to change perceptions of veg*anism and meat consumption in Western cultures, and how veg*an advocacy organisations might respond to and interact with this research.

Appendix A

Websites included in Study 1:

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Speak your mind and win an iPad
(Retrieved from http://www.stuff.co.nz/sunday-star-times/latest-edition/5602566/Speak-your-mind-and-win-an-iPad)

Adam Dudding. Last updated 05:00 11/09/2011

How do eat your jelly-babies? And, what does that say about you?

When you eat a jelly-baby, what do you do first – bite off the head, bite off the legs, or shove the whole thing in your mouth?

According to Victoria University psychology professor Marc Wilson, the answer may be more revealing than you think. The question – along with a few dozen far more sensible ones – is contained in an ambitious nationwide politics and psychology survey, Brainscan, that Wilson is conducting in conjunction with the *Sunday Star-Times*. And to make sure lots of people take part, we're giving away an Apple iPad 2 to one lucky participant.

The jelly-baby question is slightly silly, says Wilson, but it turns out that if you ask it of enough people, patterns emerge.

He's asked hundreds, and Act Party supporters have been shown to be disproportionately likely to say they'll bite the legs off first, perhaps, as one respondent told him, because "it stops the jelly-baby from running away''.

To kickstart the survey, Prime Minister John Key answered a selection of survey questions. Now we're inviting all New Zealanders to take part. The survey probes the links between Kiwis' psychology and political attitudes.

Do National voters like to eat more meat than Labour voters? Is there a correlation between paranoia and the party you prefer? Why do women support Act less than men? And, given the rugby fever sweeping the nation, there are some questions about religious faith. John Key's answers indicated he was more agreeable, emotionally stable and extroverted than average, but his conscientiousness is pretty ordinary, sitting a fraction above the population average.

And his jelly-baby habits? He'd eat the head first.

"You can't take a man out by his legs. "If you're going for the doctor you go for the head.''

Wilson says Key's head-biting aligns him with the majority of two-bite jelly-baby eaters, and that the follow-up answer is revealing. Well, maybe.

"You could, at a stretch, argue this is consistent with his agreeableness scores because the thing about taking someone out by the head is you're not prolonging the agony.''

Take part in the BRAINSCAN survey, and enter the iPad draw, at www.surveymonkey.com/sst1

Appendix C

Words used for Future Dimensions Items (provided by P. Bain, personal correspondence, 11 June, 2013)

Traits	Values	Society
Warmth	Conservation	Dysfunction
Caring	Respect for tradition (preservation of time-honoured	Homelessness
Unfriendly (R)	customs)	Global warming
Unsympathetic (R)	Self-discipline (self-restraint, resistance to temptation)	Poverty
Warm	Family security (safety for loved ones)	Gender inequality
Insensitive (R)		Suicide
Considerate	Self-enhancement	Depression
	Wealth (material possessions, money)	Disease
Competence	Ambitious (hardworking, aspiring)	
Lazy (R)	Pleasure (gratification of desires)	Development
Independent		Major scientific discoveries
Unskilled (R)	Openness to change	Technological innovation
Capable	Enjoying life (enjoying food, sex, leisure, etc.)	Economic development
Assertive	An exciting life (stimulating experiences)	Volunteering
Disorganized (R)	Freedom (freedom of action and thought)	Community groups
		Healthcare standards
Morality	Self-transcendence	Financial wealth
Honest	Equality(equal opportunity for all)	Science education
Immoral (R)	Honesty (genuine, sincere)	
Sincere	Social justice (correcting injustice, care for the weak)	
Deceitful (R)		
Trustworthy		
Unfaithful (R)		

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