

# **Cognitive dissonance in meat-eaters and the efficacy of vegan advocacy**

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by

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Date: 28 November 2017

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Dissertation submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Business and Socioeconomic Sciences in the Department of Public Governance and Sustainable Development in the Post-Graduate School of MODUL University Vienna.

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# ABSTRACT

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Date



## ABSTRACT

The efforts by vegan advocates to reduce demand for animal products through the use of moral suasion in personal advocacy contexts have yielded only moderate results over the past two decades. The theory of Carnism (Joy 2010) explains how individuals are conditioned to circumvent the consideration of animal rights with respect to their food through processes of categorization and dissociation. Animal-based vegan advocacy seeks to expose the connection between the meal and the being from which it came; perhaps revealing to individuals their own *meat paradox* (Loughnan et al. 2012) and compelling them to seek some resolution to this dilemma. Extant literature has concluded that cognitive dissonance is likely to arise in such situations (e.g. Bastian et al. 2012): typically triggering the use of justifications and other defensive strategies as opposed to deliberate consideration of the animal rights message (Rothgerber 2014). As yet unknown with respect to meat-eaters – and across many broader contexts – is which specific cognitive dissonance model best explains the process of dissonance arousal. This question is of importance theoretically, but also to practitioners in diverse fields who have an interest in the nature of dissonance resolution in their students, patients, etc.: vegan advocates inclusive.

The study sought to address this question in a unified experimental setting using interventions derived from the competing models to differentiate between them. Given the problem implied by the meat paradox of using discrete scales to capture holistic participant attitudes towards the use of animals for food, Q-methodology was used to derive the dependent variable: a measure of participant attitudinal proximity to a viewpoint largely shared by vegan advocates. The control group was only minimally aligned with the vegan advocate viewpoint (Group A correlation = .202), but revealed three important shared perspectives on the topic: the dominant view sees veganism as a viable alternative and is aligned with many basic tenets of ethical veganism, but nevertheless adopts an ego-/anthropo-centric position in relegating concerns regarding animals subordinate to personal-/human-liberty; the second is characterised by the role of religion in shaping quite pro-animal beliefs on a basis other than perception of human-animal similarity; while the third and much less endorsed perspective is one which easily justifies meat consumption on the basis of a perceived physiological necessity.

Mere exposure of the student participants to a comprehensive (40 minute) vegan advocacy video was shown to increase the importance of certain pro-animal cognitions, but the increased alignment with the vegan advocate perspective ( $B = .299$ ) was not significant. Similar results were obtained when the video stimulus was preceded by self-affirmation ( $D = .398$ ) or self-standards manipulations ( $E = .339$ ); these findings speak against the applicability of the self-affirmation and self-consistency, and self-standards models, respectively. The new look model is similarly rejected due to the pro-animal nature of the dissonance resolving attitude change. On the other hand, preceding the video stimulus with a simple induced compliance manipulation

was shown to significantly augment the pro-animal attitude change ( $C = .464$ ). This finding is consistent with the predictions made by Festinger's (1957) conventional dissonance model, as well as the complementary action-based model (Harmon-Jones et al. 2009). The consequence is that practitioners may not be able to influence the degree of dissonance aroused in their subjects, but they may be able to harness its motivational power and steer the direction of its resolution by increasing the salience of cognitions consistent with their position: whereby behavioural cognitions exert an over-proportional influence on the outcome.

Across all treatment groups, the consumption of animal products was shown to be positively correlated with anti-animal moral judgements and a range of other psychographic measures. The single emergent factor ( $R^2 = .50$ ) from these scales reveals a latent construct relating to the acceptance of hierarchical power structures. This finds expression in terms of conservative socio-political views, greater tolerance for discrimination among human populations, and an anthropocentric perspective which finds the systematic subjugation of animals to be ethical. Such attributes are consistent with the *carnist domination* dimension of the carnist worldview (Monteiro et al. 2017). As ethical judgements towards animals are also correlated with consumption levels, these findings support the thesis that carnism is just as ideational as veganism.



## ACKNOWLEDGEMENTS

This work represents the culmination of a long journey which began with the consideration of a number of wildly disparate thematic topics and methodological approaches, and I am grateful for the continuous support of the MODUL University Vienna community during this extended exploratory phase. I would like in particular to thank Prof. Harvey Goldstein, then Dean of the MU PhD program, who granted me the time and latitude to unearth a research direction which evoked my passion. In addition, I would like to acknowledge the lecturers who provided the tools and inspiration which shaped my decisions, and the supervisors who accompanied me for parts of this process.

My life changed significantly in early 2015 when, upon reading Peter Singer's *Animal Liberation*, I made the conscious choice to follow a vegan lifestyle. Most of the information I received through this and similar sources was not new to me, but the logically consistent development of these ideas into a coherent guide for proper living was a revelation: it is no exaggeration to refer to this important turning point in my life as a shift in worldview. I am thankful to Peter Singer and the many other authors I have since discovered for sharing their valuable perspectives and revealing to me a path which enables me to align my behaviours with my values. This personal development, which has helped me both physically and emotionally, provided the direction and inspiration for the current research. I wanted to understand why I had not realized these benefits earlier in my 37 years, and why many people appear never to accept what I now consider to be self-evident truths.

I consider myself extremely fortunate to have found a supervisor in Dr Ivo Ponocny who was both capable and willing to accompany me on this journey. I have drawn heavily on Ivo as a source of substantive knowledge relating to psychological and methodological aspects of the research, as well as a source of structure and motivation.

In addition, I would like to acknowledge the important assistance generously provided to me by two experts in their respective fields. Mag. phil. Erwin Lengauer of the University of Vienna provided considerable guidance with respect to the ethics-focused parts of the dissertation. As an active member of the Viennese animal liberation movement, he has also played a leading role in the organization of various local events from which I, and this research, have greatly benefited. The little-known Q methodology is ideally suited to the empirical investigations pursued in the current research and forms an integral part of the methodological approach. To this end, I have relied heavily on the freeware PQmethod created by Peter Schmolck, M.A., formerly of the University of Munich. Not only has Peter been extremely generous in sharing his intellectual property by making this valuable tool publically available, he has also responded with useful advice to my many inquiries regarding the innovative use of this tool for the analyses required by my research.

This work would not be possible without the personal data voluntarily provided by the research participants. In this respect I would like to thank those colleagues who acted as pre-testing participants and provided feedback on the development of the research instruments, the animal rights advocates who shared their perspectives, and the students who voluntarily submitted to becoming experimental subjects. I hope that the experience was as enriching for them as the data they provided has been for me.

Thank you to those colleagues who have contributed their time and expertise in the role of dissertation committee members. I appreciate your thoughtful contributions which have shaped the final direction of the research. Likewise, I am grateful to the many academics and philosophers on whose work this dissertation builds.

Finally, I would like to thank the one person who has accompanied me throughout the entire and often challenging PhD process – my wife Nina. Not only has her unwavering support enabled me to reach this stage in my research, but it is through our candid discussions that I have been able to reflect on the practical implications of my work in order to keep the research grounded and, hopefully, useful.

It is my hope that you enjoy reading my dissertation...

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## LIST OF ABBREVIATIONS

ALF	Animal Liberation Front
APPA	American Pet Product Association
BSE	Bovine spongiforme Enzephalopathie
CAFO	Concentrated Animal Feeding Operation
CARE	Conference for Animal Rights in Europe
CEVA	Center for Effective Vegan Advocacy
CIWF	Compassion in World Farming
COK	Compassion Over Killing
DxE	Direct Action Everywhere
EC	European Council
EU	European Union
EVU	European Vegetarian Union
FAO	Food and Agriculture Organization (UN)
FCR	Feed Conversion Ratio
FSA	Food Standards Agency (UK)
IARC	International Agency for Research on Cancer
IFAP	Industrial Farm Animal Production
MAFF	Ministry of Agriculture, Fisheries and Food (UK)
MEJ	Meat Eating Justification
OECD	Organisation for Economic Co-operation and Development
PCRM	Physicians' Committee for Responsible Medicine
PETA	People for the Ethical Treatment of Animals
SPCA	Societies for Prevention of Cruelty to Animals
UN	United Nations
USDA	United States Department of Agriculture
VGÖ	Vegane Gesellschaft Österreich (Austrian Vegan Society)
VGT	Verein Gegen Tierfabriken (Austrian Society Against Animal Factories)
WHO	World Health Organization (UN)



# 1 INTRODUCTION AND BACKGROUND

This dissertation concerns the personal advocacy approaches employed by animal rights activists to persuade meat-eaters not to participate in the exploitation of animals through their dietary choices. In setting the scene for a discussion of the psychological phenomena of interest, this introduction seeks to lay out the perspectives of both sides by drawing on interdisciplinary sources to first illuminate trends regarding the production and consumption of animal-based foodstuffs, before presenting the issues that such behaviours raise for animal advocates and those concerned about sustainability in general. In framing meat consumption as a choice, and meat-free diets as viable alternatives for western populations, the following section dispels defences of meat consumption as a necessity; thereby legitimizing the goal of animal advocates, and locating agency for personal consumption levels – in a physical, if not a psychological sense – in the hands of the individual. The existence of personal choice renders questions of ethics pertinent, which are explored in depth in the literature review.

## 1.1 Meat production and consumption trends

Animal agriculture has undergone a process of industrialization since the 1970s, through which the average number of animals per farm has grown by a factor of 10 and slaughter weights have nearly doubled, despite significant reductions in time-to-slaughter (Friends of the Earth 2014). As a result of genetic manipulation through selective breeding, the use of species-inappropriate foodstuffs, the addition of pharmaceuticals such as antibiotics or other growth-promoting supplements, and the intentional restriction of mobility to avoid the ‘wastage’ of calories through exercise, most animals raised for meat now reach the desired slaughter-weights and are killed after less than five percent of their natural lifespan has elapsed (Foer 2009): ‘beef’ cows being the notable exception by surviving for up to ten percent of their natural lifespan. In Europe these changes have seen the number of producers fall dramatically, such that the market is now dominated by a small number of large producers running Concentrated Animal Feeding Operations (CAFOs), or ‘factory farms’, with in excess of 40,000 poultry or 2,000 pigs (European Commission 2013). These changes have been enabled by technological innovation, but are dictated by economic considerations. The greater technological efficiency of intensive animal agriculture implies fewer resources per unit output than traditional farming practices, which, if one ignores the massive externalities associated with conventional production, translates into lower production costs (Ikerd 2016). Intensive animal agriculture therefore plays a central role in satisfying growing global demand for affordable meat products: indeed, given the Earth’s limited biophysical capacity, there is significant doubt whether current production levels could be achieved at any price through traditional farming techniques.

Worldwide production of land-based meat products reached 296 million tonnes (dressed weight) in 2010, having grown at 2.6% p.a. since the year 2000 (FAO 2014). This figure represents the annual slaughter of over 50 billion land animals (Foer 2009). Exposure to enormous aggregated figures such as these can overwhelm human comprehension. When faced with extensive violence, as in the case of genocide, the process of psychic numbing (Lifton 1982) operates in a defensive fashion to render us largely innumerate and therefore mercifully unable to appreciate the emotional connotations of the loss (Slovic 2007). The effect is that, at both societal and individual levels, we tend to regard mass atrocities as only marginally more tragic than the loss of a single individual. In this context, it is perhaps worth highlighting the fact that the figures above relate to the deprivation of life from individual, unwilling, sentient beings. It may also help to translate the aggregate figures into more manageable per capita figures: on an annual basis, around 9 land-based sentient beings have their lives prematurely ended for every man, woman and child on the planet, in addition to countless marine specimens.

Global averages conceal significant variation in meat consumption levels, both across countries and between individuals. At the country level, for instance, the FAO (2014) reports per capita meat consumption of below 10 kg/year in over 20 developing countries: far below the 80 kg/year average per capita consumption in developed countries. While cultural or religious reasons are posited as partial explanations for this massive discrepancy, economic characteristics are regarded as the principal factor influencing national meat consumption levels (FAO 2014). The 'nutrition transition' (Popkin 2001) describes the process through which, across countries and cultures, the consumption of vegetables and grains is displaced by the consumption of animal-based products as societies become more affluent. Carolan (2011) reflects that "eating large quantities of meat has become a cultural imperative throughout much of the world, having become a sign of affluence and modernity and a 'right' of consumer choice." Accordingly, increasing incomes are primarily credited for the doubling of per capita meat consumption in developing countries since 1980, with this trend projected to result in a doubling of world meat production by 2050 (FAO 2017). The emergence of new middle classes in China and India is projected to account for the majority of this growth in demand, while meat consumption in Europe and the United States is projected to stagnate or continue to grow only slowly (Friends of the Earth 2014). Unfortunately, this trend runs counter to the scientific consensus that reductions in the consumption of animal-based foods are desirable from a sustainability perspective (Dagevos & Voordouw 2013): the specific issues pertinent to sustainability are addressed in the next section.

TABLE 1: PER CAPITA MEAT CONSUMPTION BY TYPE (OECD 2017)

Type of meat	World			EU(18)		
	1995 (kg p.a.)	2015 (kg p.a.)	Change: 1995-2015	1995 (kg p.a.)	2015 (kg p.a.)	Change: 1995-2015
<b>Beef/veal</b>	6.77	6.43	-5%	12.52	10.76	-14.1%
<b>Pork</b>	10.61	12.48	17.6%	31.75	33.00	3.9%
<b>Poultry</b>	7.52	13.48	79.3%	16.12	22.71	40.9%
<b>Total</b>	24.90	32.39	30.1%	60.39	66.47	10.1%

Note: totals refer only to these meat types and therefore do not represent total per capita meat consumption.

Table 1 shows annual per capita consumption of the most consumed land-based meats in the world and in the EU (18) according to OECD data, as well as their growth over the past 20 years. As predicted by the nutrition transition, growth rates are lower for the EU(18) than for the world as a whole, yet meat consumption continues to rise in the EU(18). The overall per capita increase, at both global and EU(18) levels, is comprised of a notable reduction in beef consumption which is overcompensated by a massive increase in consumption of poultry, as well as an increase in pork consumption. This trend is explained by the FAO (2014) as resulting from increasing land and energy costs, which have shifted production towards those types of animals which can be intensively raised indoors: primarily pigs and poultry.

Despite widespread agreement regarding meat consumption projections between major organisations such as World Bank, the FAO and OECD, the nutrition transition is not an inevitable outcome of increasing affluence. This fact is revealed when one considers existing variation in dietary habits between individuals within countries, which, notably, is not well predicted by income levels (Cooney 2013), or at least not in the direction predicted by the nutrition transition. In the UK, for instance, those with higher incomes are more likely to abstain from meat consumption than those on lower incomes (FSA 2010). These individuals who shun the ‘cultural imperative’ of meat consumption in favour of alternative sources of nutrition allow factors other than economic considerations to primarily guide their consumption decisions. Understanding these factors is therefore integral to avoiding the negative consequences implied by the nutrition transition.

### 1.1.1 Dietary Classifications

Individuals can be classified according to their dietary choices with respect to the consumption of animal-based foodstuffs. While this classification system may be considered common knowledge by some, research invariably finds that the various terms are used inconsistently by the general public. A substantial proportion of self-reported vegetarians surveyed, for instance, typically report having consumed some type of meat product in the preceding week. Cases such

as these make statistics based on self-reported classifications notoriously unreliable, particularly among older demographics where misunderstanding or misreporting is far more prevalent (Cooney 2013). For clarification, then, the terminology used herein is elaborated in accordance with the definitions provided by Vegetarian Nation (n.d.):

- **Vegans** do not consume any animal products or by-products, including meat, eggs, dairy, honey or gelatine.
  - (Note that many vegan organizations, including the Vegan Society (2016), would refer to this dietary choice as ‘plant-based’: reserving the term ‘vegan’ for those who are motivated specifically by opposition to animal exploitation and who also avoid animal by-products to the degree practicable in their non-dietary consumption behaviours.)
- **Vegetarians** do not consume meat of any description, be it red or white meat, fish or fowl. This category can be further subdivided according to the animal products that are consumed:
  - Lacto-ovo vegetarians consume eggs and dairy products such as cheese and milk.
  - Lacto-vegetarians do not eat eggs, but do consume dairy products.
  - Ovo vegetarians do not consume dairy products, but do eat eggs.
- **Semi-vegetarians** restrict their meat consumption to specific types of meat and can be sub-classified accordingly:
  - Pollotarians restrict meat consumption to poultry and fowl only.
  - Pescatarians restrict their meat consumption to fish and seafood only.
- **Meat Reducers** and **Flexitarians** restrict their meat consumption without targeting specific types of meat. This restriction is presumably relative to prior personal consumption levels, but the literature is unclear on this point. With respect to meat reducers, the literature also fails to specify the extent of the reduction necessary: leaving the term ambiguous and potentially encompassing those who have made small reductions but remain heavy meat-eaters. With respect to flexitarians the literature is slightly more concise, specifying that flexitarians in western countries “significantly reduce meat intake on at least 3 days of the week” (De Backer & Hudders 2014) or consume meat “only several days per week” (Davegos & Voordouw 2013): in the case of developing countries, flexitarians consume meat “only when there is no other alternative” and occasionally “because of religious and social ceremonial reasons” (Hossain 2015). Hereinafter, these terms will refer to those who intentionally reduce their own meat consumption to whatever degree and for whatever reason.
- **Meat-eaters** eat meat. The imprecision in this definition reflects the lack of attention this group has attracted in the literature, despite representing the majority of individuals in western countries: or perhaps because of this fact. In medical studies, meat-eaters are typically classified as such according to some minimum consumption criterion which varies from study to study. In the social sciences, it is more common to encounter the term ‘omnivore’ than meat-eater, despite the fact that the latter refers to the behavioural characteristic of interest to the researchers and the former to a physiological predisposition: all humans are omnivores whether they choose to eat meat or not. ‘Carnivore’ can also be observed on occasion, despite the fact that this term does not even correspond to human physiology. Paul Watson of Sea Shepherd

prefers the term 'necrovore' in reflection of the fact that most humans do not kill, but consume often long-dead flesh in the fashion of scavengers: "we are closer in our eating habits to vultures and jackals than wolves and lions" (Watson 2008). This is indeed an apt term as it relates to the behavioural characteristics of interest as well as a physiological capacity, but 'meat-eater' will be used hereinafter to refer to all those who consume meat of any description, and therefore includes the semi-vegetarians, the meat reducers, and the flexitarians. One related term, 'carnist' (Joy 2010) will be introduced later to refer to the psychological disposition theorized to underpin human meat-eating behaviours.

As elaborated previously, inconsistent use of these terms by the general public makes measuring the prevalence of each of these dietary positions a challenging task. Variation in term usage by researchers further compounds this problem, although recent methodological developments have sought to overcome these problems by asking people about their actual consumption of various products rather than asking them to self-classify. This approach tends to yield lower rates of vegetarianism than self-classification approaches, and has allowed some degree of consensus to emerge from the numerous polls which investigate adherence to various diets. Figures for the U.S. tend to show that between 3 and 6 percent of Americans are vegetarian and one third of these, or 1 to 2 percent of Americans, are vegan (Cooney 2013; Friends of the Earth 2014). The European Vegetarian Union notes that there are no reliable statistics presently available for Europe, and has called for the EU Commission to rectify this situation by carrying out surveys via Eurostat (EVU 2016). Nevertheless, those figures which are available for various European countries tend to converge around those reported by the Vegan Society (2016) for the UK, of around 3 percent following a vegetarian diet and 1 percent a vegan diet. For various reasons, these figures should not be considered reliable measurements, yet they do enable the following general conclusions to be drawn for western countries as a whole:

- the majority of individuals in western countries (over 90%) consume some meat
- vegetarianism varies by country, but is typically below 5% of the population
- around one third of vegetarians also forego dairy and eggs and are therefore vegan

Further patterns which tend to hold across the various reports are a notable increase in the prevalence of vegetarianism and veganism over the past ten years, with the increase in veganism reported as high as 250 percent in the UK (Vegan Society 2016). The notion of increasing interest in meat-free diets is further supported by the growing popularity of internet search terms, such as the doubling of English language searches for 'vegetarian' and 'vegan' from 2009 to 2013 (Friends of the Earth 2014), and substantial growth in searches in Portuguese, Japanese, French, German, Russian and Spanish. Other notable patterns include the higher prevalence of vegetarians and vegans within younger age brackets, and a general tendency for females to be better represented in these groups than males, although this distinction is not so clear in the case of vegans (Cooney 2013). The conclusions which can be drawn are that the complete avoidance of meat remains a rare phenomenon in European society. Those who do

choose to eschew meat tend to cite a limited range of motivations for doing so, which are addressed in the next section.

## **1.2 Meat consumption as a problem**

Seven reasons encapsulate the primary motivations for the vast majority of those who avoid the dietary consumption of meat and other animal-based foodstuffs (Beardsworth & Keil 1992; Cooney 2013; Fox & Ward 2008; MacDonald 2000). Six of these reasons – concerns related to the environmental, personal health, food security, animal welfare, animal rights, and psychological wellbeing impacts of consuming animal products – provide potential lines of argumentation for animal advocates to persuade meat-eaters to change their behaviours, and are explored in this section to provide an understanding of such motivations. The seventh reason, taste preferences, is not necessarily less important as a motivation, but it is infeasible for advocates to contend that people should change their diet because they do not enjoy their current dietary choices. At most, advocates could argue that there is no hedonic sacrifice in foregoing animal-based foodstuffs, but this would not amount to an argument for dietary change and is therefore not addressed in this section.

### **1.2.1 Environment**

Environmental impacts result at all stages in the food system, from production and its inputs through to distribution, consumption, and the disposal of waste. Land use is changed, fossil fuels extracted, water sources consumed, soils degraded, and waste produced, with greenhouse gases emitted at every stage. Foods from animal sources contribute over proportionally to each of these impacts, thereby “casting ecological shadows over rural ecosystems, global water and food supplies, tropical rainforests, and the earth’s climate” (Dauvergne 2008).

The 2006 FAO report entitled *Livestock’s Long Shadow* employs a lifecycle analysis approach to highlight the multiple impacts of animal agriculture on ecosystems: a significant finding being that animal agriculture contributes 18 percent of anthropogenic greenhouse gas emissions, or more than that of the entire transport sector (Steinfeld et al. 2006). Other authors have suggested that this figure represents a gross underestimation – primarily due to deferring land use change to a separate deforestation category and by omitting animal respiration from calculations– and instead place the actual contribution of animal agriculture at 51 percent of GHG emissions (Goodland & Anhang 2009). Given the necessity of food production for nourishing human populations, however, discussions of absolute impacts are not necessarily instructive. Rather, determining the ecological problematic of animal agriculture requires investigation of its impacts relative to those arising from alternative sources of nutrition.



The process through which animals convert plants into meat and dairy products is extremely inefficient. Theoretically, the inputs into this process could utilize only vegetation unfit for human consumption from marginal terrain unsuitable as arable land, but only with a significant reduction in global production. In reality, the vast majority of animals used for food are raised in Concentrated Animal Feeding Operations (CAFOs) or Industrial Farm Animal Production (IFAP) systems where they are fed on humanly edible plants which have been cultivated for that purpose: such production methods account for 99 percent of all animals used for food in the United States (Farm Forward 2014: calculation based on 2012 USDA census data).

The efficiency with which inputs (largely grains) are converted to outputs is referred to as the Feed Conversion Ratio (FCR). Various authors reach different conclusions depending on whether they define outputs as the mass gained by the animal (live weight) or the mass of the dressed output (edible weight). The former results in lower (apparently more efficient) ratios and is therefore favoured by industry, yet the latter has greater relevance when considering the alternative ways in which the grain could be used to nourish human populations. The differences are presented in Table 2, along with protein conversion ratios and calorie conversion ratios for the most commonly consumed animal species. These ratios further vary by the exact breed of the animal in question, the quality of the feed, and specific environmental factors: therefore giving rise to the ranges presented in some cells.

TABLE 2: FEED CONVERSION RATIOS FOR VARIOUS MEATS

Conversion Ratio	Chicken	Pork	Beef	Source
<b>FCR - live weight</b> (kgs of grain to produce 1kg animal)	2 to 2.5	5 to 6.5	8 to 12	Smil, 2000
<b>FCR - edible weight</b> (kgs of grain to produce 1kg meat)	4.5	9.4	25	Smil, 2000
<b>Protein conversion rate</b> (units of protein input to produce 1 unit of edible animal protein)	5	6.5	25	Searchinger et al., 2013; Fiddes, 1991
<b>Calorie conversion rate</b> (calories input to produce 1 edible calorie of meat)	9	10	100	Searchinger et al., 2013

Regardless of the methodology or the metric employed – food mass, protein or calories – meat production from grain represents a highly inefficient use of scarce resources. Frances Moore labelled this inefficient system as a ‘protein factory in reverse’ in her esteemed *Diet for a Small Planet* (Moore 1985). This inefficiency has humanitarian implications in terms of food security, which are addressed in a subsequent section, but the focus here is on environmental impacts.

Given the objective of nourishing the global population, plant-based agriculture represents a significantly more efficient means of supplying nutrition than animal-based agriculture both in

terms of environmental impacts and energy-efficiency (McMichael et al. 2007; Pimentel & Pimentel 2003; 2008; Tukker et al. 2011). Analyses at the level of the individual diet have found that non-vegetarian diets require 2.9 times as much water, 2.5 times as much primary energy, 13 times as much fertilizer, and 1.4 times as much pesticides as vegetarian diets (Marlow et al. 2009); the ratios are still higher when comparing non-vegetarian diets with vegan diets. In the context of a global economy which is exceeding planetary boundaries (Rockström et al. 2009), animal agriculture represents a field with great opportunities for improvement. The question remains, however, as to whether reforms should focus on the supply or demand side of the equation. Technical strategies aimed at increasing production efficiency may go some way to reducing the ecological footprint of animal agriculture. Changes to feed rations, reducing the mobility of animals, and genetic ‘improvements’ can reduce methane emissions (Adams et al. 1992), for example, yet each of these ‘improvements’ are designed to increase efficiency and are generally detrimental to the welfare of the animals involved. Even if adopted, Friel et al. (2009) find that these reforms would need to be accompanied by a minimum 30% reduction in meat production for the UK to reach its GHG emission targets for the agricultural sector. From a sustainability perspective, reducing global meat consumption is therefore crucial to reducing the ecological footprint of our diets (Dagevos & Voordouw 2013; Lang & Barling 2013).

These facts may induce those who are concerned about environmental causes, about the plight of other species, of the sustainability of human populations, or merely of the wellbeing of their own offspring to consider the role of their diet in generating adverse ecological impacts and subsequently to reduce their consumption of animal-based food products. Concern for environmental issues does not logically lead to the conclusion of foregoing all animal-based products, however, as the most ambitious environmental objectives could be achieved through reduction alone. Furthermore, the environmental impacts of one’s diet may be offset by behavioural changes in other facets of one’s life.

### **1.2.2 Health**

The very existence of long-term vegetarian and vegan individuals and societies provides anecdotal evidence of the non-necessity of meat consumption for the nutritional maintenance of the human organism. Given the availability of alternative sources of nutrition, humans can function and flourish on a diet which entirely excludes animal products, as expressed by America’s preeminent dietary organization:

“It is the position of the American Dietetic Association that appropriately planned vegetarian diets, including total vegetarian or vegan diets, are healthful, nutritionally adequate, and may provide health benefits in the prevention and treatment of certain diseases. Well-planned vegetarian diets are appropriate for individuals during all stages

of the life cycle, including pregnancy, lactation, infancy, childhood, and adolescence, and for athletes.” (Craig & Mangels 2009)

Not only can diets free from animal products provide sufficient nutrition, plant-based diets may also confer significant health benefits over omnivorous diets. It must first be stated that there is no scientific consensus regarding the optimal diet for human health. Addressing this question would require long term (lifetime) investigation into the lifestyles and dietary choices of a wide range of human groups: unfortunately, publication and funding pressures have created a short-term orientation within the scientific community which precludes such long-term studies. The closest approximation remains the China–Cornell–Oxford Project, commonly referred to as *The China Study* (Campbell & Campbell 2005), which spanned 20 years and represents perhaps the most extensive dietary study ever conducted. The study compared dietary, lifestyle and disease characteristics of populations from sixty five counties in rural China, with a central focus on the suspected relationship between consumption of animal-based foods and prevalence of a wide range of ‘western diseases’. The findings of higher incidence of chronic illnesses such as coronary heart disease, diabetes, breast cancer, prostate cancer and bowel cancer among those who consumed greater amounts of animal-based foods led the authors to conclude that “eating foods that contain any cholesterol above 0 mg is unhealthy” (Campbell & Campbell 2005). While this and other individual studies are routinely subjected to various criticisms, meta-analyses conducted by respected institutions have also constructed a compelling case for the benefits of plant-based diets over diets containing animal-based products.

The American Dietetic Association conclude that vegetarians tend to have lower incidence rates of ischemic heart disease, hypertension, type 2 diabetes and overall cancer rates than non-vegetarians, as well as lower body mass indexes, blood pressure, and low-density lipoprotein cholesterol levels (Craig & Mangels 2009). Meanwhile, an analysis of 800 studies conducted by the International Agency for Research on Cancer (IARC) found that meat consumption is linked to colorectal cancer, and led the UNWHO to list processed meats as “carcinogenic” (Group 1) and red meats as “probably carcinogenic” (Group 2a) (Bouvard et al. 2015). While specific findings from individual studies may still be challenged by various researchers, such meta-analyses clearly indicate the superiority of plant-based diets with respect to many of the most common causes of death among western populations: particularly given the credibility and conservatism of the issuing institutions.

Establishing the superiority of one diet over another on nutritional grounds is not the focus of this section, however, nor is it within the capacity of the author. Rather, the more modest goals here are to establish the non-necessity of animal products in the diet, and to explain why some consumers may seek to avoid or reduce their consumption of animal products on health grounds. While knowledge in the fields of nutrition and food science continues to develop, there is nevertheless an apparent consensus that well-planned plant-based diets represent a viable alternative to omnivorous diets for the majority of the population. Admittedly there may be

individual exceptions to this rule based on physiological disorders and specific food intolerances, yet even in these exceptional cases plant based nutritional supplements represent viable solutions for maintaining physiological wellbeing in the absence of animal products. In light of this information, claims that the consumption of meat and/or dairy is necessary for human health may be viewed as either ill-informed or inspired by ulterior motives. A more thorough discussion of the availability of essential nutrients through plant-based sources is provided in the upcoming section on the Availability of Alternatives.

Further health concerns which may induce some to shy away from the consumption of animal products relate to contamination and to specific production methods. Meat represents an important source of zoonotic infections in humans, particularly *Campylobacter* and *Salmonella*, which have been found to occur in between 1% and 10% of raw meat samples in the EU (Nørrung & Buncic 2008). To counter microbial outbreaks, a vast quantity of pesticides and antibiotics is fed to animals raised in intensive systems and these may be passed on those who consume them. This widespread use of antibiotics has been discouraged by both the World Health Organization and the American Medical Association due not only to the immediate health hazard for the consumer, but also their role in hastening the development of resistant supergerms which threaten the wider community (Kaufman 2003; Heilig et al. 2002).

As previously stated, this section does not seek to definitively establish the optimal diet for human populations. Rather, it has demonstrated that state of the art nutritional science regards the consumption of animal-based products as unnecessary for human well-being, as well as highlighting various medical concerns which may induce individuals to reconsider their consumption of animal products. Like the environmental concerns addressed in the previous section, however, health concerns do not logically lead to the conclusion of complete abstinence from animal products, as significant reductions are likely to achieve most people's health-related objectives.

### **1.2.3 Food security**

Despite progress made under the banner of the Millennium Development Goals, around 795 million people remained undernourished around the world at the end of the monitoring period in 2015 (FAO 2015). It is well recognized that this shameful outcome is not the result of insufficient production, but rather from failure to ensure an adequate distribution of the abundant annual global harvest to meet the most basic needs of individuals. Factors including agricultural subsidies and trade barriers erected by richer countries, high levels of food wastage, and the diversion of human-edible crops and farm land towards biofuels and animal agriculture have conspired to generate skyrocketing prices and dwindling reserves, in spite of record crops (Paul & Wahlberg 2008). It is the inefficient feed conversion ratio (FCR) inherent to animal agriculture which raises social justice concerns about meat consumption: in terms of resource

use, it was calculated in 2008 that the 323 million tons of human-edible grain being fed to livestock in the U.S. alone is sufficient to meet the calorific needs of approximately 1 billion additional people (Pimentel & Pimentel 2008).

Of course, simply abstaining from meat in no way implies that those available calories will be redistributed to those who need them most, but there is a nevertheless very real connection between meat consumption in western countries and the prices of agricultural products around the world. Consumption of grain-fed livestock has a direct impact on demand for, and prices of, human-edible grains, but even consumption of grass-fed livestock pushes up the price of grains through the effect of land-hungry animal agriculture on land prices (Paul & Wahlberg 2008). Relative to plant-based diets, the consumption of animal-based food products exacerbates both the problems of scarcity and distribution by utilizing disproportionate resources and placing upward pressure on global food prices: thereby contributing to global hunger.

Of course, there are numerous approaches which could be taken to address the issue of global hunger, but many of these are beyond the agency of the individual. Recognizing the contribution made by their personal consumption to this humanitarian predicament, some people seek to improve conditions for their fellow man by decreasing their own demand for foodstuffs generally, and animal-based products in particular. As any increase in consumption adds to the problem and any decrease alleviates it to some degree, it does not follow that those concerned about the social justice outcomes of their food choices will completely eliminate the consumption of animal products: most will simply choose to reduce their consumption to some extent.

#### **1.2.4 Animal welfare**

Animal welfare concerns relate to the experiences of animals being raised in food production systems. Attention is generally focused on slaughter procedures and the suffering of the billions of animals being raised through intensive agricultural practices (Marcus 2005). What is questioned within the scope of animal welfare debates is not the fact that animals are raised as property and killed for human consumption, but the way in which it is done.

Around 95% of animals raised for food in the EU spend time in CAFOs or IFAP systems (Friends of the Earth 2014), where they are confined in small enclosures to hasten the growth process by ensuring that calories are not 'wasted' through exercise. Even the far more generous conditions required for certification as 'organic' in Austria are highly constrictive, with minimum allocations of: 1.3m<sup>2</sup> per 100kg pig; 2.5m<sup>2</sup> per 200kg cow; and up to 16 chickens per m<sup>2</sup> (BioAustria 2016). This limited space allocation alone provides sufficient grounds for some to reconsider their consumption of animal-based foods in the interests of animal welfare, but the complications which result from such close confinement are even more alarming. Lack of stimulation leads to a range of disorders such as tail-biting in pigs and pecking in chickens, which are now pre-emptively treated through the docking of pigs' tails and the grinding off of chickens' beaks

– both without anaesthetic – as standard industry practices: these practices are even permitted under the stricter organic guidelines (BioAustria 2016). There is no need to go into further graphic details to demonstrate that dominant industry practices may be objectionable to some and lead those consumers to reduce their meat consumption or switch to production methods which show more respect for the welfare of the animals involved.

### **1.2.5 Animal rights**

The issue of animal rights is a fundamentally different problem to the previous categories discussed. Environmental, health, and food security concerns implicitly condone the use – and slaughter – of animals for human purposes. The perceived problems result purely from the nature of modern production processes and the scale of operations: implying that societal wellbeing may be improved through reduction in the quantity of meat produced and consumed, yet that complete cessation of meat consumption is not necessary in order to achieve their objectives. Somewhat oddly, solving the animal welfare problem does not necessarily require any reduction in the numbers of animals bred and consumed. Animal welfare, as it is currently conceived, could be improved significantly by enhancing the conditions under which animals live and die, even if the number of animals slaughtered were to rise dramatically.

Animal rights arguments, on the other hand, perceive the problem to be the very use of animals for human purposes, and their designation as property. In accordance with popular usage, the term ‘animal rights’ is applied broadly here as the consideration of non-human animals as sentient beings whose interests are worthy of consideration: it is not restricted to deontological approaches which ascribe rights in a philosophical sense based on the recognition of intrinsic value, but also includes the consideration of animals’ interests through teleological approaches which do not recognise rights in a philosophical sense, although they may recognise the utility of granting specific rights in a political sense. This distinction is further elaborated in the section on the Animal Rights Movement.

As life is a prerequisite for sentience, which in turn, is a prerequisite for having interests (Singer 1975), both of these approaches take the very lives of non-human animals into account. Unlike each of the previous issues discussed, this line of reasoning may lead to the conclusion that meat production and consumption should cease entirely. Moreover, the animal rights perspective challenges the notion of human superiority and necessitates a fundamental reconsideration of the relationship between humans and other animals; a re-examination of prevailing worldviews and what it means to be human. Those who have come to adopt this perspective are inclined to not only reduce their dietary consumption of animal products, but to cease their use of animal products altogether by adopting a vegan lifestyle (Herzog 1993).

### **1.2.6 Psychological wellbeing**

The rejection of animal products on ethical grounds has been shown to affect changes not only to the lives of animals, but also to the psychological state of those who adopt the vegan lifestyle. McDonald (2000) describes this process as the transition to a new worldview characterised by an increased cognition of the suffering in the world and a heightened sense of responsibility for making informed choices. One respondent from that study reflected on veganism as a source of empowerment, as it gives “people a better sense of being self-directed rather than being the creation of the culture in which you happen to be born” (McDonald 2000). Indeed, the conscious decision to distance ones’ own actions from societal norms according to ethical considerations can bring a sense of enlightenment, which has been described in spiritual terms (Jamison et al. 2000). While this perspective may also lead to disappointment in the actions of others who continue to participate in the subjugation of animals through their consumption practices, new vegans nevertheless routinely report a sense of “psychological comfort associated with the synchronization of values and actions” (Hirschler 2011). It is the counterpoint to this synchronization in vegans – the (potential) dissonance in those who consume animal products – which forms the focus of this work.

While improved psychological wellbeing constitutes a potential benefit from abstaining from meat consumption – which therefore indicates that meat consumption may pose a psychological problem for some – these benefits are generally not foreseeable in advance. Indeed, individuals may feel better about themselves after reconciling their behaviours and attitudes, whether they are motivated by attitudes relating to environmental, health, social justice, or animal rights concerns, but it is difficult for them to imagine how they will feel differently as a result of these actions. Perhaps for this reason, personal psychological wellbeing is not typically given as a reason for changing consumption behaviours, but is often discussed as an additional benefit which is realised only after the fact.

### **1.2.7 Summary**

Depending on the ethical stance of the individual, each of the issues discussed in this section may be conceived of as morally problematic. However, moral issues only become pertinent if the consumer has a choice in their level of consumption: where there is no option, there is no moral issue (Seed 1747). The common use of ethics-based arguments by animal advocates is therefore predicated on establishing the consumption of animal products as a choice – at least for individuals in developed market economies – and the following section is dedicated to presenting this case.

## 1.3 Meat consumption as a choice

In developed market economies characterized by freedom in consumption and the availability of a wide variety of agricultural products, meat consumption can be fairly regarded as a choice made by consumers. 'Choice', in this context, is established by a set of prerequisite conditions: a) the non-necessity of meat consumption from a physiological standpoint; b) the availability of alternatives, and; c) the economic viability of the alternatives. The section above on Health, and particularly the position of the American Dietetic Association (Craig & Mangels 2009), has established that the consumption of animal products is not necessary from a physiological standpoint. The remaining two prerequisite conditions are addressed here in turn.

### 1.3.1 Availability of alternatives

In framing meat consumption as a choice, 'alternatives' refers to other food products which may be substituted for animal products to achieve the outcome of physiological wellbeing. This is not limited to the ever expanding selection of (often soy-based) 'meat substitutes' offered by the market, but includes all foodstuffs which contribute the necessary nutrients, vitamins and energy according to current dietary recommendations. While it has already been established that these essential dietary elements can (theoretically) be accessed through a plant-based diet, the goal of this section is to clarify that these elements are also available in actuality in developed market economies. The discussion is restricted to the four nutrients most often questioned with respect to plant-based diets: iron, vitamin B12, calcium, and protein.

**Iron** is essential for the transfer of oxygen from the lungs to the tissues and for normal cellular functioning. Current dietary recommendations suggest a daily intake of 18mg for adults (NIH 2016b), although males require less than half this amount. Those abstaining from animal products may require a marginally higher intake of iron due to the lower bioavailability of non-heme iron from plant-based sources than heme iron from animal-based sources, although sufficient levels of Vitamin C reduce this need by increasing the bioavailability of plant-based iron (NIH 2016b). The prevailing dietary recommendations of 18mg can be met either through consuming 200g of seafood or 685g of steak, or through any one of the following plant based alternatives: 120g of pumpkin seeds; 300g of most nuts; 100g of dark chocolate; or 500g of beans, pulses or leafy vegetables (USDA 2015).

**Vitamin B12** is necessary for the correct formation of red blood cells, DNA synthesis, and neurological functioning. Current dietary recommendations suggest a daily intake of 2.4mcg for adults (NIH 2016c). Modern farming practices necessitate the thorough washing of plant-based food products before consumption, which strips them of this environmentally abundant vitamin. While mushrooms contain small quantities of this essential vitamin internally, those abstaining from animal-based products completely are likely to require either Vitamin B12 supplements or



foods fortified with B12 (e.g. plant milks, breads and breakfast cereals, meat substitutes) – one to two servings of any one product is generally sufficient to meet the daily nutrition guidelines (USDA 2015).

**Calcium** is required for the strength of teeth and bones, as well as the correct functioning of muscles and nerves. Current dietary recommendations suggest a daily intake of 1000mg for adults (NIH 2016d). Although the bone-strengthening effects of calcium have traditionally been the primary health-related selling point for dairy, evidence now suggests an inverse relationship between consumption of dairy products and bone strength. Across individuals and countries, the incidence of osteoporosis is directly correlated with consumption of animal protein (Robbins 1987), which causes blood pH levels to acidify and accelerates the leaching of minerals from bones in order to neutralize these effects. Those consuming diets excluding animal protein therefore have significantly lower calcium requirements than those consuming meat and dairy. Nevertheless, the prevailing dietary recommendations of 1000mg can be met either through consuming 740ml of dairy milk, or through any one of the following plant based alternatives: 740ml of soy milk; 500ml of orange juice; 150g of firm tofu; 100g of sesame seeds; 520g of bok choy; or 580g of white beans (USDA 2015).

**Protein** is contained in every cell in the body and is therefore necessary for cell repair, growth and development. Current dietary recommendations suggest that between 10 and 35% of an individual's daily calorific needs should be comprised of protein (NIH 2015). Protein accounts for around 80% of the calories in most meat products (USDA 2015), which far exceeds the recommended intake and creates problems maintaining calcium levels (see Calcium above). On the other hand, protein accounts for between 8 and 40% of the calories from most plant-based foods (USDA 2015), which aligns neatly with current dietary recommendations. Those plant-based foods with the highest levels of protein per calorie include tofu, soy milk, broccoli, and most beans and pulses. Mangels (2006) concludes that it is virtually impossible for someone eating a balanced and varied plant-based diet to be protein deficient without also being calorie deficient.

In summary, the plant-based alternatives to animal-based sources of nutrition are extensive, providing a wide range of dietary options in terms of tastes and textures. The foods listed in this section are widely available at supermarkets across developed market economies: many can also be obtained in frozen, tinned or dried forms for greater shelf life without significantly sacrificing their specific nutritional value. Despite generally being less calorie dense than most animal products, readily available plant-based alternatives consumed in modest quantities can comprise a diet which is nutritious, varied, flavour-rich, and affordable – as the next section will show.

### 1.3.2 Economic viability of alternatives

A common argument mounted against veganism is that it is more expensive than an omnivorous diet, and therefore unobtainable by many people. Those who mount such arguments are likely considering processed ‘meat substitutes’, which are still more expensive than the cheapest cuts of meat in many regions – although this is changing. Such products are an unnecessary component in a balanced vegan diet, however, just as caviar is an unnecessary component in an omnivorous diet. As indicated above, a complete diet need consist only of fruits, vegetables, whole grains, nuts and legumes – all of which should preferably be purchased in an unprocessed form from a health perspective. Furthermore, the comparisons made are generally between diets including cheaper (and consequently less healthy) cuts of meat and healthier vegan diets. A recent study by Flynn & Schiff (2015) corrects these unbalanced comparisons by investigating the relative cost of diets incorporating either low-fat animal protein or plant-based diets using olive oil: concluding that the plant-based diet (in the U.S.) results in savings of around US\$750 per year. The *Live Below the Line* campaign, which challenges people in English speaking countries to nourish themselves for one week on less than the globally set poverty line, is also instructive as to the relative cost of various dietary choices. The meal plans suggested in both Australia and the UK are entirely vegan, thereby indicating that vegan diets can be less expensive than those containing animal products (Global Citizen 2016).

While it is impossible to consider all possible diet variations in such calculations, these examples indicate that healthy vegan diets can be at least as economical as omnivorous diets. It must also be noted that the costs considered in this section are only those which relate to the purchase of foodstuffs and are borne by the consumer in the short term. The calculations exclude the higher environmental costs associated with the consumption of animal products which are borne by society, as well as any costs related to deteriorating health which may be incurred by the consumer in the longer term as a result of poor lifestyle choices. The inclusion of these costs would further improve the affordability of vegan diets relative to alternatives.

Given the non-necessity of meat consumption for physiological wellbeing, the ready availability and economic viability of alternative sources of nourishment, the consumption of animal products may fairly be characterised as a choice for those living in developed market economies: this is certainly the case within the EU where this study is focussed. The characterization of meat consumption as a choice implies that ethical and moral questions become pertinent: the following section clarifies what is meant by these terms. However, the fact that individuals objectively have a choice as to what they consume does not necessarily mean that they perceive the options open to them as viable alternatives in the course of their daily lives. This issue is addressed in the section on Carnism.

## **2 LITERATURE REVIEW**

As the case espoused by animal rights activists rests heavily on ethical arguments, this literature review first focuses on the various ethical viewpoints which motivate their position: subtle distinctions between these approaches are central to understanding factional divergences within the animal rights movement. A range of objections which have been raised in defence of denying animals moral consideration are then addressed, before the concepts of speciesism and carnism are introduced to help explain the divergent ethical positions rigidly maintained by their proponents. On the back of this discussion, the following section characterizes the animal rights movement; highlighting commonalities and discords between various factions, with particular emphasis on the strategies underlying their vegan advocacy efforts. The discussion then considers the merits of various disciplinary approaches which could be chosen to investigate the topic of vegan advocacy before justifying the choice of a psychological approach: namely cognitive dissonance. The sections which follow provide a general introduction to the cognitive dissonance literature and provide empirical evidence for the occurrence of this phenomenon in meat eaters. The discussion then delves deeper into the various dissonance models which have been proposed and deliberates on the implications of each for the work of animal rights advocates.

### **2.1 The ethics of meat consumption**

Throughout the course of recorded history, individuals around the world have made the case that it is unethical to exploit animals for human consumption. Following the conviction of their beliefs they have sought to help others understand their perspective, and have formed associations and organizations to do this more effectively. The first known vegan society formed around the teachings of Pythagoras in the 6th century BCE, and diets void of animal products were termed Pythagorean until the word 'vegan' was coined by Donald Watson, founder of the Vegan Society, in 1944 (Berry 1996). Since that time, the number of associations and their members has increased dramatically and diversified in terms of their focus and strategies, yet they retain some important common ground. The purpose of this section is to introduce these animal advocates and gain an understanding of their motivation and the messages they attempt to disseminate. Doing so requires discussion of the ethical issues surrounding meat consumption, which must start with a clear understanding of what is meant by 'ethical'.

#### **2.1.1 Morality vs ethics**

The distinction between morals and ethics is rarely made explicit and the two terms are often used interchangeably in referring to frameworks for distinguishing right from wrong behaviours (Paul & Elder 2006). Certainly there is significant overlap in meaning, as evidenced by the fact

that dictionary definitions of either term will generally refer to the other in a somewhat cyclical fashion. Nevertheless, there is a fundamental distinction to be made which is central to the purposes of this thesis. Indeed, one may reach the divergent evaluations that a given act is (or at least was) moral, yet is (and always has been) unethical - historical incidents of human enslavement are presented below as a case in point. Such contradictory conclusions can be explained by investigating the sources of ethical and moral guidance, and the origins of the two words are instructive in this regard.

Morality differentiates between proper and improper intentions, decisions, and actions based on socially accepted standards derived from a particular philosophy, religion, or culture (Gert & Gert 2011). The existence of competing moral codes presents a *prima facie* case for conceiving of morality as a social construction and rejecting the possibility of a universal (or objective) morality. As various cultural and religious groups adamantly disagree about what constitutes 'proper' behavior, Benedict (1934) concludes that while socially constructed customs exist, transcendent morals do not. The societal source of moral standards is also evident from the Latin root 'mos', which has been variously translated as 'customs' or 'social norms'. This conception of morality as a social construction precludes the possibility of an absolute morality, and easily accommodates the current reality of various competing moral codes which tend to be separated spatially and are incompatible in certain respects.

Incongruities are also evident within specific cultures when viewed across time. Nietzsche (in Katz 1955) made explicit the relativity of morals as being time-bound systems which enable the transvaluation of yesterday's good into today's evil. Homosexuality, for example, has traditionally been regarded in Europe as morally impure, yet the prevailing view is that gay sex is neither morally impure nor unacceptable. More broadly, the shifting or developing nature of morality is recognizable through the temporal trend in many societies for expansion of the sphere of moral concern, which defines membership of the group(s) of individuals whose interests are taken into account (Singer 2011). While today slavery is generally regarded as immoral, one must accept that the practice represented a consensus view within practicing communities and was therefore not morally transgressive at the time: it may have been considered either moral or amoral. The diversity of moral standards across populations and time speaks to a process of social determination which, importantly, implies no necessity for the various moral precepts contained within a given moral code to even be internally consistent. Whatever social convention decides to be right is moral, even when, as the Sophists identified, this judgement fails to reflect any fact of nature (Singer 2015). Morality then, is applied hereinafter as referring to the intersubjective assessment by some community of what is just or good.

As well as being restricted to certain groups, socially constructed morality implicitly categorizes specific types of behaviours as either falling inside or outside the moral realm. This is a departure from the ancient Greek philosophical tradition of considering every action to be a matter of

practical reasoning which may therefore be evaluated, and instead reflects the legalistic nature of the Judeo-Christian deference to divine authority which has come to dominate western cultures and which identifies certain spheres of activities – notably sexuality – as morally relevant, while excluding others from consideration (Singer 2015). Food choice has largely escaped consideration as a moral issue by secular groups until recently being incorporated within the wider scope of the sustainability discourse. Most prominent religions, on the other hand, have long-standing restrictions relating to the type and timing of consuming certain foods.

Formerly, the term ‘ethics’ was used exclusively to refer to the field of study which examined the subject matter of morality in an attempt to systematically understand designations as right and wrong in accordance with underlying principles; for this reason ethics is also called moral philosophy (Parry 2014). While evidence of early moral codes can be traced back to the Middle East over 5000 years ago, they made no attempt to identify underlying principles and are therefore not considered works of ethics in the philosophical sense, the first of which emerged in India some 2000 years later (Singer 2015). Unlike moral codes, which may well be internally contradictory and limited to finite situations, ethical principles are generally assessed according to the criteria of internal consistency and universality in terms of both subjects and behaviours. Identifying a relevant basis on which to found moral judgements necessitates a process of introspection regarding the nature of ultimate value and consequently the standards by which human actions can be judged as being right or wrong: precisely the method of inquiry advocated by Socrates in observing that “the unexamined life is not worth living” (Singer 2015).

While other animals exhibit moralistic behaviours in some contexts, Churchill (1999) reflects the legacy of the Stoics in his conviction that “ethics, understood as the capacity to think critically about moral values and direct our actions in terms of such values, is a generic human capacity”. As different individuals may arrive at diverse answers to fundamental questions regarding value – whether through reason in the Scholastic tradition, through reflection using a rational Intuitivist approach, or by reference to divine authority – the ethical concepts and principles applied by a given individual are therefore subjective and dependent on one’s own innate knowledge (Singer 2015). The individualistic nature of ethics is apparent from the Greek root ‘ethos’, meaning character (Liddell 1889).

While not morally transgressive according to the norms of perpetrating communities, periods of human enslavement may nevertheless be found to be unethical if the actions cannot be rationally defended according to an appropriate principle which transcends religion, culture and time. To do so, one may need to identify a morally relevant characteristic which differentiates slaves from others and therefore makes such discriminatory behaviour permissible: the author is yet to read such an account.

Use of the term ‘ethics’ has since been extended to include the underlying principles themselves – rather than merely the process by which they are derived – as in the definition: "set of concepts

and principles that guide us in determining what behaviour helps or harms sentient creatures" (Paul & Elder 2006). Common usage has also led to the term being applied interchangeably with morals in referring to specific precepts even without any underlying principle being made explicit, such as in a simple statement like "it is unethical to..." which omits the explanatory clause "because...". While a departure from its origin, this latter usage nevertheless retains the element of subjectivity, as recognized by Audi (1999) in referring to "the moral principles of a particular ... [ ] ... individual". There is certainly evidence that, at least towards the end of periods of human enslavement, certain individuals within practicing communities were ideologically opposed to the practice: further supporting the claim that what is considered moral is not necessarily ethical. Incorporating these various meanings, ethics is applied hereinafter as relating to the systematized subjective understanding of right and wrong by individuals.

In summary, this work considers ethics as the process and outcome of an individual's assessment of values as relatively good or bad, whereas morality relocates ethical decision-making on certain issues away from the individual and into a social space which is generally informed by the views of the majority but does not necessarily apply any other systematic approach or critical analysis.

"Although the morality of people and their ethics amounts to the same thing, there is a usage that restricts morality to systems such as that of Immanuel Kant, based on notions such as duty, obligation, and principles of conduct, reserving ethics for the more Aristotelian approach to practical reasoning, based on the notion of a virtue, and generally avoiding the separation of 'moral' considerations from other practical considerations." (Blackburn 2008)

This same distinction between ethics and morals is stressed by Marks (2013) in contrasting the inexorable nature of ethical introspection with the non-necessity and potential societal disservice which frequently arises from the practical application of moral codes. One need only reflect on the example of slavery to conclude that dogmatic public morality evaded ethical scrutiny and trumped valid subjective ethical positions for far too long. There may, however, be benefits which arise from the democratic codification of subjective ethical positions into group-wide moral codes: namely balancing the egotism which is likely to characterize the ethical judgements of any one individual according to their worldview.

Although this discussion has sought to differentiate between ethics and morals by focusing on incidents where they may not agree, they are generally likely to coincide (Blackburn 2008), which is clear when considering the dynamic interaction between the two sources of guidance. While morality may be characterized as the consensus of subjective ethical positions, it must equally be acknowledged that the prevailing morality during one's formative years is likely to influence the direction and scope of an individual's ethical development – not least by defining the very topics they are disposed to consider (or neglect) as posing relevant questions of right

and wrong. Nevertheless, each individual is free to choose what they believe to be ethical, and why, meaning that discrepancies do arise. It is only through such discrepancies that moral development becomes possible, and the Socratic method of developing an ethical case by exposing errors and confusions in prevailing arguments has proved indispensable in this respect (Singer 2015).

Applying the above definitions to the subject matter of this thesis – the use of animals for food in Europe – it becomes apparent that meat consumption in Europe is generally regarded as not being morally transgressive. This conclusion is supported by the widespread dominance of omnivorous diets (see Meat Production and Consumption Trends), the ubiquitous legality of animal husbandry practices and meat consumption across international, European, and national legal frameworks, and the absence of social sanctions in the wider community for engaging in such practices. Meat consumption, if not explicitly moral, is currently not regarded as immoral by the European community at large. It is not the purpose of this dissertation to question the morality of meat consumption. Indeed, the applied definition of morality as being socially determined precludes such a goal. Rather, the psychological approach of the current work treats the individual as the unit of analysis. Of interest from this perspective are the subjective viewpoints of individuals regarding the use of animals for food and the ways in which disparate individual beliefs related to the topic can be reconciled into their own ethical framework in an intuitive and logically consistent manner. This work is therefore concerned with ethics, being the systematized subjective understanding of right and wrong by individuals.

This approach is also applied with respect to participants in the various studies, with all communications, data collection instruments, and materials referring exclusively to ‘ethics’ and accompanied by the instruction that:

“Whenever you see the word ‘ethical’ it refers to your personal perception of right and wrong, according to however you make such distinctions. It does not refer to what society thinks generally, or to what some particular community thinks – although these may coincide with, or inform your personal perceptions” (taken from the Conditions of Instruction, see Appendix).

### **2.1.2 The case for animal rights**

Having defined what is meant by ethics, this section lays out several ethical arguments for animal rights. The purpose is not to advocate a specific ethical framework, but rather to illuminate the principles underlying animal rights advocacy in order to understand the messages and motivations of those who engage in this cause. As most people hold beliefs which align with these underlying principles, yet simultaneously hold attitudes towards certain animals which contradict these principles, personal advocacy for animals generally focusses on highlighting

these inconsistencies and encouraging rationality. Such arguments are appeals to logic and personal values, which do not rely on ethics being either universal or objective.

The meaning of 'animal rights' has become progressively less specific since the animal protection movement adopted the 'rights' language of other social movements in the late 1970s (Jasper & Nelkin 1992), to the extent that even veal producers now claim that "animal rights are important" (Francione 2007). As will be seen, this is a massive departure from the original meaning of the term which would preclude all commercial meat production, and especially that of veal. Compounding the co-option of the term by hostile groups, 'animal rights' was always somewhat a misnomer in that general usage of the term does not necessarily imply the acknowledgement of rights in a philosophical sense according to a deontological argument. Rather, 'animal rights' also refers in a more restrictive sense to legal rights conferred on animals, which may be supported for purely pragmatic purposes even by those who reject the notion of inherent rights and subscribe instead to consequentialist reasoning: that is, individuals who support animal rights, but do not believe that animals have a (philosophical) right to those (legal) rights.

This qualification already illuminates the major philosophical division between animal rights factions. Common versions of both deontological and teleological arguments for animal rights, termed 'abolitionist approach' and 'animal liberation' respectively, are presented in this section along with the major counter arguments which have been proposed. While these two philosophical approaches can yield divergent ethical conclusions in relation to certain fields of human-animal interactions, most notably vivisection, they are remarkably consistent in their decrees regarding the use of animals for food. This is not to paint the animal rights movement as a homogeneous group – significant diversity exists in terms of roles and strategies, as discussed in the section on Animal Liberation as a Social Movement – but the movement nevertheless agrees that animals are not for eating. Here we examine how they reach this verdict.

### **2.1.2.1 Abolitionist approach**

The most renowned version of the deontological argument for animal rights is that put forward by philosopher Tom Regan (1983) in *The Case for Animal Rights*. In claiming that moral rights arise from the recognition of an individual's intrinsic value, Regan's argument largely follows in the Kantian tradition, yet differs as to the criterion for ascribing intrinsic value. Whereas Kant emphasised rationality as the necessary condition for respect – ostensibly including humans and excluding non-human animals – Regan observes that many non-rational humans are routinely accorded respect on account of their inherent value: obvious examples being infants and the mentally impaired. Instead, Regan proposes that the unifying attribute underlying the inherent value of all humans is that we all experience being the 'subject-of-a-life' (Regan 1983): having a



life which matters to us regardless of what others may think. In applying the fundamental ethical principle of consistency, inherent value must be acknowledged in all subjects-of-a-life regardless if they are human or not. Regan (1983) subsequently defines subjects-of-a-life as having a “psychophysical identity over time”, consisting of the capacity to perceive and remember, a sense of one’s own future, beliefs and preferences, and intentional action in pursuit of these desires. Those beings which fulfil these criteria are accorded moral rights: the most basic of which is the right never to be treated merely as a means to the ends of others.

It has been noted that Regan’s criteria may be too restrictive to even encompass all humans within the moral sphere (Wrenn 2012), in the same way that Kant’s rationality criterion fails to account for the extension of moral concern to infants and the mentally impaired, and therefore fails to align with the ubiquitous moral intuition that these beings are also due some consideration. Accordingly, other scholars who favour deontological arguments have removed the requirement for complex cognitive functions in favour of less restrictive criteria focussing on sentience alone in determining the allocation of rights (e.g. Francione 1996, who further suggests a precautionary approach to those species whose sentience is questionable). These varying approaches lead to different conclusions about the conferment of rights to certain species, yet they agree unequivocally that the mammals and birds which account for the vast majority of human consumption have rights which demand respect: paramount among which is the right to freedom from harm (Regan 1983).

Shue (1996) makes the case that the right to physical security – a right “not to be subjected to murder, torture, mayhem, rape, or assault” – is the most fundamental of all rights, by differentiating between ‘basic rights’ and ‘non-basic rights’: the former representing prerequisite conditions for the enjoyment and exercise of the latter. With respect to the Universal Declaration of Human Rights (United Nations 1948), for instance, Article 4 (“No one shall be held in slavery...”) is only of use to an individual only under the condition that Article 3 (“Everyone has the right to life...”) is satisfied. It does not much help one to be protected from slavery if one can be killed instead, so Article 4 is effectively meaningless in the absence of Article 3, which is therefore a basic right. It follows that if non-human animals are to have any meaningful rights at all (de facto rather than purely de jure), they must have a right to freedom from bodily harm. This perspective suggests that those Americans who believe that non-human animals do not have a right to life, yet are among the 74.5% who believe that non-human animals have at least some rights (Nibert 1994), are on shaky ethical ground.

There may be times when respecting one individual’s right to freedom from harm necessitates another’s right to freedom from harm to be superseded. In dealing with such situations, Regan (1983) proposes two principles: the ‘miniride’ principle instructs overriding the rights of the few rather than the many (when the individuals would be equally harmed); whereas the ‘worse-off principle’ advises mitigation of the greatest harm (in cases where individuals would be differently harmed). It is not entirely clear whether Regan would apply these principles in

determining the ethical course of action for a human group stranded in a 'desert island' scenario and facing the option of killing a pig in order to sustain the group, or whether ethical arguments are dismissed altogether in cases of necessity. Uncertainties in such hypothetical situations notwithstanding, the implications for the use of animals for food in European market economies are clear: the basic right to bodily integrity of any sentient animal (human or non-human) may not be compromised to accommodate the less-basic interests of human populations. Regan extends this reasoning to condemn both animal experimentation and commercial hunting.

Francione's position is rather clearer, and rather more absolute. The only way in which to uphold the rights of non-human animals to be treated as ends rather than means, he holds, is to reject all forms of exploitation and to advance the legal status of animals from that of property to that of personhood (Francione 1995). Any other arrangement inevitably leads to the subjugation of the interests of the 'property' to those of the property owner. A clear parallel can be drawn between this position and the ethical arguments motivating the end of institutional slavery in the United States. For this reason, as well as the need to distance this clear ethical position from the industry co-opted term of animal rights, this approach has become known as the 'abolitionist approach' to animal rights.

While the discussion here has attempted to explore some of the intricacies of the deontological position, and is therefore somewhat convoluted, it is in fact an advantage of this philosophical approach that the argument is easy to communicate in a concise fashion: non-human animals have rights and to kill them for food is a violation of these rights. Pragmatically, Jasper and Nelkin (1992) observe that 'rights talk' is often the most effective way to communicate moral values in individualistic cultures such as the United States and, increasingly, Western Europe. Whether they are justified through tradition or coherent ethical arguments, rights claims by human groups tend to be accepted as non-negotiable moral trump cards, which suggests that it may also be a useful strategy for animal advocacy. It should be noted that while the ethical arguments presented in this section adopt the wording of a universal morality (in asserting that humans objectively have rights), they can easily be adapted to reflect a moral relativist position by changing the original premise (humans have rights) into a conditional statement (if all humans have rights...). From there, the argument is one of logical consistency which relies only on rationality and not values. Of course, some will determine that humans do not have rights in a philosophical sense, and that non-human animals do not either: among them will be those who favour consequentialist reasoning.

### **2.1.2.2 Animal liberation**

Classical (hedonic) utilitarian arguments concerned purely with pleasure and pain are often employed by animal 'welfarists' in pursuing industry reform without challenging the notion of animal exploitation (Jasper & Nelkin 1992). Welfarists seek improvement in the conditions for

non-human animals (e.g. shifting from cages to free-range) but do not question their use for human purposes. While such individuals and groups are actors for animal protection, they are not generally considered to be part of the animal rights movement (Wrenn 2012). An important reason for this is the apparent misalignment of the welfarist position regarding animals with the commonly held value that it is unacceptable to painlessly kill a human without their consent. In order to avoid the charge of speciesism while maintaining their stance on ‘humane slaughter’, welfarists would need to either 1) condone the painless murder of humans, or 2) identify a valid grounds on which to justify the differential treatment of humans and other species. The most common attempts at justifying such discrimination are addressed in the following section: suffice for now to say that these justifications have not satisfied the rest of the animal rights movement.

The understanding that pleasure and pain are insufficient to explain the deepest of moral intuitions led to the contemporary field of preference utilitarianism (Hare 1981), which defines right actions as those which consider the interests of those beings involved (Singer 1993). This consequentialist approach to animal rights is generally referred to as the case for animal liberation, after the book by philosopher Peter Singer which catalysed the animal rights movement in the 1970s. Pleasure maximization and pain minimization are not ignored in this philosophical approach: they enter the preference utilitarian equation as two more interests which must be considered, just not the only ones. More importantly, the capacity to feel and experience subjectively – sentience – is the single criterion for recognition as a member of the moral community: a philosophy known as sentiocentrism (Bekoff 1998). The choice of sentience over the range of other traits proposed to confer moral standing (e.g. Kant’s rationality or Descartes’ immaterial soul) is not arbitrary: sentience is identified as the prerequisite condition for a being to be able to differentiate various states as being relatively better or worse, and therefore to have an interest in the realization of one state rather than the other (Singer 1975). Sentience is that which turns pain into suffering: that which makes feeling matter (Webster 2011). Although the ability to comprehend one’s own existence or articulate one’s preferences are entirely unnecessary conditions for the holding of interests (human infants have interests despite lacking rationality), cognitive faculties such as the ability to consider future consequences may generate additional interests of relevance (Singer 1993).

As sentient beings have interests which matter (at very least to those beings), the preference utilitarian argument holds that decisions about right paths of action are obliged to take those interests into account (Singer 1975). Within the European Union, the sentience of farm animals has been legally recognized as a protocol since the 1997 *Treaty of Amsterdam*, and as an Article since the 2009 *Lisbon Treaty*. This recognition has generated new legislation within member states which begins to take their capacity to suffer into account, but as yet fails to recognize other and more fundamental interests. Just as sentience is a prerequisite for having preferences, so life is a prerequisite for being sentient. Singer (1975) proposes that all sentient beings have

an implicit interest in remaining alive because the maintenance of this condition is necessary for them to realize their other preferences: that is, an interest in obtaining pleasure implies an interest in being alive to have that subjective experience. It is through this recognition of the value of life to the individual that the perspective of the preference utilitarian differs from that of the classical utilitarian.

The recognition of relevant interests in moral subjects does not necessitate that these preferences be fulfilled, merely that they be taken into account. When the interests of different beings come into conflict, they must be traded off in order to determine an overall optimal solution. While Hare (1981) proposes mathematical solutions to this end, such computations become relevant only when the conflicting interests are similar in nature yet differ in strength. In most cases, however, qualitative differences between the competing interests allow them to be graduated according to importance (Singer 1975). Just as a rapist's interest in sexual satisfaction can never take priority over the rape victim's interest in maintaining their bodily integrity, regardless of the relative strength of the two preferences, so too must the taste preferences of the eater give way to the interests of the eaten in continuing to live. Accordingly, and in line with the conclusion of the animal rights position, Singer's (1975) case for animal liberation rejects the use of non-human animals for the 'lesser' needs of humans.

In certain cases, however, the conflicting interests may not be so different, or the interests of the users may override those of the used. In the hypothetical case that the painful yet non-fatal extraction of cells from an animal could save multiple human lives, the preference utilitarian would likely find that the involuntary extraction of the cells is ethically justified (even if the unwilling donor were human rather than animal). Extrapolating this medical example to vivisection is complicated by the fact that the outcome of research on animals is always unknown. Evaluating the consequences of such experimentation must therefore weigh the *certain* subjugation of the animal's interests against the *possible* benefits to others. Varying assessments of both the probability of success and the nature of the interests themselves will lead preference utilitarians to different conclusions about the ethical course of action in a given situation, but the use of animals (or humans) in general is not precluded. Here the utilitarian view differs from the animal rights position, which would disallow all such practices as violations of the donor's right to not be used as a means to another's ends.

### **2.1.2.3 From ethical frameworks to social justice**

There is no consensus between philosophers as to whether the deontological or teleological approach to ethics has more merit. In a survey of 931 professional philosophers which probed their tendency to support each of the dominant normative ethical frameworks, 25.9% accept or lean towards deontology, 23.6% towards consequentialism, and 18.2% towards virtue ethics, while 32.3% selected a range of 'other' answer options (PhilPapers Surveys 2016), and these

proportions do not change substantially when enlarging the sample to the full 3226 respondents by removing the restriction on respondents' academic qualifications. It seems, therefore, that all of the ethical frameworks are minority approaches with similar levels of support within the academic community.

To the best of the researcher's knowledge, no statistics exist to illuminate the tendency of animal advocates in general to favour one approach over the other. Some activist factions, notably the militant Animal Liberation Front (<http://www.animalliberationfront.com/>), explicitly side with the rightist ethical framework in arguing for the immediate cessation of all animal exploitation. They are typically unwilling to support incremental reforms to exploitative practices, and may disparage those who do as tacitly condoning the property status of non-human animals (Francione 2007). Jasper and Nelkin (1992) classify such actors in the animal protection movement as 'fundamentalists'. At the other end of the scale, 'welfarist' groups such as Humane Societies and Societies for Prevention of Cruelty to Animals (SPCA) follow a classical hedonic utilitarianism in opposing animal cruelty and seeking to minimise suffering, yet permitting killing. In the middle are the 'pragmatists' who see animal use as permissible in certain circumstances (Jasper & Nelkin 1992) and therefore align most closely with Singer's preference utilitarian framework. As Jasper and Nelkin (1992) acknowledge, the distinctions in this classification scheme are not rigid or absolute: as the categories are defined by both strategic and philosophical approaches, some groups defy labelling. People for the Ethical Treatment of Animals (PETA), for example, was founded after one of the two initiators gave a copy of Singer's 'pragmatic' Animal Liberation to the other (Jasper & Nelkin 1992), yet adopted the 'fundamentalist' long-term goal of ending all animal exploitation (PETA 2016), which they often pursue through 'welfarist' reform strategies (Wrenn 2012).

Other groups are still harder to categorize, as the underlying philosophical basis on which their campaigns and communications are founded is rarely made explicit. Possible explanations are that the individual members have not explored the issue at a deep philosophical level, or that these groups have not committed whole-heartedly to any one approach for fear of alienating potential supporters. The former explanation is supported by Herzog's (1993) finding that only four out of the 23 animal rights activists interviewed were "knowledgeable about the nuances of animal rights philosophy such as the debate between deontological and utilitarian theorists". The latter explanation is supported by the fact that many activist groups offer both Singer's and Regan's arguments, as well as a range of less recognized positions, among the literature supplied through their websites. This may be a wise strategy given the finding that, at least within the field of business ethics, people apply a combination of both deontological and teleological criteria when making ethical judgments (Hunt & Vitell 1986; Hunt & Vasquez-Parraga 1993). The discovery of pluralistic modes of reasoning are hardly surprising given that many people recognize specific rights for humans as well as acknowledging the ethical import of non-human animals' interest in avoiding suffering. Possible explanations are that consequentialist reasoning

is applied only in situations where specific rights are not explicitly defined, or that rights act as heuristics to circumvent the need for utilitarian calculation. Regardless, the use of both deontological and teleological approaches is an apparent logical inconsistency, which brings into question the ethical foundation of any conclusions drawn, and may have the potential to arouse dissonance when made salient.

Instead of expounding complete ethical arguments which first examine the justification for treating humans in certain ways, as do Singer and Regan, animal rights activists tend to take the moral status of humans as their starting point and then question why certain species of non-human animals should not be afforded the same status. That is, they appeal exclusively to the principles of logic and equity in framing their case as a social justice issue. The formulation of questions which probe apparent discrepancies in the ethical reasoning of their audiences can be seen as the application of the Socratic Method. Given a deontological basis for the moral status of humans, one may ask: "If we acknowledge that humans have rights, on what basis can we deny the rights of non-human animals?" An underlying teleological framework would generate the question: "If we are compelled to consider the interests of humans in deciding right from wrong action, are we not also compelled to consider the similar interests of non-human animals?" A significant strength of this approach is that it circumvents moral epistemological questions about universality and relativity: those are questions to be addressed by the individual who is the target of the animal advocacy communications. If they believe that human beings have rights and/or interests which demand consideration, regardless of how this conclusion was reached, there is the potential for the extrapolation of this consideration to other species: if they do not recognize moral value in humans, they are unlikely to do so in animals. Likewise, as the individual forms the unit of analysis in this study, all that matters is their beliefs and the degree to which their subjectivity can be influenced.

### **2.1.3 Speciesism**

Humans and other species are routinely treated differently by people generally, and under the law. The ethical question is whether this discrimination is justified. There are sound reasons why the differential treatment of various groups is permissible in certain circumstances, but these reasons must refer to specific traits which differ between the individuals comprising those groups, and which relate directly to the differential treatment. For example, there is no ethical problem with selecting an all-black basketball team if the athletic ability of each of those players is superior to all of the white aspirants, but selecting an all-black team on the basis of their skin colour is the unjust discrimination we recognize as racism.

In pointing to differences in the way that humans and other species are treated, animal advocates beg the question of whether there are any relevant traits which justify this discrimination. Some of the distinguishing characteristics which have been proposed are

addressed in the following section, but the criterion of 'species membership' is a special case which is dealt with here. The term 'speciesism' (Ryder 1971) was coined to draw parallels to other forms of discrimination such as racism and sexism on the grounds that one's species, like one's race or one's gender, does not amount to a defensible justification for differential treatment in most cases. Rather, moral consideration is usually assigned on the basis of specific observable characteristics, such as life or sentience (Singer 1975).

While there may be specific characteristics which justify the differential treatment of individuals across species lines, the dominant taxonomical approaches of cladistics and evolutionary systematics are poorly equipped to identify them, grouping individuals as they do according to genetic similarity or evolutionary closeness (Opperdoes 1997). That is, our current classification system focuses on heredity, "who their parents are", rather than "what they are". The primary criterion applied – the ability to interbreed to create viable offspring – results in dogs and pigs being classified as different species, yet this fact alone cannot justify their differential treatment. Even if it could, it would not inform us of which of the two species should receive the preferential treatment currently enjoyed by dogs. This taxonomical approach, which has come to dominate the natural sciences, is only one of numerous approaches that have been proposed by biologists. The now obsolete taxonomical approach of phenetics groups taxa based on the overall similarity of all available characteristics without any preference or weighting being assigned to one characteristic over another (because, for example, of the order of branching) (Opperdoes 1997). As we base decisions regarding moral considerability on elements of character, this would seem to be the more appropriate grouping strategy from an ethics point of view.

In this context, our current understanding of species membership can be seen as an arbitrary distinction which cannot logically form a basis for ethical reasoning. Furthermore, the current taxonomical approach is flawed in its ability to classify many of the earth's lifeforms - resulting in a large number of exceptions to the rules that have been arbitrarily applied. A prominent example is that of so-called 'ring-species' typified by various populations of gulls and salamanders. As genetic variation increases with spatial separation, a paradoxical situation results in which each pair of neighbouring populations can interbreed and are therefore classified as the same species, yet the populations at each end of the genetic chain are sufficiently different that they cannot viably reproduce and must therefore be classified as different species; thereby violating the principle of transitivity (Dawkins 2004).

If not problematic enough, the process of evolution reveals that what occurs spatially also occurs temporally (Lawlor 2012). Minor mutations over time have not precluded successful interbreeding with direct ancestors – for otherwise the mutation could not be passed on – yet eventually a creature may emerge which cannot interbreed with its distant ancestors. If it is to be defined as a different species to the distant ancestor, the species border must necessarily be drawn between individuals who can viably interbreed. It is worth considering the evolution of humans in this light. While we appear to be far removed from other species in an evolutionary

sense, this appearance is merely an historical anomaly resulting from the fact that our closest ancestors are now extinct - likely at the hands of our own species. Dawkins (2004) highlights the fact that classification into species is only possible due to such extinctions, and that if we were to consider all of the species which have ever lived (rather than just those currently alive) we would see a smooth continuum in which distinguishing species would appear just as arbitrary as it truly is. These problems with the current taxonomical approach provide further grounds to question the feasibility of basing differential treatment of individuals on their species membership alone and demonstrate the ethical problematic of moral specist attitudes.

While the discussion here has focussed on non-human animals, it should be noted that homosapiens have been classified according to the same ambiguous criterion: we are homosapiens because we can viably interbreed among ourselves, and other animals are excluded from this category because they cannot viably interbreed with us. If the outcome of this classification system is regarded as an insufficient justification for the differential treatment of pigs and dogs, the fact that “we are human” must similarly be regarded as an insufficient justification for treating other species differently to other humans. Such discrimination can only be justified by reference to a morally relevant characteristic, and not to species membership alone. This amounts to a challenge to those who believe, for instance, that it is not permissible to kill and eat other humans, but that it is permissible to kill and eat other species. Many attempts have been made to define such a morally relevant distinction, and these are addressed in the following section.

#### **2.1.4 Animal rights counter-arguments**

One way in which moral domains are distinguished from non-moral domains is through the designation of various actors as being worthy of moral consideration, or not. While most people believe that all humans are members of the moral community and must therefore have their interest in continuing to live taken into account, non-human animals are not normally given the same consideration. This section addresses the arguments most commonly employed to exclude non-human animals from the moral community.

##### **2.1.4.1 Soul**

Some philosophers follow Descartes in contending that humans possess souls whereas non-human animals do not (Rutherford 2013). Those who argue this case tend to believe that it is the possession of a soul which accords moral standing, and that they have definitively differentiated all humans from all non-humans. Such beliefs are non-verifiable however, either in terms of the existence of a soul in humans or the absence of souls in non-humans, and it should also be noted that alternative theological traditions including Hinduism and Jainism ascribe souls to all biological organisms. Despite the impossibility of scientifically verifying



positive claims regarding souls, the notion of an eternal essence which endures the death of the physical being is an interesting concept which could conceivably relate to moral standing: the question is the nature of such a relationship.

While theologians generally state that possession of a soul confers moral standing, such a claim does not amount to a logical argument and closer inspection fails to identify why any such relationship should hold. Persuasive arguments can be composed in the opposite direction, however. Author CS Lewis was largely convinced that humans possessed souls whereas non-human animals did not (at least not immortal souls). From the premise of man's superiority, Lewis reasoned the moral responsibility for humans to protect and care for animals because they cannot "be recompensed by happiness in another life for suffering in this" (Lewis 1947). According to Lewis, it is precisely the lack of an immortal soul in non-human animals which makes their experiences in this life and the continuity of their current lives more important and morally relevant than those of humans, who have the future possibility to be recompensed for their current suffering. A similar line of reasoning is adopted by Scully (2002) in reinterpreting biblical references to man's 'dominion' over animals as an obligation to protect, rather than a license to exploit. From an objective position, these arguments are more logically appealing than unsubstantiated claims that souls confer moral standing. However, as acknowledged by Lewis (1947), the very existence of a soul in any being is mere speculation which should not form the basis of a moral code: scientific progress over the intervening 70 years has done nothing to further inform this issue.

#### **2.1.4.2 Intellect, rationality, and consciousness**

Frey's (1980) *Interests and Rights: The Case against Animals* makes the deontological case that non-human animals do not have moral rights because they are unable to undergo the same emotional and intellectual experiences as humans. Neither can utilitarian arguments be applied to animals, according to Frey (1980), on account of their lack of wants and expectations. Similarly, Partridge (1984) disqualifies non-human animals from the possession rights on the basis of their lacking rationality and self-consciousness, which are claimed to confer 'personhood'. Despite variation in the traits identified by these authors, each of their contentions can be challenged in at least three ways.

The first is to accept the logic of each argument, in turn, but to show that non-human animals indeed possess these traits and are therefore due moral consideration. Consciousness, a more restrictive criterion than Singer's and Francione's appeal to sentience, has been demonstrated in several species (e.g. Reiss & Marino 2001), and recognition has been extended to include (at least) all vertebrates (Cambridge Declaration on Consciousness 2012). Rationality, wants and expectations are often denied in non-human animals due to a claimed inability to conceive of future activities and associated rewards. It is the foundational principle of animal training

techniques such as operant conditioning (Skinner 1938), however, that animal behaviour (human and non-human alike) is largely guided by expectations regarding the consequences of that behaviour. Those animals which can be successfully trained using such techniques, at least, must have the capacity to conceive of the future and their role in it. The ability of non-human animals to feel is not only obvious, but is also recognized by EU legislation (European Union 2007). An absolute lack of these traits cannot be used to defend the exclusion of non-human animals from the moral community, but what about their magnitude?

The second approach to challenging each of the claims is to highlight that the selection of a 'human level' of traits such as intellect or rationality as the threshold for moral consideration is both arbitrary and self-serving. Any attempt to defend the current level of human intellect as being an objectively relevant limit would have to concede the objectionable conclusion that a future reduction in human intellect would render human beings unworthy of moral consideration.

Alternatively, if this particular level has been chosen merely because it is 'human', then the argument can be dismissed as inherently speciesist. A still greater problem with Frey's comparisons between the capacities of human and non-human animals is his failure to recognize the diversity which exists within each group.

A third option is to highlight the fact that some non-human animals possess the specified traits to a greater extent than some humans. The average pig, for instance, has superior intellectual faculties to the average 6 month old infant (Singer 1975) as well as the comatose, the senile, and the severely cognitively impaired. The conclusion from such observations is that those who would deny the pig moral consideration on account of its intellect must also deny moral consideration in the other cases: many people would find this conclusion repugnant. References to the moral status of human babies are generally subsumed under the terms 'arguments from species overlap' or more commonly 'arguments from marginal cases' (Dombrowski 1997). The latter is a misnomer given that all moral agents have been 'marginal cases' at some stage: the terminology is perhaps intended to diminish the impact of this argument which is so problematic for those who seek to define a narrow membership of the moral community, yet include all humans. We will have cause to return to the argument from marginal cases in relation to contractarianism.

#### **2.1.4.3 Hobbesian Contractarianism**

A staunch critic of animal rights, Carl Cohen concedes that non-human animals are sentient and can suffer, but holds that "animals cannot be the bearers of rights, because the concept of rights is essentially human; it is rooted in the human moral world and has force and applicability only within that world" (Cohen & Regan 2001). This position is based in Kant's notion of a social contract, in which rational agents voluntarily agree to be bound by negotiated moral norms for

the benefit of society and individuals alike (Cudd 2013), but aligns most closely with the Hobbesian version of contractarianism, in which moral rights and duties are claimed to arise from the terms of an agreement reached in a hypothetical bargaining situation by rational agents representing their own self-interests (Carruthers 1992). Given that this contract is essentially a prudential device with its authority derived from voluntary agreement to its terms stemming from the mutual benefits it affords the contractors in terms of various protections, it would be irrational to contract with those who cannot reciprocate, or who are substantially weaker and therefore pose no threat. In reducing morality to self-interest, Hobbesian contractarianism extends moral consideration only to rational beings capable of extending moral consideration to others (Rowlands 2009): this position clearly excludes non-human animals, but so must it exclude the 'marginal cases' of babies and the cognitively impaired.

Carruthers (1992) tacitly concedes that logical consistency excludes all marginal cases, but proposes the addition of a loophole which brings all non-rational humans into the moral community on the grounds of maintaining social stability. This requires a distinction be made between the direct obligations owed to rational agents on account of their legitimate moral standing, and the indirect obligations due to non-rational agents which arise only because of potential flow-on effects to rational agents (Rowlands 2009). This view is not intuitively appealing: it seems more like our obligation not to harm infants derives from the interests of the infants themselves, rather than the interests of society at large. Moreover, the necessity of such a significant caveat raises serious questions about the utility of the Hobbesian social contract model itself. Machan (2004) seeks to negate this caveat by observing that rational agents retain their moral status even when their rationality is temporarily suspended – such as during sleep – and subsequently claims that it is not the present state of the individual that matters, but the 'normal' state of being. According to the 'argument from species normality', as rationality is the normal state for humans but not for non-human animals, all of the former and none of the latter are members of the moral community (Machan 2004). However, the fact that Machan arbitrarily selects to define normal states at the species level (rather than for six month old infants, or for all vertebrates, etc.) demonstrates the inherent speciesism in this argument.

In attempting to include infants in the moral community while excluding other species, Hsiao (2015) defines all humans as moral actors based on their possession of the 'root capacity' for moral reasoning, despite the actual inability of marginal cases to manifest moral agency. Three major objections can be mounted against this position. The first is that, for any given capacity claimed to be relevant to moral consideration, it must be the expression of that capacity which qualifies one for membership of the moral community: blind people are not members of the seeing community despite their root capacity for sight (as evidenced by their non-functional eyes). Secondly, like Machan (2004), this argument is speciesist in claiming (without justification) the relevance of root capacity at the species level rather than some other level of aggregation.

Thirdly, and most importantly, even if the notion of ‘root capacity’ were to be adopted as sufficient grounds for classification as a moral actor, such reasoning cannot be used to exclude other species from the moral community; as Hsiao’s ‘root capacity’ need not manifest in any observable or measurable forms, it is infeasible to mount a case that any other species lack a given root capacity and are therefore excluded from the moral community.

Seeking to reconcile the exclusion of non-rational humans according to social contract theory with the observation that infants are universally acknowledged as being morally valuable and owed a duty of care in their own right, Singer (1993) draws the useful distinction between moral agents and moral subjects. Moral agents are those rational beings who have a responsibility to behave in accordance with a set of moral guidelines, whereas moral subjects are non-rational beings who are nevertheless afforded moral protections by moral agents, despite their inability to extend the same consideration to others. While rationality is the necessary condition for being a moral agent, Singer (1993) identifies sentience as the criterion for qualification as a moral subject: thereby determining that all humans and many non-human animals are deserving of moral consideration.

The obstacle presented by marginal cases appears intractable for those who seek to define rational thought as the eligibility criterion for moral consideration, but there is also a broader challenge for moral arguments based on concepts of reciprocity: accounting for the responsibilities of current populations towards future generations. Such ideas have been recognised as traditional wisdom among indigenous populations for millennia and are now gaining prominence in the west under the sphere of sustainability, but the temporal nature of intergenerational obligations clearly precludes the possibility of reciprocity. Singer’s distinction between moral agents and moral subjects provides a parsimonious and logically consistent solution to explaining our moral imperatives towards infants and future generations which Hobbesian contractarianism cannot vindicate. However, there is another form of contractarianism which is able to accommodate these intuitions.

#### **2.1.4.4 Neo-Rawlsian Contractarianism**

The alternative expounded by Rawls (1971) in *A Theory of Justice* develops the concept of the contract in a distinctly different way. Whereas Hobbes sees the contract terms hypothetically negotiated by rational agents of equivalent power as determining moral right and wrong without any prior conception of morality, Rawls conceives of the contract as a heuristic device which has the function of identifying and expressing the principles of a moral code which, for whatever reason, has been adopted. One essential element which is exogenous to the contract is the intuitively appealing moral equality of individuals, as proposed by Kant (Rowlands 2009). This inexorable stipulation implies the importance of impartiality in deliberating the terms of the contract (Rawls 1971) in order to overcome the subjectivity and power imbalances which

both restrict the inclusion of contractors and influence the outcomes of the Hobbesian contract. Rawls proposes the 'original position' as a heuristic device to ensure that this condition of impartiality is fulfilled, by placing contractors behind a 'veil of ignorance' which conceals from them all knowledge of their personal talents, characteristics, or place in society (Rawls 1971). Having assumed the original position, by imagining these conditions to hold, the contractor (and there need only be one) is tasked with determining the rules by which society should operate. The contract which emerges from this deliberation will be impartial because "one can be partial towards oneself only if one knows who, and what, one is" (Rowlands 2009). In this way, the process represents an intuitive test of distributive justice akin to dividing a pizza without knowing which piece we will get (Rowlands 2009): in choosing that division which is personally advantageous, we choose what is best for everyone.

The Rawlsian contract is not an agreement between contractors which constitutes morality in the Hobbesian sense, but a blueprint which functions to reveal the implications of a pre-contractual ethical principle: the moral equality of individuals. Rawls holds that only rational individuals are subsumed under this principle, as only rational agents can viably occupy the original position (Rawls 1971): this follows Hobbes in concluding that only individuals capable of framing a contract can receive protection under that contract. While it is certainly true that rationality is a prerequisite for adopting the original position in order to make the rules, it is non sequitur that this fact precludes the formulation of provisions for non-rational beings. Rowlands (2009) points out that question of one's rationality would be one of the characteristics concealed behind the veil of ignorance, and, even if it wasn't, that it would be irrational for an individual in the original position to fail to make provisions for the non-rational, given that many humans will eventually reach this state as they pass into senility. Rowlands (2009) considers Rawls' adherence to the stipulation of rationality as "an incongruous remnant of the Hobbesian vision of the contract", which he purges in developing the neo-Rawlsian position.

To summarize, rational agents strip themselves of their subjectivity by assuming the original position, under which they do not know their place in society: be it human, animal, tree, or rock. In this state they are able to impartially deliberate the rules according to which society should operate, and thereby define the obligations of rational beings towards all other beings and things. The rules which would emerge from this process would include provisions relating to all humans and all sentient animals, living both now and in the future, because those rules would matter to the deliberator if they were any of these beings. However, no provisions would be made for plants and rocks because, even if on emerging from the veil of ignorance the deliberator learns that they are, in fact, a rock, they would be indifferent to the implications of any rules: "the contractarian position, then, makes sentience the cut-off point for morality" (Rowlands 2009).

With respect to the morality of killing animals for food, the rational agent – not knowing whether they would be human or animal – would consider the implications of this decision from the

perspective of each party. On the one hand, the status quo allows humans to satisfy their gastronomic desires at the expense of the premature death of animals. On the other hand, a vegetarian world may necessitate some sacrifice of palate sensations by humans, although this is unclear, whereas animals would be spared their lives. Given that the sacrifice of one's life significantly outweighs the sacrifice of some fleeting taste sensation, the rational choice according to Rowlands would be to opt for a vegetarian world: "and if this is the rational choice in the original position, then, if contractarianism is correct, it is the moral choice in the actual world" (Rowlands 2009).

Pre-empting common objections relating to the behaviours of carnivorous animals, Rowlands (2009) offers the following clarifications:

- Lions, unlike rational humans, are not moral agents so they are not bound by any moral code and are not acting immorally in killing and eating their prey.
- There is no obligation for humans to interfere in the natural order by protecting prey animals from predators, because doing so would condemn carnivorous predators to starvation; as the deliberator in the original position does not know whether they will be a carnivorous predator, they would not elect to include such a provision.

In conclusion, while contractarianism is almost universally considered to be an incompatible with animal rights (Rowlands 2009), and this belief holds true for Hobbesian contractarianism, the more amenable neo-Rawlsian version which accommodates our intuitive obligations to non-rational humans and future generations actually constitutes one of the most parsimonious arguments in favour of animal rights.

#### **2.1.4.5 The Myth of Consent**

The myth of consent is associated with the idea of a contract, except that the non-rational animal is a party to this hypothetical contract and a willing participant in its own slaughter. Michael Pollan (2006) makes reference in *The Omnivore's Dilemma* to ancient rituals whereby spiritual figures infer the compliance of the animal to be sacrificed from their behaviours. In ancient Greece, for instance, animals were found to consent to their own slaughter through the shaking of their heads after having water sprinkled on them. While such rituals are unknown in modern western societies, they have been replaced to some degree by a "post-Darwinian version of the ancient myth of animal consent" (Foer 2009), which conceives of domestication as a mutually beneficial form of coevolution.

According to this view, domestication is not a political development imposed on animals by humans, but the outcome of certain opportunistic species realizing a symbiotic relationship by striking a deal with humanity (Pollan 2006). Rather than contend with the slings and arrows of outrageous fortune implied by a natural existence, the argument goes, animals have consented to human protection and a regular food supply in exchange for having their lives prematurely

ended to provide meat for their human allies in this evolutionary struggle (Foer 2009). Pollan (2006) asserts that this bargain has been enormously successful from the animals' point of view in achieving their supposed goal of the survival and proliferation of their species. Herein lies the rub: according to this hypothetical bargain, the interests of the individual – e.g. life – must be sacrificed to realize the interests of the species, yet choices are made by individuals, not by species. The claim that individual animals would opt for the perpetuity of their species in preference to their own lives is entirely unsubstantiated, as is the notion that these species could not have survived without 'collaborating' with humankind.

Nevertheless, a common defence of this position points out that if there were no domesticated species, say because the world turned vegan, then there would be no individuals. This forecast is untrue as many breeds of farm animal are already 'ornamental' or raised as companion animals (Foer 2009), but even if it were true, the choice which individuals would make in this context remains highly uncertain. To highlight this, one may consider whether they would personally choose to sacrifice their own life and those of all their family and acquaintances in order to secure, for some undefined period, the continuity of *Homo sapiens*: all future members of which would be subjected to captivity and premature death. To the extent that other humans, like me, would choose the survival of the individual over the perpetuation of the species in this situation, the post-Darwinian myth of consent fails as a defence of meat consumption. In fact, given the limited cognitive capacities generally ascribed to livestock, it seems probable that they would be even more likely than humans to select for the tangible individual survival option in preference to the abstract species survival option.

### **2.1.5 Summary: a prima facie case**

This section has not unequivocally demonstrated the ethical imperative of animal rights – either in an absolutist sense or for those relativists that recognize the moral claims of humans – but this was never the intention. The more modest goal of this section is to demonstrate that the ethical case underpinning the work of animal rights advocates is one of sufficient substance that it demands consideration by those who regard themselves as ethical actors.

Of course, not everyone recognizes the prima facie merit of this case. Morrison (2002) speculates that few philosophers make the effort to dispute animal rights arguments because they "think the subject to be too far from reality to be worth the trouble". Given that the animal rights debate is still topical in both academic and public forums, it seems that any philosopher would gladly distinguish themselves by formulating the knock-out argument against animal rights, if it were so easy. An alternative perspective acknowledges that arguments for the equality of interests or rights of non-human animals cannot be faulted for their logical consistency, yet holds that they cannot be accepted because this would create the absurd situation in which we are unable to resolve inter-species conflicts of interest. While sound

rebuttals have been formulated against the “argument from absurdity” in general (e.g. Aaltola 2010), the more restricted case for ethical veganism of relevance in this study circumvents the absurdity argument altogether, as a vegan world need present no such unresolvable conflicts. Some are bold enough to state that the moral argument for veganism is irrefutable, unless we are willing to accept the reason that “I like eating meat” as a valid argument (Fetissenko 2011).

Stepping up to this challenge, the New York Times launched an essay competition in 2012, which invited readers to make an argument for the ethics of eating meat (NYTimes 2012a). The winning entry, chosen from over 3,000 submissions by a panel of prominent authors and philosophers, discussed the relative merit of various meat production systems according to mainly sustainability-related criteria, but on the central issue of unnecessary slaughter offered only the following:

“The issue of killing of a sentient being, however, lingers. To which each individual human being must react by asking: Am I willing to divide the world into that which I have deemed is worthy of being spared the inevitable and that which is not worthy? Or is such a division hopelessly artificial?” (NYTimes 2012b).

This amounts to nothing more than an argument for moral relativism, yet one which suggests consistency to be a valuable ethical principle within any given moral framework in order to avoid artificial divisions. This submission was deemed the most convincing pro-meat argument from a pool of 3,000 entries, despite the fact that consistency, in this case, would mean the rejection of meat. Despite this, the author of the essay is clearly no animal rights advocate: framing the moral question as one of personal choice implicitly strips the ‘eaten’ of any inherent value or rights while recognizing these features in the ‘eater’, yet no explanation is given for why this might be the case. The popular online vote supported a submission which did manage to make a coherent argument for eating meat, but only for the consumption of laboratory grown meat and certainly not that obtained at the expense of a sentient being (NYTimes 2012c). So while many common people evidently believe it ethically unproblematic to consume meat, they clearly struggle to explain why this is the case: perhaps they have not thought much about it. Professional ethicists, on the other hand, have had ample opportunity and reason to explore the issues in depth. Nevertheless, Rowlands reflects:

“One of the things about philosophy that has always struck me as curious is a peculiar sort of blindness philosophers seem to bring to bear on their discussions of animals. When they talk about animals, good philosophers, even great ones, seem to make the sorts of mistakes they wouldn’t make in other contexts, and so manage to convince themselves of the most outlandish of views. The question is: why is this?”

And how could anyone ever have convinced themselves that animals are not even conscious? Descartes, the Father of modern philosophy, famously managed to convince



himself that animals are automata. And in this respect the Father never seemed to quite lose his grip on the children.” (Rowlands 2009)

On the other hand, a 2009 survey asked US-based professors about the morality of “regularly eating the meat of mammals, such as beef or pork”, and found that 60% of ethicists rated the practice as morally bad, compared with 45% of non-ethicist philosophers and only 19% of non-philosophers (Schwitzgebel & Rust 2009). The more one thinks about the ethical issues surrounding meat, it seems, the more negative one’s attitude is likely to be. While the study did not investigate why meat consumption might be regarded as immoral, the importance usually placed on effects-on-others in moral reasoning gives cause to believe that concerns about animals would be more prominent than environmental and especially health concerns in coming to these conclusions. Even complete consensus between ethicists does not determine a given act to be moral or not, but the high level of agreement revealed in this study certainly determines ethical veganism to be a strong case which demands consideration by ethical actors.

Individuals and societies need to decide for themselves whether the interests of non-human animals are to be taken into account: whether they are included in, or excluded from, the moral community. To say that non-human animals are not owed moral consideration is to completely disregard the effect of any cruelty on the animals themselves, and to determine starving, torturing, or burning animals alive to be morally permissible. Of course, the vast majority of individuals do not feel this way. Nibert (1994) finds that 74.5% of Americans believe that non-human animals have at least some rights, and legislation regulating cruelty to animals reflects this public sentiment. Importantly, animal cruelty legislation also reflects the societal belief that the interests of these animals in avoiding pain and suffering override the interests any humans who may derive pleasure from inflicting that cruelty.

So we live in a society which regards non-human animals as moral subjects whose most basic interests should be taken into account: where cruelty to animals is illegal and generally regarded as immoral. Yet, this same society regards the systematic slaughter of these same moral subjects on a massive scale as being either moral or amoral. This situation appears on its face to represent a paradox. We recognize with respect to humans that our most basic interest is in the continuity of our lives, because life is a prerequisite for the satisfaction of all other interests. This logical hierarchy of interests is reflected in the law, which prescribes harsher penalties for violation of this basic interest than any other. When it comes to non-human animals, however, the failure of the law to protect their interest in continuing to live implicitly relegates this interest to a lower importance than their interest in avoiding pain and suffering: it is deemed worse under the law to hit a pig than to kill it. This apparent contradiction presents a challenge to those who would defend the slaughter of animals: to explain why the primary interest of human beings – life – is not also the primary interest of non-human animals. Incredibly, most people appear not to notice or question this inconsistency, which begs the question of why that might be.

## 2.2 Carnism

The interests of non-human animals is not the only aspect of meat consumption which generally escapes our scrutiny; despite the fact that the consumption of animal products is a choice for consumers in developed market economies, the vast majority of meat-eaters never made a conscious decision to become meat-eaters. Indeed, most begin consuming animal products before they have the necessary information or the cognitive capacity to make such a determination through a rational decision-making process. Instead, they are born into a specific cultural context in which it is assumed that they will conform to the familial/social norm of consuming an omnivorous diet, and they learn what to eat and how to treat animals from those in their environment through a process of acculturation. Melanie Joy (2010) describes this learning process as the adoption of the prevailing carnist schema: the internalisation of a specific lens through which we view the world.

‘Carnist’ can be distinguished from the terms ‘omnivore’ and ‘carnivore’, which refer to physiological dispositions relating to the ability or necessity of eating certain foods, and ‘meat-eater’, which describes a behaviour without reference to an underlying ideology. In contrast, ‘carnism’ describes the belief system which conditions people to eat certain animals by shaping beliefs, behaviours, norms and laws; as the dominant ideology it is invisible and deeply entrenched (Joy 2010). The fact that these beliefs and cultural practices have persisted for millennia does not necessarily imply that they are beneficial. Unlike genes which travel with the gametes of their host and must prove useful in order to be passed on, memes are communicated and can therefore survive even without conferring any actual benefit on groups or individuals (Harris 2010): “It is quite possible for people to traffic in ideas and other cultural products that diminish their well-being for centuries on end”.

Typically in western nations, the carnist schema incorporates the notion of human superiority, relegating all other species to subordinate roles, and classifies particular non-human species as being either edible or not. When contemplating eating the meat of animals classified as ‘inedible’, most people envision the animal it came from and become disgusted as a result (Joy 2010). In contrast, when confronted with ‘edible’ species, most people are able to focus purely on the aroma, texture, and flavour of the ‘food’ and fail to even recognize its once living source. The fact that this process happens from an extremely young age prompts some commentators to question whether the resulting belief structures are actually learned or whether they reflect an inherent human condition - inciting the nature versus nurture debate. However, Joy (2010) points to the fact that different societal groups, particularly across cultures, form varying beliefs regarding the edibility of different species as evidence that the belief structures are in fact learned from the prevailing culture. The prominent example which forms the title of her book *Why We Love Dogs, Eat Pigs, and Wear Cows* (Joy 2010) cites the fact that dogs – which are virtually indistinguishable from pigs in terms of genetic make-up, cognitive capacities, physical abilities and social behaviours – are regarded as a potential food source in some countries, while

the very thought of consuming 'man's best friend' typically conjures a disgust reaction in western populations.

The disgust reaction is different to distaste in that it is ideational and results not from the food, but from the idea of the food. Disgust is considered a moral emotion which is triggered only by issues which are morally charged (Joy 2010), which reveals that this process of acculturation shapes not only the behaviours of individuals, but is deeply internalised as a set of moral precepts. In this context, it is easy to understand why the average individual comes to view the consumption of (specific) animal products as not being morally transgressive. In accordance with societal norms, the consumption of certain species - those which the individual has learned to view as food - falls outside of the realm of moral consideration. It is only when the individual is confronted with the consumption of novel species (dolphin, for instance), that their moral compass is aroused. As addressed previously, however, sets of moral precepts need not be internally consistent. Examination of these many precepts in a systematic fashion - engaging in ethical reasoning - may reveal contradictions and inconsistencies depending on the person's underlying ethical framework. It seems, however, that people do not generally engage in such reasoning unless prompted to do so by relevant stimuli: reference to societal standards rather than personal standards is the default setting (Stone & Cooper 2001).

One source which may stimulate individuals to contemplate the congruence between the disparate moral precepts they hold regarding non-human animals is contact with animal advocates and/or the media they propagate. Assisting individuals to recognize the misalignment between their own values and actions through a process of questioning – applying the Socratic Method – is a technique used by many and endorsed for all animal advocates (Bruce Friedrich, Senior Director for Strategic Initiatives at Farm Sanctuary, in Davidow 2013). Meanwhile, Moyer (2001) recommends that activists in general highlight any discrepancies between powerholders' policies and the social values they espouse as a way of winning over the public.

### **2.3 The Animal Rights Movement**

Throughout human history individuals have acted on the conviction that humans are not at liberty to exploit animals as they please by adapting their own behaviour or mobilizing to influence others. An early example of animal protection objectives being pursued in an organizational context is the Pythagorean movement which emerged around 600BCE and followed a vegetarian diet according to the teachings of Pythagoras (Huffman 2014).

For most of the modern era, animal protection groups have focussed their attention on opposing what were perceived to be the most egregious abuses, with particular emphasis on vivisection. They were joined in the 1950s by organizations such as Humane Societies which sought mainly to protect pets from cruelty, and to provide shelters in the case of abandonment. What was

opposed by these welfare organizations was not the use of animals per se, but the avoidable suffering inflicted upon them in the name of human interests. These harms were typically seen as resulting from the actions of abusive individuals and poorly educated individuals, rather than representing the outcomes of systematized and institutionalized oppression (Jasper & Nelkin 1992). Largely catalysed by the release of Singer's *Animal Liberation*, the 1970s saw ideas from numerous sources converge into a new ideological agenda which retained concern for the welfare of sentient beings, but also recognized that animals hold additional interests, such as the interest in life, which had traditionally been neglected by society at large. This view acknowledges that the oppression of non-human animals is not a rare occurrence perpetrated by a few 'misguided' individuals, but is a pervasive phenomenon grounded in human institutions (Jasper & Nelkin 1992). This revelation, and the actions it inspired, has been identified as the birth of the modern animal rights movement.

To reiterate a point made in an earlier section, not all of the actors working towards the protection of animals are included under the banner of 'animal rights activists'. Such an inclusive definition would be useless, as it would include those farmers who practice 'humane' husbandry and 'conservationist' hunters: while generally considered preferable to less-humane alternatives, both of these practices are ideologically repugnant to activists. Instead, this work follows Wrenn (2012) in defining the animal rights movement as including those groups and individuals who seek to liberate animals from oppression in recognition of their individual rights or interests. This more restrictive definition includes both the deontologically motivated Fundamentalists and the preference utilitarian Pragmatists, yet excludes the hedonic utilitarian Welfarists (Jasper and Nelkin 1992) who recognise the interests of animals in avoiding pain, yet fail to acknowledge the interest of animals in life itself. Also excluded are those who treat animals as resources or who view them as important components in the ecosystem but as lacking in legitimate claims as individuals, according to the conservation ethic: "Save the species, liquidate the members" (Scully 2002). This definition thereby excludes both the farmer and the hunter, but also many animal welfare organisations and wildlife protection agencies which have substantial public support.

Considerable variation exists among animal rights activists in terms of the specific set of animals they seek to represent (ranging from individual animals, to single species, to all sentient life), the types of exploitation they actively oppose (whether specific practices and industries or exploitation as a whole), and the kinds of tactics they employ (whether education, moral suasion, political lobbying, consumer boycott, legal approaches, protest, or other forms of direct action). This diversity notwithstanding, animal rights advocates are united by the common goal of extending to animals those rights traditionally reserved for humans: namely the consideration of interests. The magnitude of this challenge cannot be overstated.

According to Joy (2008), three important factors distinguish the animal rights movement from other social movements: the status of animals as legal property rather than legal persons; the

fact that animals are unable to represent their own interests; and the degree of societal investment in maintaining the status quo.

All social movements, except perhaps the anti-abortion movement and some environmental movements, have sought to extend further rights to legal persons: this was true even in the case of African slaves who were recognised as three-fifths persons under the law. The present classification of animals as legal property is problematic because the interests of the property will always concede to the interests of the owner when the two come into conflict, for that is the very nature of the relationship (Francione 2012). This legal situation is therefore a target for reform by the movement, but also an impediment to the work of activists as it limits opportunities for pursuing change through legislative channels.

The second major impediment to progress is the fact that animals are voiceless, and therefore unable to advocate for themselves. As a result, activists must represent the interests of animals, despite their imperfect knowledge of what these interests truly are. According to Wrenn (2012), “just who is being represented and who can be counted as a representative has required definition and is still without consensus”. The testimony of direct victims also has greater moral authority than that provided by mere advocates, who are likely to be perceived as moralistic and to arouse defensive reactions in audiences (Joy 2008).

Finally, to take on speciesism is to challenge “the most entrenched and widespread form of exploitation in human history” (Joy 2008). It is endorsed by all major institutions, including government, medicine, education, and science, and directly benefits almost all humans through the products they consume. “The exploitation of animals is pervasive, entrenched, and unspeakably horrific... not only can we torture and kill them with complete impunity; we are expected to do so” (Francione & Charlton 2012). The implication of this personal investment is that most people find it difficult to consider the topic of animal oppression with the degree of objectivity they bring to other social concerns (Singer 1995). Compounding these material barriers are significant psychological incentives to maintain the speciesist status quo. Most significantly, to reject speciesism is to reject the notion of human exceptionalism in which many people are deeply invested according to the privilege and sense of superiority it affords (Joy 2008).

Animal rights activists also face the unusual situation that virtually all economic actors are united in their opposition to the goals of the movement. Whereas a downturn in industry A typically creates opportunities in industry B, and therefore provides an incentive for the actors in B to support the change, the massively inefficient production process behind animal protein actually creates more demand for non-animal food products than would exist in a vegan world. Over 80% of animals raised for food in the UK spend time in concentrated animal feeding operations (CAFOs) (Foer 2009), where they convert human-edible grains into animal protein, wasting around 80% of the weight (Smil 2000), protein (Fiddes 1991), and calories (Searchinger et al.

2013) in the process. The perverse outcome is that demand for animal products increases demand for non-animal foods, and thereby aligns the interests of primary producers of non-animal foods with those of the meat lobby. Given the current economic system which enables producers to externalize many environmental costs and health costs associated with antibiotic resistance to the wider population, and welfare costs to the animals under their care, economic forces are generally in favour of continuing the status quo. The specialized firms producing 'meat substitute' products which have emerged in recent years are an exception to this rule, but as veganism provides an economic incentive only to processors and not to primary producers, the power of this group is still extremely small.

Foer (2009) reports that those involved in animal agriculture work proactively to protect their vested interests against the changes sought by animal rights advocates. In seeking to investigate the impacts of industrial animal agriculture, the Pew Commission (2008) reported "...significant influence by the industry at every turn: in academic research, agriculture policy development, government regulation, and enforcement". The focus of these efforts is on maintaining the invisibility of the production process from the perspective of consumers to facilitate their dissociation of the animal products they consume from the living, feeling beings they once were (Joy 2010): "As with any violent ideology, the populace must be shielded from direct exposure to the victims of the system, lest they begin questioning the system or their participation in it."

Activists therefore face a significant challenge and massive resistance in their struggle to improve conditions for animals, while "liv(ing) in a world where they are constantly bombarded by imagery and attitudes that offend their deepest sensibilities" (Joy 2010). Despite these hurdles, the movement can reflect on considerable success over the past century in manipulating societal culture to be more sensitive to the interests of animals: the mainstreaming of concern for animals creating an environment conducive to further progress in the future (Wrenn 2012).

### **2.3.1 Animal rights as a social movement**

Wrenn (2012) states that the animal rights movement conforms to Goodwin and Jasper's (2003) definition of a social movement as a "conscious, sustained effort to enact social change using extra institutional means", as distinct from movements which are widely supported and lack opposition, or those which achieve social change primarily through political lobbying. Accepting this definition, it is possible to analyse the animal rights movement in terms of the generic model laid out by Moyer et al. (2001), which identifies various stages in the evolution of a social movement and the roles played by various types of actors at different stages: namely the Rebel, the Citizen, and the Reformer.

Rebels employ confrontational tactics, may engage in civil disobedience, and are likely to be perceived as radical by the mainstream. A prime example from the rights movement is the

Animal Liberation Front (ALF): an informal organisation to which vegans can self-proclaim membership after engaging in some form of direct action to rescue abused animals or cause financial loss to animal exploiters through the destruction of property (ALF 2017). As the urgency with which this group acts in pursuance of their short-term aim of saving as many animals from abuse as possible often leads to the violation of laws, activists work anonymously and without centralized coordination. Their actions yield immediate benefits for the animals rescued, and the publicity which tends to surround illegal activities such as open rescues brings awareness of important issues to the public, yet it is unclear whether these successes outweigh the negative public perception of such activists as extremists: especially if these attitudes are extrapolated to the movement as a whole.

Citizens, on the other hand, are easily relatable to the general public and use conventional tactics and discourse to further their cause. Welfare organisations such as humane societies assume this role within the broader animal protection movement, but it is difficult to identify such an actor within the more restricted animal rights movement: primarily because no advocate for the abolition of animal exploitation can claim to have even moderate levels of public support. Nevertheless, many vegan groups aspire to fulfilling this role and use non-confrontational outreach as their primary tactic.

Reformers are representatives of professional opposition organizations who bring credibility to the movement through their professional positions. Within the animal rights movement, this would include the Physicians' Committee for Responsible Medicine (PCRM), who seek to counteract the immense lobbying power of the animal agriculture industry by insisting that medicine, rather than industry, determine governmental dietary recommendations.

While some authors (e.g. Wrenn 2012; Francione 2007) argue that the diversity of messages propagated by these disparate actors is counterproductive and call for a unified approach, others (e.g. Moyer et al. 2001; Joy 2008) recognize the value of this diversity and the important role played by each at different stages of the movement. The animal rights movement is comprised of various sub-movements tackling different manifestations of animal exploitation through single-issue-campaigns (e.g. anti-vivisection, anti-animal testing, and anti-fur), each of which may have reached different stages of development within the public psyche.

Moyer et al. (2001) define eight distinct stages through which social movements must transition, beginning with the public being unaware of any problem, supporting the institutions responsible for the problem, and ridiculing the burgeoning movement. In the second stage, activists seek to resolve issues through official channels: failure to do so demonstrating the institutional nature of the problem. While welfarists have enjoyed limited success in influencing the *types* of animal exploitation permitted through legislative channels, official channels have not assisted those who oppose exploitation per se in the least: primarily due to the 'property' status of animals. Growing awareness that 'extra institutional means' (Goodwin & Jasper 2003) will be necessary

for the social change sought leads to the emergence new activist organizations in the third stage, along with rising public awareness and concern. It could be argued that many of the sub-movements within the broader animal rights movement have reached this stage, but that few have experienced the catalysing event which triggers a wave of rallies in stage four and brings the issues into the mainstream consciousness. The anti-fur sub-movement has achieved this level of prominence in many locations, probably due to its association with the high-profile fashion industry, but more pervasive cases of animal exploitation such as animal agriculture do not appear to have reached this stage. From there, Moyer et al. (2001) explain, a movement may lose momentum and die out (stage five), or progress to stage six where public support increases, as does opposition from hostile powerholders. Despite lacking the coordination and visibility typically associate with stage four, Joy (2008) reports that activists focussed on animal agriculture nevertheless experience significant ‘backlash’, primarily in the form of attempts to discredit their messages by denigrating the messengers as “overly emotional animal-lovers”. This reaction perhaps indicates industry concern that this grass-roots sub-movement has progressed further than its public profile would suggest. Stage seven sees alteration of laws and official policies to reflect the goals of the movement, and this leads to full social transformation in stage eight. In its entirety, this social movement evolution model can be summarised by the quote often attributed to Mahatma Gandhi (although perhaps incorrectly): “first they ignore you, then they laugh at you, then they fight you, then you win”.

### **2.3.2 Focus of the Animal Rights Movement**

The existence of sub-movements with differing short-term goals notwithstanding, various authors have examined the overall focus of the animal rights movement and how it has shifted over time. Continuing the anti-vivisection tradition, the movement primarily concentrated its efforts on opposing animal testing for many decades (Jasper & Nelkin 1992). Not only were most activities focussed on this particular form of animal exploitation into the early 1990s, but the majority of activists also believed this to be the best use of their resources according to a survey of around 400 attendees of a 1990 animal rights march in Washington DC (Plous 1991: see Table 3). Around this time, some elements within the movement were calling for a shift in focus in order to increase the impact for animals: one example being this appeal by Henry Spira, Coordinator of Animal Rights International:

“Looking at the universe of animal suffering in America today, we see pain dominated by the more than eight billion farm animals, who suffer roughly 95% of all animal misery... Let’s get out of the past and stop ignoring the vast majority of animal suffering” (Spira 1996).

Academics had also noticed the apparent imbalance in activist attention relative to animal suffering, leading Nicoll and Russel (1990) to calculate a “concern-to-use-ratio” by determining



the proportion of animal rights literature devoted to various forms of animal exploitation (two-thirds of which related to research on animals) and then adjusting this by the proportion of animals subjected to each use (96.5% being used for food and only 0.3% for research). They concluded that, on a per-animal basis, 659 pages were published about animal research for every page dealing with animal agriculture. In the years that followed, it appears that calls for the movement to shift its focus were heeded by activists. Plous (1998) took the opportunity to repeat the 1990 animal rights activist survey at an identical 1996 “March for Animals” rally in Washington. One significant finding, shown in Table 3, is that many more activists selected animal agriculture as “the issue that the movement should focus on most” than in 1990, making it the predominant concern for the movement for the first time.

TABLE 3: WHAT SHOULD THE ANIMAL RIGHTS MOVEMENT FOCUS ON MOST?

<b>Focal Point</b>	<b>1990 (N=346)</b>	<b>1996 (N=327)</b>
Animals used in research	54	38
Animals used for food	24	48
Animals used for clothing and fashion	12	5
Animals in the wild	5	3
Animals used in sports or entertainment	4	5
Animals used in education	1	2

Table recreated from Plous (1998): Figures represent percentage of respondents giving each answer.

The same study also reported that twice as many of the surveyed activists consumed a vegan diet in 1996 than they did in 1990 (Plous 1998). Although the methodology did not allow the investigation of causality between diet and attitude towards animal agriculture, both had shifted and there appears to be an important connection between the two.

The idea that activist efforts should be targeted in order to maximise the positive impact on animals now guides the activities of all major advocacy organisations. The Humane League recommends “taking a data-based, utilitarian approach to advocacy” (David Coman-Hidy, Director of Campaigns), with resources allocated according to the question, “how many animals can I help?” (Nick Cooney, Founder; both reported in Davidow 2013). These calculations invariably lead such organisations to the same conclusion:

“As animal activists, it's vital that we focus our time and resources on activities that reduce the greatest amount of animal suffering per hour expended and dollar spent. It is this focus on maximizing impact that leads so many of today's most effective advocates to work for farm animals, since they make up over 98% of the animals raised

and killed by humans in the United States” (Jon Camp, Director of Outreach at Vegan Outreach; in Davidow 2013).

As an example, Mercy For Animals, which once led protests against fur and circuses, now focuses on cruelty towards farm animals (Kristie Middleton, The Humane Society; in Davidow 2013). Regardless of adopting a teleological (preference utilitarian) or deontological (natural rights) approach, applying animal rights objectives to animal agriculture implies abolition within developed market economies such as the European Union where viable alternative sources of nutrition are available. Likewise, applying animal rights objectives to consumer diets implies veganism. Given that the property status of animals gives legal protection to those who would exploit these sentient beings for profit, there are few avenues for effective action on the supply side of the equation. For this reason, most activist groups take a personal advocacy approach which seeks to limit demand by influencing individual consumers:

“Everyone eats, making decisions daily that affect farmed animals. Informing and inspiring new people to open their hearts and minds to making compassionate choices leads to many fewer animals suffering. Everyone we meet is a potential victory. We don’t need to form a group or change a law; we can each make a huge difference every day!” (Matt Ball, Co-founder Vegan Outreach; in Davidow 2013).

### **2.3.3 Vegan advocacy**

Generally speaking, there is widespread agreement within the animal rights movement that animals used for food are the top priority for the movement. With respect to this issue, those classified herein as animal rights activists are united by the ultimate objective of creating a vegan world. Furthermore, it is commonly understood that official channels are unsupportive of this objective and that grass-roots vegan advocacy is the primary route through which change will occur. Despite these fundamental similarities, there are deep divisions within the movement about the best way to achieve this objective in the shortest time possible. This division is characterized by three primary points of differentiation: the first concerns the question of whether to encourage individuals to become vegan or to advocate for some smaller change, such as reductionism, vegetarianism or flexitarianism; the second concerns the choice of message – be it ethical, health-focused, environmental, etc. – that should be deployed to this end; and the third relates to the type of language and rhetorical techniques employed in advocacy communications.

### 2.3.3.1 Rhetorical approach

The animal rights movement has traditionally tended to adopt a ‘push’ marketing approach, which highlights to audiences some downside of the speciesist status quo and subsequently encourages a shift towards a vegan lifestyle as a solution to this problem. While this approach may be effective for some audiences, others will be overwhelmed by the presentation of ideologies which threaten their existing worldviews and will cling strongly to existing habits as a result (Benzaquen 2017). The US-based consulting company Plant-Based-Solutions, which offers guidance to other vegan advocacy groups, therefore endorses ‘pull’ approaches which attract consumers to vegan products by highlighting beneficial aspects of those products, including their taste and healthfulness: “Rather than pointing out the problems, we are offering the solutions and making them desirable and non-threatening”, thereby enabling individuals to “overcome barriers and eliminate assumptions about how difficult or unpleasant living a compassionate lifestyle can be” (Benzaquen 2017). As one could justifiably ask why any ‘solution’ would appeal to a person in the absence of a problem: it seems implicit in these claims that the general public already perceive a problem with the exploitation of animals for food. If animal agriculture is, in fact, widely perceived as problematic, it would signal that this sub-movement is situated squarely within the third stage of Moyer et al.’s (2001) social movement evolution model and now awaits a catalysing event to trigger mainstream awareness. While it is unclear exactly what such an event would entail, a massive public health scare resulting from standard industry practices – such as another outbreak of BSE – would seem a likely candidate.

Other activists are not convinced that public awareness has developed to this extent and continue to emphasize the negative aspects of consuming animal products – whether ethics-, health-, or environment-related – which, after all, were the factors which convinced most activists to change their own lifestyle (Herzog 1993). Nevertheless, activist websites reveal that the content of public communications is shifting in the more positive direction promoted by Plant-Based-Solutions (Benzaquen 2017) by increasingly including recipes and nutritional advice which emphasise the ‘how’ of veganism, to supplement the text and images depicting the problems associated with animal agriculture – which represent the ‘why’ of veganism. Mirroring the debate in public health campaigns regarding smoking (Farrelly et al. 2011) and drinking (Al-Hamdani 2014), controversy also surrounds the question of whether the presentation of emotive graphic images (particularly of animal slaughter) contributes to persuasion efforts, or overwhelms audiences. While some animal rights organisations avoid such presentations altogether, many others continue to provide a range of graphic images revealing the brutal realities of animal agriculture, but also warn audiences in advance of the graphic nature of the content they are about to see.

Veganism is often portrayed as an act of compassion which, logically, would be undertaken only by those with a deep affection for animals. The presentation of veganism as a response to one’s own emotional state is problematic in that: a) it exposes activists to disparagement as overly-

emotional (as opposed to meat-eaters who can then claim to be more rational); and b) it provides an apparently sound justification for meat-eating in the form of: “I am not vegan because I don’t really like animals”. This portrayal of veganism is misleading in that many vegans do consider themselves to be animal lovers, yet a significant proportion does not (Plous 1998). Indeed, Peter Singer, who catalysed the animal rights movement, declares in *Animal Liberation* that he is not particularly fond of animals, and observes that: “The assumption that in order to be interested in such matters [animal rights] one must be an 'animal lover' is itself an indication of the absence of the slightest inkling that the moral standards that we apply among human beings might extend to other animals” (Singer 1993). Just as our basic obligations towards other humans are not predicated on our having affection for those humans, so, according to Singer (1993), are our responsibilities towards other animals independent of personal emotion. In this vein, and consistent with the concept of justice on which the movement is founded, Davidow (2013) recommends that activists frame veganism “as an act of basic decency rather than as an act of love or compassion”. However, as years of conditioning by carnist institutions have so deeply entrenched the dichotomisation of humans and other animals that many people fail to recognize even the most minimal of obligations towards them (Joy 2010), additional rhetorical approaches are often employed to help people relate to their earthling companions.

### **2.3.3.2 Intersectionality**

Despite developments in evolutionary biology demonstrating the fundamental similarity between all higher-order lifeforms and revealing religion-based moral distinctions between humans and animals as the “effluvium of a discredited metaphysics” (Rachels 1990), most people cling to the boundaries which traditionally separate the two groups. As these distinctions are based on belief, rather than evidence, they tend to resist rational persuasion (Jasper & Nelkin 1992). The challenge for animal advocates, then, is to communicate about the experience of animals in a manner to which human audiences – self-regarded “non-animals” – can relate. Wrenn (2012) notes that advocates have often sought to build legitimacy and claimsmaking strength by highlighting similarities between the animal rights movement and various human rights causes, and drawing on the discourse from those movements. In particular, parallels are often identified between historical periods of institutionalised human slavery and the current-day institutional exploitation of animals, with animal advocates calling on the abolitionist rhetoric of the anti-slavery movement (Beers 2006). According to Jasper & Nelkin (1992), such comparisons have “emotive power for those who blur the boundaries between humans and other species... [while for others] these metaphors appear outlandish, threatening, and dangerously defying accepted categories.”

While drawing attention to similarities between injustices experienced by animals and by human groups to which audiences can better relate is regarded by some authors purely as a rhetorical strategy (Jasper & Nelkin 1992), other authors acknowledge the validity of such comparisons in

revealing important underlying similarities and interlinkages – an intersectionality (Crenshaw 1989) – between ostensibly disparate oppressions. According to Crenshaw (1989), recognized societal oppressions such as racism and sexism do not operate independently, but interrelate to form a system of oppression which differs from its component elements. The pro-intersectionalist vegans who dominate the feminist and abolitionist factions contend that speciesism is implicitly linked with, and strengthened by, other forms of discrimination. Indeed, various human rights movements have adopted vegetarian diets as congruent with their chosen causes, including suffragettes who saw vegetarianism as consistent with the opposition of patriarchal oppression (Leneman 1997).

Even in the absence of any interplay between various forms of oppression, Rowlands (2009) defends comparisons between speciesism and slavery, for instance, on the grounds that opponents of each employ logical arguments having the same general form:

P1. Individual members of group X possess a substantial set of moral entitlements including, fundamentally, the entitlement to equal consideration and respect.

P2. There are no morally relevant differences between individual members of group X and individual members of group Y.

C. Therefore, individual members of group Y also possess a substantial set of moral entitlements including, fundamentally, the entitlement to equal consideration and respect.

In the case of anti-slavery, group X would refer to the privileged group in power and Y to the enslaved group; in the case of anti-speciesism, group X refers to humans and group Y to specific groups of non-human animals. If there is a difference between the cases against slavery and speciesism, argues Rowlands (2009), it is not due to the legitimate and logically compelling form of the arguments employed.

Despite these sound defences, people do take offence at comparisons between the oppression of animals and the oppression of various human groups, claiming, for instance, that it is illegitimate and even racist to compare the imprisonment and exploitation of animals with human slavery. Such complaints fail to appreciate that the similarity being highlighted in these metaphors is that between the oppressors, not the oppressed: it is not that human slaves are like animals, but that actions and mindsets towards animals are analogous to those towards slaves. Such comparisons are better accepted when they are proposed by those within the relevant marginalized human group, such as when an eco-feminist promotes veganism as moral imperative for all feminists (Adams 2001) or when Jewish writers compare the oppression of animals to the persecution experienced by their own people: “In relation to [animals], all people are Nazis; for the animals it is an eternal Treblinka” (Isaac Bashevis Singer 1972).

Some animal advocacy factions embrace intersectionality as fundamental to their beliefs: the Abolitionist Approach including it as the fifth of their six guiding principles according to the claim that “opposition to speciesism makes sense only as part of a general opposition to all forms of discrimination” (Francione & Charlton 2015). As such, this and other groups unashamedly use intersectional metaphors as part of their communications. Other groups shy away from such rhetoric for fear of alienating the public and fuelling criticisms of animal rights activists as misanthropic. A public perception persists that animal advocates are less empathetic toward humans than average (Knight et al. 2010), despite neurological and survey-based investigations demonstrating that vegans have more empathy towards both humans and companion animals than meat-eaters (Filippi et al. 2010; Preylo and Arikawa 2008) and are far more altruistic (Kalof et al. 1999). As a result of these public perceptions, many organisations do not take advantage of the emotive power of intersectional metaphors. Which strategy is more effective is hotly debated and still waiting to be informed by empirical evidence.

Taft (2016) brings a clinical psychological perspective to the issue of animal activism in insisting that the adoption and communication of a clear ethical position must form the basis of effective advocacy. An integral part of this strategy is the use of language which reflects this ethical stance by, for instance, answering questions about what vegans ‘can’ eat with the response that they *can* eat animals but they *choose* not to. This frames veganism as a choice guided by the moral imperative of avoiding injustice towards animals, rather than a mere dietary restriction or an exercise in willpower. In addition, people can be assisted to see beyond their carnist perspective through the use of apt descriptors such as ‘animal flesh’, rather than industry sanctioned terms such as ‘meat’ which act to maintain a cognitive disconnect between the suffering of sentient beings and the packaged product they may buy and consume (Taft 2016).

### **2.3.3.3 Which message?**

As individuals are motivated by different causes to varying extents, some regard it as a strength of the vegan movement that the case for refraining from animal products can be framed in a number of different ways. Whereas some people are highly receptive to messaging related to animal welfare and ethical issues which invoke empathy and appeal to notions of social justice, others respond more strongly to messages focused on the environmental or health implications of meat consumption which appeal primarily to self-interest. Many animal rights organisations take a ‘whatever works’ approach to their advocacy efforts, as typified by the advice from Jaya Bhumitra, Campaigns Director at Compassion Over Killing (COK), that animal advocates should “speak to people’s interests” after having inquired why it is that they are not vegan (Bhumitra; in Davidow 2013). Others groups maintain that it is undesirable, and even immoral, to employ messages unrelated to animals, as such communications tacitly condone animal use and thereby undermine the long-term objectives of the movement (Francione 2012).

To clarify, the common long-term objective of the vegan sub-movement (and the modern animal rights movement in general) is a world which eschews the exploitation of animals because to do otherwise would be unjust (Francione & Charlton 2015). It is not simply a given set of behaviours which is ultimately sought, but a specific motivation and mindset consistent with those behaviours. Tobias Leenaert (2014), cofounder of the Center for Effective Vegan Advocacy (CEVA), received a rousing applause in response to his statement to the 2014 International Animal Rights Conference that: “we want people to do the right things for the right reasons; we want them to be vegan for the animals.” Indeed, the conception of veganism as more than simply a set of behaviours is enshrined in the definition of veganism maintained consistently by The Vegan Society since registering as a charity in 1979 as:

"A philosophy and 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; and by extension, promotes the development and use of animal-free alternatives for the benefit of humans, animals and the environment. In dietary terms it denotes the practice of dispensing with all products derived wholly or partly from animals." (The Vegan Society 2016)

The health and environmental benefits of avoiding animal exploitation, while acknowledged in the definition, are incidental and arising “by extension” from the actions motivated by concern for animals and obligations towards them. According to this definition, health-motivated ‘vegans’ who avoid all animal-based dietary products nevertheless fail to qualify as vegan primarily because they continue to use animals and derived products for clothing and other purposes where alternatives are readily available. Environmentally-motivated ‘vegans’ who avoid all examples of animal exploitation to the degree practicable may also fail to qualify as vegan on the basis that they are not motivated by concern for the welfare and justice accorded animals as individual beings, but only in a holistic sense. To those outside of the movement, this attention to motivation in addition to behaviour may appear unnecessary and overly restrictive, and is perhaps better explained by analogy to another ideological movement. It does not seem overly restrictive to exclude a man from the category of ‘Christian’ if he does not believe in God, even if he prays and visits church regularly, because the belief itself is so central to the concept of Christianity. Likewise, belief that animal exploitation is unjust is central to the concept of veganism and therefore, according to some, represents a requisite criterion.

So when animal advocates declare their objective of a vegan world, they are referring to a world in which people not only avoid personal complicity in the exploitation of animals, but do so out of respect for animals. The question of what mode(s) of advocacy will yield the fastest progress towards this goal is also contested, both in terms of the persuasive efficacy of different messages and the question of whether to employ uniform or pluralistic messages. On the face of it, it seems obvious that messages relating to animals would be the fastest route to a world in which people acknowledge moral responsibilities towards animals. However, leading animal advocacy

consulting firms are aligned with Fetissenko (2011) in advising activists to embrace rhetorical strategies which go “beyond morality” to include other persuasive lines of reasoning, such as health arguments. The reasoning behind this approach, which has been adopted by most vegan advocacy organisations, is twofold: first, that pluralistic messages will reach a greater number of individuals and induce more to change their behaviour, thereby yielding immediate benefits for animals; and second, that those who have changed their diet, regardless of the initial motivation, will be more willing and able to appreciate and acknowledge their responsibilities towards animals. Tobias Leenaert (2014) explains in his talk *Making Compassion Easier* that it is difficult for individuals to acknowledge the harms that they are currently engaged in, even to themselves, as doing so constitutes a threat to their image of themselves as good people. However, “as people eat vegan, for whatever reason, their defences go down and their compassion can grow” (Leenaert 2014). In identifying extant meat-eating behaviours as constituting a psychological barrier to compassion, Leenaert dismisses linear behavioural models in recognition of the dynamic interplay between behaviours and attitudes.

Advocacy groups such as EffectiveAnimalActivism.org, the Center for Effective Vegan Advocacy (CEVA), and The Humane League pride themselves on their “data-based, utilitarian approach to advocacy” (Coman-Hidy; in Davidow 2013) which takes strategic decisions according to the guiding question of how many animals can be helped per unit time and cost (Cooney; in Davidow 2013). These organisations can cite various data supporting their use of pluralistic messaging. For example, numerous studies have asked individuals about their motivation for having changed their diet by cutting out meat and a selection of these are presented in Table 4.

TABLE 4: MOTIVATIONS FOR DIETARY CHANGE

Year	Primary motivation				Notes	Source
	Animals / ethics	Health	Environment	Other		
1989	57	17	12	1	U.K n=76	Beardsworth and Kiel (1992)
2002	21	50	4	7	U.S. n=400	Time/CNN Poll, in Humane Research Council (2012)
2005	30	28	10	18	U.S. n=40	Humane Research Council (2007)
2006	47	30	-	12	U.K. n=43	(Hamilton (2006)
2008	45	27	1	27	-	VegForum, in Fox & Ward (2008)
2012	67	20	9	3	Ages 18–25 n=125	Timko et al. (2012)
2013	69	-	-	-	Online n=7943	Katz (2013)

Values in cells represent percentages of respondents and sum to 100 for each study.

Note: Original motivation categories have been aggregated for uniformity across studies



The selected studies are those which inquired specifically about the *primary* motivation for dietary change and allowed respondents to select only a single option. Other studies which permit multiple selections tend to reveal that individuals choose multiple motivations (Cooney 2013): an issue addressed later. Not all of the studies have been peer reviewed or published, and some of them conflate vegans with vegetarians. This aggregation likely accounts for the high frequency of health related motivations, as numerous studies have shown vegetarians to be motivated primarily by health concerns and vegans to be motivated primarily by animal ethics (MacNair 1998; Stahler 2009). Despite these weaknesses in the data, some clear trends are visible: the most striking of which is that concerns regarding animals and health are the two leading motivations for dietary change, with other concerns significantly less influential.

For various reasons addressed later, vegan advocacy campaigns tend to target younger individuals. It is therefore interesting to examine how motivations differ according to age. Several studies have shown that animal welfare is a more important motivator for younger age groups, with health concerns taking over as the primary motivation only for people in their late forties (Timko et al. 2012; MacNair 1998). So while the data supports the premise that pluralistic messaging is likely to persuade more of the general public to become at least vegetarian, the case is less clear that mixed messaging will convince a greater number of young people to become vegan.

It is not just convincing people to become vegan which is important to the cause, but that they stay vegan. Another question of interest is therefore whether recidivism rates differ according to motivation. A study by Haverstock and Forgays (2012) which compared current and former vegetarians found that current vegetarians are much more concerned about animal welfare and slightly more concerned about their health than their counterparts. These results were interpreted by the authors as indicating the importance of concern for animals in maintaining their diet, but this interpretation is challenged by Cooney (2013), who suggests that the former vegetarians may have reduced their concern for animals in order to avoid the cognitive dissonance which would otherwise result from their discordant behaviours. Cooney does not explain, however, why the same effect should not be observed with respect to attitudes towards health, which raises doubt over this interpretation. A further study which tracked individuals over the three years from 2006 to 2009 found little difference in recidivism rates according to initial motivations, but the reported retention rates of over 90 percent for all groups (Stahler 2009) are so much higher than those generally reported (Cooney 2013) that it raises questions about the influence of participation in the longitudinal study on participant behaviours. While the evidence is inconclusive on this issue, if there is a relationship between specific motivations and persistence with the diet it appears that those concerned by animal ethics are more consistent. This suspicion is corroborated by evidence regarding the transformation and addition of extra motivations over time, which is relevant to the second premise of the argument

for pluralistic messaging: that those avoiding meat for whatever reason will more likely appreciate arguments about animal ethics.

A tendency is observed that vegans (and vegetarians) assume additional reasons for their behaviours over time. Cooney (2013) claims the shifting of beliefs for better alignment with behaviours to be logical from a psychological perspective, and notes that those avoiding meat are better able to accommodate beliefs about the environmental and animal welfare harms of meat consumption without conceiving of themselves as bad people. MacDonald's (2000) qualitative accounts of the process of becoming vegan are more revealing of the underlying motivation. One account by a vegan initially motivated purely by ethical concerns explains that his family were supportive only once they could be convinced that his diet was adequately nutritious. His consequent investigation of the health implications of veganism can therefore be viewed as a defensive measure for avoiding social disapproval (MacDonald 2000). MacNair (2001) explains the addition of motivations over time as an attempt to bolster the case for veganism, as predicted by a variation of cognitive dissonance theory: the dissonance existing not between belief and practice, but between the practice and critics of the practice. In the face of detractors, additional assurances of the benefit of one's behaviours may be necessary in order to maintain those behaviours. An alternative explanation for the pervasive phenomenon of adding motivations over time simply recognizes that vegans and vegetarians are likely to interact with others who practice the same dietary choices, perhaps for different reasons, and these interactions can cultivate interest in alternative perspectives.

While most vegans add secondary motivations, some also shift their primary motivation. This is the hope of those who seek an outcome of "vegan for the animals" through the use of alternative messages. Hoffman et al. (2013) find that the likelihood of switching primary motivations depends largely on the initial motivation. Only 8 percent of ethical vegetarians later shifted their primary motivation: in most cases to health concerns. In contrast, 38 percent of health vegetarians and 75 percent of 'other' vegetarians later shifted their primary motivation: in the majority of cases to concerns regarding animals. These findings also support the case for the use of pluralistic messaging.

This assembled evidence, with its various strengths and weaknesses, has been accepted by most vegan advocacy organisations and their consultants as justifying the use of scarce resources for public awareness campaigns which promote dietary change on the basis of arguments related to health. This approach, they claim, represents the fastest route to reducing the number of animals which suffer in animal agriculture (Leenaert 2014; Cooney 2013): an inherently consequentialist justification which selects the means purely on the basis of expectations about specific ends. This reasoning is not universally accepted, however, and is criticized both for the means selected (health-specific campaigns) and for the ends sought (short-term harm reduction as opposed to transformative change). The most vocal opponent of health-based messaging is Gary Francione, who is most closely associated with the Abolitionist Approach to Animal Rights.

The Abolitionist Approach can be described as faction, rather than an organisation, which is united by the goal of eliminating the use of animals by humans with an emphasis on veganism as a moral baseline (Francione & Charlton 2015). Professional animal advocacy organizations are not only considered to be unnecessary for the success of this grass-roots movement, but their moderated goals and tactics are claimed to undermine the broader movement and actually compromise animal rights (Francione 1996). The rights in question here are philosophical rights in a sense closest to those expounded by Regan (1983), thereby situating the Abolitionist faction within the fundamentalist category of animal advocates (Jasper & Nelkin 1992). While the position of this faction has been criticized as radical and exclusive (Wrenn, 2013), their opposition to health-based messaging is a logical consequence of a deontological rights-based approach. Considering one's consumption levels (i.e. the degree to which one engages in the exploitation of animals) according to the criterion of one's own health, even if this means reducing meat consumption, is nevertheless using (or not using) animals as means towards one's own ends. Doing so fails to accord animals the respect they are due as inherently valuable beings in the rights-based view (Regan 1983), which makes health-based messages encouraging such behaviour immoral in themselves.

The conflict here can be understood as being between two irreconcilable philosophical positions: a consequentialist approach focussing on ends and a deontological approach which emphasises means. Furthermore, the Abolitionist Approach holds that single-issue campaigns, such as health-based messages, are implicitly speciesist on account of the way in which they suggest animal use be determined according to the ends of others (Francione 1996). In disseminating such messages, mainstream advocacy organisations are actually supporting the ideology they purport to oppose, which, it is claimed, undermines the progress of the movement towards the ultimate goal of "vegan for the animals" (Francione 2012). In this sense, it is claimed that health-based messaging also fails to deliver the long-term objectives sought by consequentialists. In the end this is an empirical question which is unlikely to be resolved soon. The controversy over which message to use escalates further with respect to the question of what behavioural change animal advocates should ask of the public.

#### **2.3.3.4 What to ask of audiences?**

Animal rights activists are united in endorsing the ultimate objective of a vegan world. Different opinions exist, however, as to a) the most efficient way of achieving this, and b) the legitimacy of various approaches. The form of these arguments approximately matches those in the previous section, and the battlelines are drawn between very much the same actors and philosophies. The options available to activists are easily enumerated: ask people to go vegan; or ask for some lesser change such as vegetarianism, reductionism, consumption of 'happy meat', or the avoidance of particular animal products. As veganism is widely considered to be too much to ask of people, the latter are often employed as gateways to veganism:

“Most non-vegetarians tune out when told to go vegan but may consider starting to make changes like adopting Meatless Mondays or eating fewer chickens” (Matt Ball, Co-founder and Executive Director of Vegan Outreach; in Davidow 2013).

The stance of the Abolitionist Approach is uncompromising on this issue: veganism is considered a ‘moral baseline’ according to the belief that averting unnecessary harm to others is the minimum criterion for qualification as a moral actor (Francione & Charlton 2012). To consume animal products is to fail in this minimum duty and is therefore considered immoral. Likewise, to encourage others to consume animal products, or to tacitly condone them doing so, is regarded as both wrong in itself and detrimental to the movement as a whole. Campaigns which communicate a reduction in meat consumption (e.g. Meatless Monday) or ‘ethical meat’ (e.g. free range) as being end goals, rather than stepping-stones towards the end goal of veganism, implicitly condone meat consumption. According to Francione (2009):

“... even if vegetarianism was a gateway to veganism, or “happy” meat was a gateway to vegetarianism..., should we promote something that is morally wrong as a way of getting to something morally right? It is, of course, better if a rapist does not beat a rape victim in addition to raping her/him. But does that mean that we should campaign in favor of “humane” rape as a gateway to no rape? ... Of course not. Where issues involving humans are concerned, most of us see the problem and few, if any, of us would campaign for “humane” rape or “humane” racism or “humane” torture... these gateway arguments have the disturbing characteristic of promoting conduct or practices that explicitly violate the fundamental rights of animals when we would never do that in a human context. The gateway approach is speciesist on its face.”

Here we see again the clash between a philosophy of inviolable rights and the utilitarian calculus which, as we will see, is used by other groups to justify the use of such campaigns. The rights-based view of the fundamentalist faction (Jasper & Nelkin 1992) is held not only by adherents to the Abolitionist Approach, but also Direct Action Everywhere (DxE) and other groups who hold that the key to change is in actively shifting people’s beliefs and not just their behaviours, which can only be achieved by using ethical arguments and encouraging veganism (Hsiung 2015). These groups actively pursue veganism as an issue of social justice, with the clarity of conviction and action that most people reserve for injustices directly affecting humans. The latter group of pragmatists (Jasper & Nelkin 1992) – which includes all of the larger advocacy organizations – operationalize a consequentialist view of social justice in working to improve welfare and reduce animal use, according to the belief that a vegan world is an unrealistic goal for the foreseeable future.

On top of the aforementioned ideological objection, Francione (2009) raises a practical objection to this consequentialist reasoning: namely that there is no causal connection between reduction and veganism, or between welfare and abolition, and that the evidence that does exist points in

the opposite direction: “The animal welfare approach has been the dominant moral and legal paradigm for 200 years now and we are using more nonhuman animals in more horrific ways than ever before in human history”. The ‘happy meat’ movement, which is backed by organisations such as PETA through their issuance of awards to retailers who endorse free-range or ‘humane’ products, is causing the movement to regress, according to Francione (2009), by enabling people to again feel comfortable and complacent about their consumption of animal products. Taft (2016) takes the more moderate view that incremental changes such as reductionism are steps in the right direction, but only if they are presented as steps towards the goal of veganism rather than ends in themselves; to present them otherwise is to undermine the ideological groundwork being laid by the fundamentalists, by promoting the view that animals can continue to be harmed in moderation or ‘humanely’.

Mainstream advocacy groups, on the other hand, have ceased promoting veganism as a moral imperative and instead tend to promote vegetarianism or reductionism through their campaigns in response to market research suggesting that the latter are considered more attainable goals by the general public. One survey, for instance, showed that vegans are favoured less than vegetarians by every demographic group in America (Public Policy Polling 2013, in Cooney 2013). Another showed that UK meat-eaters were ambivalent regarding vegetarianism and recognized various benefits including health, whereas perceptions of veganism were consistently negative due to being extreme, unhealthful, and restrictive (Povey et al. 2001). Based on similar data, the Center for Effective Vegan Advocacy (CEVA) recommends that advocacy communications avoid the word ‘vegan’ when addressing general populations, preferring reductionist messages such as Meatless Monday instead (Leenaert 2014). According to this view, the time is not yet right for ethics-based messaging, which must therefore concede to more agreeable communications.

Others are critical of this approach of “determining how best to encourage people to stop exploiting animals [by asking] those doing the exploiting how we should craft our message to them” (Taft 2016); meat-eaters naturally prefer that the ethical arguments implied by veganism be excluded because it is difficult for them to reconcile conceptions of themselves as animal exploiters with their otherwise compassionate nature. Individuals also resist exposure to the truth of carnism because bearing witnessing to the suffering of animals and recognizing one’s own participation in the process can induce distressing emotions, including sorrow, anger, despair, guilt, and shame (Joy 2010). The question for consequentialists is whether these emotions, once aroused, are likely to lead to a process of introspection and reflection on the associated behaviours, thereby yielding opportunities for personal growth, or whether they are likely to trigger defensive responses such as those described by Taft (2016):

“I have frequently seen non-vegans exhibit a classic shame response wherein they are presented with information regarding animal cruelty, then quickly turn to anger, which they direct at the messenger. Rather than undergoing the difficult process of developing awareness and insight into their own guilt and shame, and reflecting on their behaviors

connected to that shame, they instead direct those feelings outward and present irrational justifications for their contributions to continued animal mistreatment. They may describe feeling “attacked” by the messenger of this new information even when no actual attack has occurred because they are experiencing shame and are battling their own “self talk” in which they may be unconsciously (or consciously) questioning their own morality.” (Taft 2016)

Another possibility, and a key focus of this dissertation, is whether strategies can be deployed by animal advocates to better manage such responses, and channel the emotions of their audience towards introspection rather than outward justification. For now it is sufficient to conclude that more individuals will be induced to shift their dietary habits by the more moderate request to reduce their intake of animal-based products than to go vegan. For the consequentialist, it is not the number of vegans and vegetarians that matter, however, but the number of animals being raised and killed for food (Davidow 2013). While moderate messages attract more people, Goal-setting Theory suggests that each will undergo a lesser degree of behavioural change than receptive individuals would in response to the more specific and challenging goal of veganism (Taft 2009). There has been a strong focus among the larger animal protection organisations in the past years on performing calculations of this kind to determine which approach is likely to save the most animals in the short-term. Faunalytics was established in 2001 to propel this new data-driven approach, and EffectiveAnimalActivism.org was launched in 2012 in order to advise donors of which animal organizations save more lives per donated dollar (Cooney 2013).

Using 2012 figures for Americans, the average meat-eater is responsible for the suffering and death of about 31 farm animals each year (28 chickens, 1 turkey, ½ pig, ⅛ beef cow, 1½ farm-raised fish), while consumption of dairy and eggs adds 2 chickens and 1/30 dairy cow (Sethu 2012). Further calculations which translate this death toll into the number of days of suffering experienced by each type of animal do not change the proportions significantly, even when corrected by professional estimates of how acutely each type of animal suffers (Cooney 2013). What is immediately apparent from this data is that shifting from an average omnivorous diet to a lacto-ovo vegetarian diet would save the vast majority (94%) of those animals, assuming that the reduction in meat is not countered by an increase in consumption of eggs and dairy. Furthermore, simply cutting chicken out of the diet and replacing it with plant-based foods would save 84% of the animal suffering inherent in an omnivorous diet. As it is considered significantly easier to convert an individual to vegetarianism than veganism, many organisations claim that they can save more animals by advocating vegetarianism or reductionism and consequently structure their communications accordingly.

On top of the immediate benefit to animals, a large number of meat reducers creates more demand for vegan foods and substitutes than a small number of vegans; the industry response to this demand makes more products available and thereby makes it easier for others to move

towards a vegan diet (Leenaert 2014). While this may be true, two factors raise questions about the relative efficacy of this approach in the longer-term: the first is that vegetarianism and reductionism involve dietary changes, but do not address the use of animal products in other spheres of life; the second that vegetarians and reductionists are unlikely to become activists themselves given the moral ambiguity of their own lifestyles, whereas vegans are very likely to engage in movement building activities and may thereby recruit more individuals (Herzog 1993). The question of which strategy produces superior outcomes in the long run – the consequentialist case – therefore boils down to an empirical question for which current evidence is insufficient to provide a definitive answer. The rights-based view, on the other hand, clearly supports advocating for the complete cessation of animal exploitation through the adoption of a vegan lifestyle, at least as an end-goal. If this approach could be made more palatable for audiences and thereby achieve a better conversion rate than it has experienced in the past, it may even resolve the consequentialist debate: informing this question is a major theme of this study.

### **2.3.3.5 Summary of vegan advocacy approaches**

The efforts of the animal rights movement are now squarely focussed on mitigating the suffering inherent in the most extensive form of animal exploitation on the planet: animal agriculture. From the perspective of the animal rights activist – whether of a consequentialist, natural rights, or contractarian persuasion – the ultimate goal is a vegan world in which the most fundamental interests of animals are no longer subjugated to satisfy the trivial taste preferences of humans. Animal rights activists, as defined herein, are unified on this matter. While some seek change through legal routes, the ‘property’ status of animals severely limits the progress that can be achieved through such approaches in the short term. A massive shift in public attitudes regarding the exploitation of animals for food would be necessary to pass the sought after legal provisions, but then again, such a shift would simultaneously contribute to the desired outcomes through economic pressure and thereby render legislation largely redundant. Consequently, most activists recognize that developing a grassroots groundswell through public communications and personal advocacy is critical to the success of the movement.

Such communications could take the form of ‘pull’ campaigns which seek to attract consumers to veganism simply by presenting it as an attractive proposition in itself. At the other end of spectrum are campaigns designed to ‘push’ consumers away from participating in the exploitation of animals. Various advocacy organisations tend towards one approach or the other and, in the case of push campaigns, appeal to a range of different problems including environmental harms and negative health implications, on top of animal welfare and rights issues. In actuality, public communications tend to represent a combination of these approaches, by presenting some problem related to animal agriculture and framing veganism as a desirable alternative.

Taft (2009) seeks to explain this approach with reference to the transtheoretical model (e.g. Prochaska & DiClemente 2005), which conceives of individuals as passing through a series of defined stages as they address their own problematic behaviours. In the first of the five stages, 'pre-contemplation', individuals may not even recognise that there is a problem and certainly have no intention of changing their behaviour. The common use of incoherent justifications for using animals, argues Taft (2009), is evidence that the majority of the public still resides in this stage. It makes sense for activists addressing such audiences to emphasize the meat problematic in order to awaken a complacent public from their habitual slumber. The second stage, 'contemplation', is characterized by awareness of, and growing interest in, the problem. At this stage, activists would ideally provide further information which leads individuals to recognize the need to change their own behaviour: continuing to communicate the harms of animal agriculture, but also hinting at the existence of viable alternatives such as veganism. Having recognised the problem, individuals in the 'preparation' stage are planning to make a change and can be supported by advocacy communications which leave the 'why' of veganism behind and focus instead on the 'how' of veganism: for instance by transferring skills and tools in the form of recipes and nutritional advice, and providing resources such as links to supportive organizations and networks. In the 'action' and 'maintenance' stages which follow, the individual makes substantive changes to their behaviour and attempts to maintain the new improved behavioural regime. Animal advocates can assist best through ongoing support relating to the 'how' of veganism in order to avoid recidivism (Cooney 2013), as well as occasional reminders of the 'why' of veganism in order to maintain motivation.

Conceiving of non-vegans as pre-vegans (Taft 2009) or blocked vegans (Adams 2001), in accordance with the transtheoretical model, entails recognition that individuals at particular stages of the transition towards veganism have distinct informational needs and can be best assisted through communications tailored to their situation. While this view highlights the absurdity – from a consequentialist standpoint – of claims that a singular communication strategy should be employed for all audiences, such assertions are commonly made by various factions in arguing for their preferred approach. It could be argued that if the majority of the public are truly in the pre-contemplation stage, then 'push' strategies should be favoured over 'pull' strategies for untargeted communications. However, even then points of contention between advocacy groups relate to the choice of problem presented in order to push audiences out of their comfort zone, and the question of how far to push them: i.e. what extent of behaviour change to request of them.

At one extreme are the fundamentalists, who endorse the exclusive use of ethical arguments: framing animal rights as a social justice issue and promoting no less than veganism as a moral baseline. While all animal rights advocates endorse these principles in theory and would prefer to use this approach if they considered it effective (Leenaert 2014), mainstream advocacy organizations believe that such messaging will be perceived as extreme and restrictive by their



audiences. As a result, they tend to avoid ethical arguments in favour of compassion- and health-based rhetoric as part of a communications strategy which embraces pluralistic messaging and promotes small behavioural change. It is unclear which approach would be more effective in the long run: after all, “today’s social conservatives are yesterday’s ‘extremists’ on issues like women’s rights, civil rights, children’s rights, and so on” according to Foer (2009), who further asks “who advocates half measures on the issue of slavery?” One could well ponder whether slavery would ever have been abolished if the anti-slavery movement leaders had only pushed for some marginal reduction in its prevalence, or sought welfare reforms rather than freedom for the enslaved.

So while specific messages are clearly more appropriate for audiences at different stages of awareness, the question remains of how best to craft an economical communication approach for general audiences in the pre-contemplation or contemplation phase.

There is, however, a middle ground, which is able to accommodate the ethical position of the fundamentalists whilst simultaneously acknowledging the practical concerns of the pragmatists. This approach grounds its appeal for behavioural change primarily in the case for animal rights/welfare, but also acknowledges environmental and health benefits as additional advantages. Veganism is clearly defined in communications as the ultimate objective which is sought from all audiences, but incremental steps in that direction such as vegetarianism or reductionism are also encouraged and celebrated as beneficial for both the individual and animals in general. This strategy closely approximates the communications approach adopted by U.S. based organization Vegan Outreach in their personal advocacy endeavours (Sjodin 2016). As this compromise represents several steps away from the strategy currently promoted by the largest advocacy organizations, which they justify using efficacy-based arguments, several questions become relevant: why is the approach used by Vegan Outreach not more effective?; what underlies the resistance of audiences to well-founded ethical arguments?; and can anything be done by activists to make such messages more persuasive for their audiences?

## **2.4 Disciplinary approaches to meat consumption**

The discussion has thus far presented the choice of whether or not to consume animal products as an ethical issue with the potential for broad reaching ramifications in terms of the way individuals perceive the world, and their own place in it. The fact that various individuals will reach different conclusions regarding these issues, and some may not consider them at all, indicates that there are many other potential academic approaches to the topic of meat consumption beyond this philosophical perspective. A primary distinction between the social science disciplines is the way in which they make attributions regarding agency.

So who, or what, is responsible for the prevalence of meat consumption? Joy (2010) would respond that meat eating is a cultural phenomenon which therefore lends itself to an anthropological approach. Reflecting on my personal experience supports the notion that significant agency lies beyond the individual: I do not recall ever having resolved to be a meat-eater, and I was already a meat-eater by the time I was capable of taking such an important decision. An alternative explanation is that individuals are pressured into eating meat through interactions with others, suggesting a sociological approach to the topic, but this does not align with my experience either: the individuals and groups surrounding me and influencing me appeared similarly unaware that meat consumption was even a choice, let alone an issue worthy of serious consideration. Joy (2010) would explain that dominant ideologies like carnism tend to remain unnamed and largely invisible to most of society, and therefore evade scrutiny. The anthropological perspective highlighting cultural factors therefore seems to offer the best explanation for why people start eating meat – or not in the case of certain cultures – but the questions posed here are concerned with ceasing meat consumption: which may be better approached from a different perspective.

The veil of carnism has influenced the perspective of the masses for a long time, preventing most from considering various specific species as anything other than food. Yet some creative thinkers throughout history have envisioned alternative realities and acted on their broader worldview. Accounts of vegetarianism go back as far as Pythagoras in the sixth century BCE, who purportedly stated that “all animate beings are of the same family” (Porphyry, *VP* 19, in Huffman 2014), and noted that “as long as men massacre animals, they will kill each other”. More recent history is replete with examples of famous scholars adopting a vegetarian lifestyle, or at least rejecting animal suffering, in opposition to the dominant culture of their age: examples include Leonardo da Vinci, who lamented the brutality of animal use (Bramly 1991) and predicted that “the time will come when men such as I will look upon the murder of animals as they now look on the murder of men”; and Jeremy Bentham (1823), who explained the grounds for moral consideration as “... not 'Can they reason?' nor 'Can they talk?' but 'Can they suffer?'”. The ethical positions adopted by these individuals in dissent to the vast majority (who did not necessarily eat meat but who condoned it) cannot be explained by cultural, nor societal forces. Agency to control meat consumption in these cases very clearly lies with the individual and may therefore be best investigated as a psychological phenomenon.

As the quantity of information surrounding vegetarianism expanded and the proportion of the population practicing vegetarian lifestyles grew to measureable levels, it is feasible that sociological influences may have become a significant factor in causing individuals to stop consuming meat. Benjamin Franklin’s diet, for example, was likely influenced by the time he spent with Quaker communities who opposed meat consumption on ethical grounds (Kaiser 1996), as well as the writings of Thomas Tryon:

“when about 16 years of age, I happen'd to meet with a book written by one Tryon, recommending a vegetable diet. I determined to go into it... My refusing to eat flesh occasioned an inconveniency, and I was frequently chid for my singularity” (Franklin 1790)

As vegetarian groups can now comprise a significant proportion of Western populations, sociological reasons for stopping meat consumption cannot be entirely dismissed and may motivate some individuals to become vegetarian. However, an ethnographic study of vegetarians found individual concerns, specifically cognitions regarding health and animal welfare/rights, to be the primary motivators for becoming vegetarian (Fox & Ward 2008). The authors note, however, that these initial motivations may be augmented by additional reasons over time in order to sustain a dietary practice that departs so dramatically from the norm. It seems, therefore, that psychological factors best explain the behavioural shift away from meat consumption, while sociological and cultural forces may act as a barrier to this change. Certain tools may be necessary to break through such barriers, including the knowledge and perspective to recognise the carnist schema which acts upon all of us: activist communications are one such tool. Given this caveat, this research adopts the perspective that agency to stop eating meat lies primarily with the individual. Accordingly, the following sections examine the issue from perspectives which emphasize the agency of the individual: consumer behaviour and psychology.

#### **2.4.1 Consumer behaviour**

The essence of the choice before us – to eat meat or not – is a question of how we behave as consumers: the field of consumer behaviour therefore appears an appropriate body of literature in which to seek understanding. Consumer behaviour has traditionally been studied through one of two highly structured approaches: cognitive social psychological approaches emphasizing the primacy of consumer agency, or economic and behavioural decision theory perspectives which emphasize the environment in which rational consumers are situated (Askegaard & Linnet 2011). This dichotomy has led to the formulation of highly divergent models which are often contradictory in their conclusions, and which fail to provide a comprehensive account of the many forces influencing consumer behaviours at conscious and sub-conscious levels. Melanie Joy's (2010) work on carnism has established the substantial influence of environmental factors in shaping individuals' belief structures regarding other species, yet the very coexistence of vegans and carnists demonstrates that consumer agency remains a significant factor in any given context. The field of Consumer Culture Theory (Arnould & Thompson 1984) is therefore an appropriate body of literature through which to examine meat consumption behaviours, as it recognizes that contextual factors “frame consumers' horizons of conceivable action, feeling, and thought, making certain patterns of behaviour and sense-making interpretations more likely than others” (Arnould & Thompson 2005).

### 2.4.1.1 Consumer Culture Theory (CCT)

In general, CCT seeks to illuminate the symbolic and experiential aspects of acquisition behaviours, as well as the sociocultural complexities of exchange behaviours and relationships (Arnould & Thompson 2005). These broad aims have developed into a set of four research programs: consumer identity projects; mass-media marketplace ideologies and consumers' interpretive strategies; marketplace cultures; and the sociohistorical patterning of consumption. These various perspectives reveal that consumption attitudes may serve a number of functions in addition to mere utilitarian purposes (Katz 1960).

*Consumer identity projects* conceive of consumers as goal-driven identity seekers who choose to inhabit specific consumer positions from the range produced by the market, thereby emphasizing the (bounded) agency of the consumer in working together with market-generated materials to forge a coherent, if diversified and fragmented, sense of self (Arnould & Thompson 2005). Food markets produce a range of positions that consumers may choose to occupy through their consumption behaviours and which may well have a significant bearing on their sense of self-identity and the identity they outwardly project to the world. The wide range of produce available in modern market economies makes it both feasible and affordable to adequately nourish oneself on diets ranging from vegan through vegetarian and flexitarian to omnivorous, while organic certification and other quality standards allow for further discrimination within each category. Each of these diets is typically associated with certain meanings which are propagated through marketing materials and interpreted by consumers: meat consumption is typically associated with strength, masculinity, and domination, while vegetarianism is associated with compassion and femininity (Rothgerber 2012). While consumers who select either of these two positions are free to accept, reject, or reconfigure these typical meanings with respect to their self-identity, they must nevertheless accept that the dominant societal interpretation of the products they consume is how they will be largely perceived by others. The symbolism associated with specific food products may therefore influence consumption behaviours in accordance with an individual's value expressive aspirations.

Consumers are not one-dimensional characters myopically pursuing a single clearly defined identity, however, and they are likely to hold multiple goals which may be marked by points of conflict, internal contradictions, ambivalence, and even pathology (Arnould & Thompson 2005). Meat-eaters who also feel some empathy for other species may wish to perceive themselves as both strong and compassionate, although traditional consumer positions do not easily facilitate the expression of such an identity: it is difficult to reconcile the thought 'I care about animals' with the thought 'animals were killed for my meal'. Conflicted consumers must therefore resort to myriad coping strategies and compensatory mechanisms to deal with the juxtaposition of seemingly antithetical meanings and ideals (Arnould & Thompson 2005). The concept of

reconciling conflicting cognitions is explored more deeply in the section on Cognitive Dissonance.

Newer product categories including 'organic' or 'free range' meat have emerged to assist conflicted consumers by providing the novel consumer position of 'happy meat': typified by marketing communications propagating the myth of animal consent (Foer 2009) by depicting cartoon animals expressing their willingness to be consumed following a 'humane slaughter'. In this context, the next CCT research program – *mass-media marketplace ideologies and consumers' interpretive strategies* – conceives of consumers as interpretive agents who react to advertising and mass-media communications through responses which range from tacitly embracing the dominant lifestyle ideals portrayed to consciously deviating from these ideological instructions (Arnould & Thompson 2005). All advertisements for meat products implicitly communicate an ideology of human superiority over other species, to the extent that a fleeting hedonic pleasure for the consumer outweighs all interests of the animal to be consumed, including its interest in life itself. Meanwhile, service scapes void of animal heads or internal organs and euphemisms such as 'beef' help to distance the meat product from its 'cow' source, thereby directing consumers' attention and self-narration in order to systematically predispose them towards certain kinds of identity projects (Arnould & Thompson 2005): namely carnism.

'Happy meat' campaigns go still further to suggest that the very victims of the violence – non-human animals – are willing participants in the meat production process. Despite the fact that virtually all of the most abhorrent production practices – beak grinding, tail docking, mincing of live animals, etc. – are still permitted without anaesthetic under organic and free-range certification schemes (BioAustria 2016), many consumers have become convinced that such schemes have resolved the issues surrounding animal welfare. Indeed, some have come to accept the antithetical phrase 'humane slaughter' as a genuine possibility. These specious cases demonstrate Arnould & Thompson's (2005) assertion that many consumers willingly become complicit in their own seduction by marketing communications.

Consumers still have a choice, however. They may embrace the marketed ideology by dutifully purchasing the presented goods or they may consciously deviate from these ideological instructions and shop instead from the vegetable aisle. Whichever they choose, their very actions make them culture producers, according to the next CCT research program - *marketplace cultures*. Recognizing the democratic contribution of each individual's actions to the generation of a societal culture is a logical consequence of adopting a broad conception of culture such as Bower's (1966) "the way we do things around here", which applies both to the general societal culture as well as distinctive cultures within societal sub-groups. Through the pursuit of common consumption interests, consumers may forge feelings of social solidarity (Arnould & Thompson 2005), thereby fostering collective identifications based on shared belief, meanings, mythologies, rituals, social practices, and status systems.

The consumption of animal products has long represented such a ritual which is strongly related to collective identities. One need only reflect on the festive dishes associated with various national cultures (even those which consume little meat) to recognize that meat has traditionally played a central role in the collective celebrations of most human groups: eating turkey at Christmas is a prime example. Participating in such social practices can do more than simply affirm group membership however; specific consumption practices are also associated with status (Fiddes 1991). Many developing countries are currently experiencing massive growth in levels of per capita meat consumption, and this phenomenon is claimed to be largely driven by the prestige conferred on the consumer (Friends of the Earth 2014). Even in developed market societies where meat may now be cheaper than alternative foodstuffs – and should therefore be dissociated from socio-economic status – this shared mythology has largely persisted in the form that many feel it necessary to provide meat to guests in order to show respect and save face.

It is not only through active participation in specific consumption activities that consumers may forge such social bonds; symbolic boundaries may also be defined through an ongoing opposition to dominant lifestyle norms and mainstream consumer sensibilities (Arnould & Thompson 2005). While individual motivations may differ dramatically, members of vegan societies are nevertheless connected by their denunciation of animal based food stuffs. In seeking to understand the consumption of animal products, it is therefore important to recognize the social implications of such consumption practices. Changing one's consumption, while it may present new opportunities for building social bonds, could also affect valued existing social ties.

Finally, the last CCT research program, *sociohistorical patterning*, addresses the institutional and social structures that systematically influence consumption, such as class, community, ethnicity, and gender (Arnould & Thompson 2005). It is through this lens that carnism may be detected as a systematic influence on consumption which operates through a number of overlapping and reinforcing channels. Religious doctrine has had a significant influence on perceptions of the relative status of human and non-human animals, which has surprisingly persisted despite its inconsistency with Darwinian teachings (Dawkins 2004). Cartesian beliefs regarding the inferiority of non-humans animals have resulted in the denial of status under the law, while economic policies such as agricultural subsidies for animal-based foodstuffs further create an institutional context which predisposes consumers towards mainstream carnist consumption practices. As many of these structural foundations are outside of consumers' experiential universes, they remain unexamined:

“As consumers act to maximize material, symbolic and social capital within various types of fields, they may experience themselves as under no particular constraint from rules or obligations... [but this is because] ... the social actor possesses an embodied, pre-re-

flective competence, having internalized the rewards and sanctions that stem from surrounding social structures, which are thus not the object of direct reflection” (Askegaard & Linnet 2011).

As many beliefs surrounding the consumption of meat are internalized from a young age (Joy 2010), they are taken for granted and rarely questioned by consumers. The environment can therefore be seen as having significant influence on consumer behaviours at a pre-reflective level.

Consumer Culture Theory provides a useful perspective on the consumer as a complex character with manifold and often contradictory objectives navigating through a dynamic environment. It is valuable in identifying the role of food choices in contributing to self-identity and social solidarity, as well as identifying knowledge and environmental influences as drivers of behavioural outcomes. Each of these factors demands exploration in the current research. However, the role of ethics and morality in consumption is not explicitly mentioned within any of the four CCT research programs. Arnould and Thompson (2005) recognize this omission in the following: “An intriguing issue, still in its theoretical infancy, concerns the moral constitution of consumption and the nature of moral dilemmas and challenges that the commercialization of everyday life, including its most intimate moments, pose for consumers”. It is therefore necessary to look further in to the consumer behaviour literature – specifically towards the field of Ethical Consumerism.

#### **2.4.1.2 Ethical consumption**

Ethical consumer behaviour has been defined as “decision making, purchases and other consumption experiences that are affected by the consumer’s ethical concerns” (Cooper-Martin & Holbrook 1993). This broad field can be subdivided into ‘ethical consumerism’, which is concerned with questions of what and how much is consumed (e.g. Shaw & Clarke 1999; Carrigan & Attalla 2001), and ‘consumer ethics’, which is concerned primarily with the conduct of consumers in retail settings (e.g. Vitell & Muncy 1992). The issue of consuming animal products falls within the former category, ethical consumerism, which developed out of environmentally concerned consumption (Chatzidakis et al. 2006). Efforts to develop models of ethical consumption decision making have generally applied either Hunt and Vitell’s (1986) general theory of marketing ethics, or Ajzen’s (1991) theory of planned behaviour.

The theory of planned behaviour states that the behaviour of an individual in a given situation is a function of their behavioural intention, which is contingent on their attitude and subjective norm, with the individual’s perception of their agency to control their own behaviour impacting both their behavioural intentions and behaviour (Ajzen 1991). As noted by Fukukawa (2002) in applying this model to the field of ethical consumerism, the underlying assumption is that behavioural intentions will be consistent with ethical judgements in most cases. Joy’s (2010)

insights into carnism have revealed, however, that the norm of consuming (mainstream) animal products is internalized from a young age and therefore lies outside of the scope of ethical scrutiny for most people. That is, the subjective norm merely reflects the societal norm, and therefore represents a moral precept rather than an ethical judgement. Societal rewards and sanctions encourage individuals to follow this path (Joy 2010), as do the principles of sufficiency and least effort in information processing. The uncritical adoption of societal norms (moral precepts) can be seen as an application of heuristic information processing, following the rule that "consensus implies correctness" (Eagly & Chaiken 1993). This can be contrasted with the more effortful cognitive task of systematic processing (Eagly 1980) required to reach considered ethical judgements. Irwin (1999) described the minimal effort generally invested into ethical decision making in consumption settings by stating that individuals are unlikely to "incorporate a complex hedonic calculation of the greatest utility for society into [their] weekly supermarket trip".

Hunt and Vitell's (1986) model, as applied to the context of ethical consumerism (Marks & Mayo 1991), foresees that the process of ethical decision making begins with the perception of an ethical problem. It is recognized that many of the contemporary ethical dilemmas which face consumers do not involve the violation of widespread social norms (Beauchamp & Bowie 1988), as non-normative behaviours are not necessarily unethical, while ethical behaviours are not necessarily normative (Strutton et al. 1997): these authors fail to note that normative behaviours may be considered unethical. Having perceived an ethical problem, consumers then combine teleological and deontological evaluations to reach a judgment on the issue which informs their behavioural intentions (Marks & Mayo 1991). As all choices which lead to divergent outcomes for ourselves and other moral subjects can be fairly construed as ethical problems, all consumption choices are ethical problems (although we lack the necessary information to properly evaluate the alternatives in many cases). Despite this, individuals tend to view some consumption choices as ethical problems and others as not ethically relevant. The likelihood of perceiving a given consumption choice as an ethical problem is influenced by the individual's past experiences, reference group characteristics, and cultural environment (Marks & Mayo 1991).

Given the numerous societal and environmental problems associated with animal agriculture, the consumption of animal products is certainly an ethical problem worthy of consideration, to which different individuals would reach different conclusions depending on their perception of the facts, their personal conception of value, and their inclination towards either teleological or deontological reasoning. Actual recognition of the ethical problem, however, is contingent on the cultural environment of the consumer. As discussed, carnism is an integral characteristic of dominant cultural environments across most of the planet which systematically precludes the recognition of topics such as the consumption of certain animal species as legitimate ethical issues. As a result, the typical European consumer has not traditionally engaged in ethical



decision making with respect to their consumption of animal products, although the emergence of novel consumer positions which reflect concern for animal welfare and the environment is a sign that this may be changing. Chatzidakis et al. (2006) note that involvement with particular ethical concerns can fluctuate as it is continuously influenced by peer pressure and the availability of information. One source of additional information, and perhaps some degree of external pressure, is through communications by animal rights activists (see the section on Vegan Advocacy).

Given that an individual recognizes – at some level – the ethical ramifications of their consumption behaviours, they may still be able engage in the activity without guilt by employing cognitive mechanisms to deactivate normal self-regulatory processes. Bandura (1999) used the collective term *moral disengagement* for a range of eight mechanisms through which one might selectively deactivate self-sanctions: moral justification, euphemistic labelling, advantageous comparison, displacement of responsibility, diffusion of responsibility, disregarding or distorting the consequences, dehumanization, and attribution of blame.

An example of moral justification, as it applies to meat consumption, may be the misinformed claim that meat consumption is necessary for human health. Euphemistic language (e.g. beef instead of cow) is employed to make harmful acts appear benign (because “a beef” can’t die like a cow can). Advantageous comparison juxtaposes unethical behaviours with still worse conduct in order that the original behaviour appears more acceptable: for instance confessing to eating beef but emphatically rejecting veal. These three mechanisms rely essentially on the cognitive misconstrual of unacceptable behaviour such that it becomes more morally acceptable (Bandura 1999).

The following three mechanisms attempt to shift responsibility for, and distort the consequences of, transgressive behaviours in order to circumvent self-sanctions (Bandura 1999). Individuals may attempt to negate personal accountability for their actions by displacing responsibility to some authority figure: such as by claiming that meat consumption is mandated by some divine power. They may attempt to diffuse responsibility for their own actions: for example, by referring to the limited availability of meat-free alternatives at their place of work, or the sharing of meals with their meat-eating family. In addition, individuals may seek to diminish their perception of the negative consequences of their actions by claiming that one person’s consumption can’t make a difference, or that the animal consumed was already dead and beyond salvation. Such arguments are distortions in that they neglect the fact that every act of consumption increases future slaughter levels through the mechanism of supply and demand – Lusk & Norwood (2009) have examined the relative elasticities in order to quantify the exact impact by species – and that even the consumption of small quantities by one person makes a significant difference to the life (death) of the particular animals involved.

The final two mechanisms alleviate self-regulatory processes by reducing the individual's identification with the victims of their actions. The very fact that Bandura (1999) uses the term 'dehumanization' for the recasting of others as out-group members reveals an inherent speciesism, given that it implies humanity to be the relevant criterion for moral consideration. As we have seen, species membership is an arbitrary criterion for drawing such distinctions which cannot be defended any more than appeals to race or gender. Nevertheless, the broader principle of degrading others and belittling their suffering is applied frequently in the defence of meat consumption. Finally, individuals may attribute blame for their own harmful behaviours to the victims themselves. Claims that non-human animals are unavoidably destined for our dinner plate due to their place in the food chain or because they have been bred for the purpose effectively defer responsibility from the eater to the eaten.

While each of these mechanisms are used by meat-eaters, two factors speak against the use of moral disengagement as a disciplinary approach to analysing meat consumption behaviours. The first is the fact that this body of literature, like many others, fails to differentiate between moralization and ethical decision making: treating them as synonymous. This is immediately problematic, given that meat consumption may be considered unethical (depending on one's subjective viewpoint) but cannot be considered morally transgressive according to the definitions applied herein; as such, moral disengagement is unnecessary in this case. This differs from the majority of moral disengagement studies which deal with clear incidents of moral transgression against widely accepted social norms: such as organizational corruption (Moore 2008) or cheating in sporting contests (Boardley & Kavussanu 2007). It could be that some individuals need to disengage from *ethical reasoning* in order to enjoy their steak, although the ready availability of a behaviour-consistent social norm should make such cases uncommon. More importantly, it is not the place of the researcher to speculate that individuals (on average) act contrary to their own privately held ethical judgements with respect to meat consumption. The more parsimonious conclusion is that the veil of carnism effectively precludes the process ethical reasoning, or that behaviours actually reflect individuals' ethical positions. That said, behaviours and ethical positions are not always aligned.

An ongoing challenge for researchers concerned with ethical consumption is the persistent finding of a value-action gap: whereby individuals behave in ways which are contrary to their professed ethical concerns (Carrigan & Atalla 2001). Attempts to account for such discrepancies have led to the addition of extra constructs such as "self-identity" and "ethical obligation" (Shaw et al. 2000) to the dominant consumer behaviour models. Chatzidakis et al. (2006) note that these additional influences on ethical consumer behaviour indicate "the internal tensions that consumers feel when balancing their own desires with moral behaviour that favours societal well-being". Similar internal conflicts have been described in meat-eaters (e.g. Scully 2002; Rozin 2004; Pollan 2006; Foer 2009; Loughnan et al. 2014; Rothgerber 2014; Amiot & Brock 2015; Blidaru & Opre 2015; Piazza et al. 2015), despite the fact that eating meat does not violate

general societal norms and is therefore not regarded as morally transgressive within most societal groups. Such findings recommend departing the narrow field of ethical behaviour and approaching the topic through a broader frame of cognitive or attitude-behaviour consistency: namely Cognitive Dissonance. It should be noted that the phenomenon of moral disengagement is still regarded as relevant to the meat paradox, but that neither the situations in which it will be used or the techniques for circumventing internal conflicts comprehensively cover the experience of meat-eaters. Rather, moral disengagement provides a (non-exhaustive) set of solutions for mitigating the undesirable experience of cognitive dissonance (Blidaru & Opre 2015) in those cases in where dissonance is aroused between behaviours and ethical judgements. According to this view, the experience of dissonance, which expresses as guilt and other negative emotions (Stice 1992), is a manifestation of the self-regulation processes described by Bandura (1999).

## 2.5 Introduction to Cognitive Dissonance Theory

It is recognised that many meat-eaters hold ambivalent attitudes towards their own meat consumption (Berndsen & van der Pligt 2004), associating it with slightly negative feelings, objectionable moral issues, and risks for both the environment and personal health. This is not surprising, given that eating meat produced either through industrial factory farming or through 'humane' methods is inconsistent with various other attitudes that individuals tend to profess, including caring about non-human animals and caring about the environment. This conflict has recently been termed the 'meat paradox' (Loughnan et al. 2012), but the ambiguities surrounding meat consumption have been recognized for decades. A researcher investigating the intellectual development of children over eighty years ago noted that "there is probably no moral field in which the child sees so many puzzling inconsistencies as here" (Isaacs 1930). Rozin (1996) encouraged more serious investigation into the psychological factors relating to the consumption of meat. This section provides evidence that the call has been answered, but that several important questions remain unanswered.

*"Happiness is when what you think, what you say, and what you do are in harmony."*

Mahatma Gandhi

According to Cognitive Dissonance Theory (Festinger 1957), inconsistencies between attitudes and behaviours, when made salient, arouse a state of discomfort which individuals are motivated to resolve. Dissonance manifests as a range of negative affective states including feelings of guilt, anger, anxiety, embarrassment, and shame, but is only aroused when certain conditions are fulfilled: a) a sense of personal responsibility for one's behaviour; b) the perception of aversive consequences stemming from that behaviour; and c) the relevance of these consequences to the self. These criteria are addressed in turn and applied to the act of meat consumption:

a) One must feel that their behaviour is freely chosen (Beauvois & Joule 1999), which therefore creates a sense of personal responsibility. Given the non-necessity of consuming animal products from a human health perspective as well as the availability and affordability of plant-based nutrition in developed market economies, as laid out in the introduction, meat consumption can fairly be construed as a choice in an objective sense; those who are aware of these facts are likely to feel personally responsible for whether or not they consume meat. As will be seen, however, meat-eaters frequently seek to absolve themselves of responsibility for their actions by appealing to the necessity of meat consumption on health grounds, or by claiming that such behaviour is divinely mandated. These attempts to transfer liability away from the self may be strategies to assuage the guilt or other negative feelings related to meat eating behaviours.

b) Although some contention remains regarding this issue (e.g. Harmon-Jones et al. 1996), there is broad agreement that the individual must perceive their behaviour to be both consequential and (potentially) aversive (Cooper & Fazio 1984), and these consequences must have been foreseeable when the behaviour was enacted (Staw 1974). Even in operations optimised for animal welfare, meat consumption requires the taking of a life. With the exception of small children who may not yet realize that “chicken comes from chickens” (Foer 2009), we are inescapably aware of this fact, yet make concerted efforts to dissociate the meat from its once living source through, for instance, the use of euphemisms like beef or pork (Kunst & Hohle 2016). The consequences of meat consumption are clearly undesirable from the perspective of the source animals, but recognizing this requires consumers to put themselves in the place of the victims. Carol Adams (1990) introduces the concept of the ‘absent referent’ to describe the animal who dies, yet is curiously absent from the mind of the meat-eater during the act of consumption.

This psychological dissociation is further aided by modern agricultural supply chains which distance consumers from producers and may thereby confound some consumers’ perceptions regarding the specific consequences of their actions (Foer 2009). Gone are the days of animals being slaughtered and butchered on request, when the causal implications of the consumer’s decision were clearly evident. In the age of pre-production, one’s decision to eat chicken tonight does not cause the death of the bird that they actually consume, for it had already been slaughtered prior to their decision – and this was done by someone else. The undesirable consequences are now mediated both spatially and temporally through the mercenary relationship of supply and demand. Nevertheless, profits resulting from today’s purchase act as instructions for the slaughterhouse to kill another bird tomorrow: consumers kill by proxy. Generally speaking, consumers have the knowledge to foresee the negative consequences of their meat consumption – potentially satisfying this condition for the arousal of dissonance – although such cognitions may not always be salient (Joy 2010).

c) The cognitions must be relevant to the self; they must be valued by the individual (Aronson 1969). Individuals vary as to the importance they place on non-human animals, but surveys of western populations generally reveal a significant proportion to hold favourable attitudes towards animals. 74.5% of respondents to an Ohio based survey declared that they agree that “animals have rights that people should respect” (Nibert 1994). Females were more likely to agree than their male counterparts, reflecting a consistent finding across decades of research into attitudes towards animals (e.g. Driscoll 1992; Herzog 1993; Peek et al. 1996), and higher levels of agreement were detected among younger respondents.

A more recent poll showed that 94% of Americans believed that animals deserve at least “some protection” from harm and exploitation, with 32% stating that animals deserve the exact same rights as people to be free from harm and exploitation (Gallup 2015a). Furthermore, 54% were either ‘very concerned’ or ‘somewhat concerned’ about the treatment of animals raised for food; with females and liberal voters more likely to be concerned than males and conservative voters (Gallup 2015b). Interestingly, this level of concern was lower than that for other categories of animals such as those used in research, in circuses, and in zoos. Given the significant biological differences between the many species of animals commonly designated as food - fish, chicken, and cows for instance – the documented variation in attitudes towards animals based on species membership (Driscoll 1995) does not seem to explain the lower level of concern for “food animals”. Rather, the relative indifference expressed regarding this most exploited category of animals appears to be the outcome of a dissonance reduction strategy (Bastian et al. 2012), as will be discussed later.

Further evidence of the importance of non-human animals in people’s lives comes from the prevalence of pet ownership. According to a national survey, 65% of U.S. households own at least one pet and spend over 60 million US\$ on those pets each year (APPA 2016). Finally, yet potentially more importantly, people want to maintain an image of themselves as moral actors (Steele, 1988). Those that recognize the consumption of non-human animals as ethically problematic are therefore likely to evaluate these cognitions as being personally relevant.

## **2.6 Cognitive Dissonance in Meat-Eaters**

The above discussion reveals that the three basic pre-requisite conditions for the arousal of dissonance are likely to be met in meat-eaters under certain circumstances. This phenomenon has been recorded by a number of authors based on observational and anecdotal evidence (Adams 2001; McEachern & Schroder 2002; Mayfield et al. 2007; Bergmann et al. 2010; Bilewicz et al. 2011; Loughnan et al. 2014). Adams (2001), for example, describes meat-eaters as “blocked vegetarians” who are prone to negative emotions – annoyance, dejection, intimidation, nervousness, perplexity, helplessness, constriction, bewilderment, confusion, immobilization, ambivalence, awkwardness, puzzlement, hesitancy, surprise, depression,

bitterness, terror, fear, and guilt – as a result of their dietary behaviours, and notes that these tensions can be resolved either through behavioural change or psychological manoeuvring. As an example of the latter, Bilewicz et al. (2011) find that vegetarians attribute significantly richer mental and emotional lives to meat animals than do meat-eaters. They infer that meat-eaters are motivated to ascribe more restricted cognitive and affective capacities in order to alleviate the discomfort arising from their complicity in the deaths of these animals.

Still other researchers have sought to measure the connection between meat consumption and cognitive dissonance, often employing experimental designs in laboratory settings. Typically, such studies detect cognitive dissonance indirectly by measuring the degree to which participants seek to make use of the dissonance resolution strategies which are made available to them. Focusing on resolution techniques is an accepted method for detecting the existence of dissonance, but it does little to explain the process through which dissonance is aroused, as demonstrated by the following studies. The differences between the various models of dissonance arousal, and their relevance, are discussed in the next section.

In order to assess the connection between meat consumption and the arousal of dissonance (proxied by the use of dissonance reduction strategies), Loughnan et al. (2010) asked participants to indicate their perception of the mental states and moral status of cows, after having eaten either cashew nuts or beef jerky. Results showed that those who had consumed the meat expressed less moral concern for cows, and animals in general, and ascribed lesser mental capacities to cows relative to those who consumed the cashew nuts. The authors explain the findings as an attempt to “escape the conflict between enjoying meat and concern for animal welfare by perceiving animals as unworthy and unfeeling” (Loughnan et al. 2010).

Investigating more subtle behavioural cues, Bratanova et al. (2011) provided varying descriptions of an exotic tree kangaroo to different treatment groups in order to frame the animal as either an ‘animal’ or as a ‘food’ for the indigenous population. Participants were then asked to rate 1) the degree to which the kangaroo would suffer if harmed, and 2) how deserving the tree kangaroo is of moral treatment. Findings showed that designation as a food led participants to attribute a lower capacity to suffer to the animal, and that this attribution could not be explained by the death of the animal or human responsibility for the death (each of which represented alternative manipulations). A diminished capacity to suffer, in turn, was found to reduce the degree of moral concern for the animal. The authors claim that the design of the experiment – in referring to the actions of people in a distant nation – enacted conditions which preclude the arousal of cognitive dissonance and therefore isolates a phenomenon resulting from a non-motivated process: that of categorization. While the effects detected are in line with Joy’s (2010) description of the carnist schema, which is shown through cross-cultural comparisons to be adopted at a young age rather than hard-wired, Bratanova et al. do not address the question of *why* food animals should be attributed (or denied) certain qualities. The authors do suggest, however, that categorization plays a part in resolving the meat paradox. The

open question is why individuals would seek to resolve the meat paradox unless it is somehow motivating: for instance through cognitive dissonance. From this perspective, categorization is perhaps better viewed as dissonance avoidance strategy rather than a non-motivated process. Two of these same authors reach this conclusion in the next study to be discussed.

Replicating the findings of the previous study, Bastian et al. (2012) again find that priming respondents to think of a given animal as food results in the attribution of lesser cognitive capacities to that animal compared with a non-food framing of the same animal. They claim that the phenomenon of mind denial represents a strategy employed by meat-eaters who are motivated to alleviate their cognitive dissonance. Importantly, dissonance is not detected in both conditions – which would indicate that it is a perennial condition – but is easily triggered in situations which make certain elements simultaneously salient to the meat-eater. For example, in another part of the study, participants' moral concern for meat animals was measured after they were asked to concentrate on either the origins of meat or the origins of vegetables. Those who had been primed to consider the animal origin of meat were found to actively reduce their level of moral concern, in order "to avoid the conclusion that they are involved in the harm of a morally worthy animal" (Bastian et al. 2012). This experiment highlights the ease with which dissonance can be aroused merely by directing the attention of participants, and without providing them with any additional information. This seems to suggest that the cognitive and affective elements necessary for dissonance arousal exist within meat-eaters, but that the process is generally circumvented by defensive strategies. The third part of this study measured the additional effect of expected future behaviours on the arousal of dissonance. Participants who were primed to expect to eat meat as part of the exercise were found to deny animal mind to a greater extent than those who expected to eat fruit. This finding, it is claimed, provides evidence for the action-based model of dissonance (Harmon-Jones et al. 2009), according to the presumption that dissonance reduction serves to reconcile cognitions with behavioural commitments in order to facilitate effective action. An alternative explanation, however, is that the future expectation represents merely one additional cognition which is incongruent with pro-animals beliefs. According to this view, which is consistent with the majority of dissonance models, dissonance should be aroused to a greater extent in those anticipating eating meat, even though this particular cognition does not necessarily carry any greater weight than others. A thorough discussion of the various dissonance models follows in the next section.

A further study probed the impact of increased salience of the animal origin of meat on future behavioural intentions. Hoogland et al. (2005) used a quiz format to prime participants to either consider the 'animal origin of meat', 'animal welfare', or 'fruits and vegetables' (as the control condition), then assessed short-term behavioural intentions across a range of food choice criteria. Those who had been primed with either of the animal related manipulations expressed an increased tendency to favour free range or organic meat for future consumption, or to avoid meat altogether, compared with the control group. Certain motivational value types from the

Portrait Value Questionnaire (Schwarz et al. 2001) were found to alter their behavioural intentions more significantly than others. When prompted to consider the question of the origin of meat, we all know the answer. The findings in this study reveal that this information is important enough to impact on our consumption decisions, yet that this information is not normally considered in consumption contexts. While cognitive dissonance theory provides a potential motivation for this widespread phenomenon of selective attention, the authors also highlight the contribution of an opaque supply chain to facilitating society's collective forgetting about the victims: Carol Adam's 'absent referent' (Adams 1990).

Investigating the ways in which meat-eaters justify their meat consumption through post-hoc rationalizations, Piazza et al. (2015) classify the arguments according to four dominant categories – that meat consumption is: natural, normal, necessary, and nice – thereby empirically adding a fourth 'N' to the 'three Ns' proposed by Joy (2010). The authors note that such rationalizations may help to resolve the conflict experienced by meat-eaters when contemplating the harm that their dietary choices imposes on animals; both the notion of internal conflict and its resolution are entirely consistent with cognitive dissonance theory. They further specify that this conflict has a moral component, providing motivation to rationalize the behaviour in order to maintain a positive self-image, in accordance with Bandura (1999), but also consistent with the self-affirmation (Steele 1988), self-consistency (Aronson 1969), and self-standards (Stone & Cooper 2001) cognitive dissonance models. Finally, it is noted that the use of rationalization strategies may alleviate guilt (Haidt 2001), which can also be understood as an affective response aroused when dissonant cognitions are ethically charged (Ahmed et al. 2001). This study, like many others, uses the term 'omnivore', which refers to a physiological capacity, in place of 'meat-eater', which describes the behavioural characteristic of interest. This conflation of 'can' with 'do' is reminiscent of the naturalist fallacy committed by those study participants who infer 'ought' from 'is' in pointing to the naturalness or normality of meat consumption as justifications for their own dietary preferences.

Hank Rothgerber (2012; 2014) has similarly investigated attempts by meat-eaters to justify their meat consumption. One study develops the Meat Eating Justification (MEJ) scale, which illuminates the various strategies employed by individuals to "reduce negative feelings they may experience over eating meat" (Rothgerber 2012). These strategies are categorized into a range of seven direct, unapologetic approaches which are characterised as masculine and favoured by males (Pro-meat, Denial of suffering/sentience, Dichotomisation, Hierarchical-, Religious-, Health-, and Human Destiny/Fate-Justifications), and two indirect, apologetic strategies (Avoidance and Dissociation) favoured by females. The MEJ scale was highly informative in the development of the primary data collection instrument used in this dissertation and is discussed further in the methodology section. Despite referring to inconsistencies arising from a diet which "is harmful to the planet, to their bodies, and to other animals", which then motivate individuals



to reduce their discomfort, this paper does not unequivocally label this process as cognitive dissonance.

However, a subsequent study (Rothgerber 2014) makes explicit that the conflict, inconsistency, and discomfort referred to in the previous study are manifestations of dissonance in meat eaters. Accordingly, the MEJ scale is augmented through the addition of strategies derived from the cognitive dissonance literature: reduced perceived control and perceived behavioural change. It is shown that these dissonance reduction strategies can be triggered by such subtle stimuli as reading a description of a vegetarian. This provides empirical support for the thesis that vegetarians, without acting, arouse discomfort in meat-eaters by activating meat eating as a meaningful category (Adams 2001) and causing them to consider latent cognitive inconsistencies which are generally rendered invisible by their carnist schema (Joy 2010). Not only is the philosophical outlook associated with vegetarians threatening to the self-worth of meat-eaters (Adams 2001), but the very presence of vegetarians undermines the efficacy of many dissonance resolution strategies (Rothgerber 2014); it is more difficult to argue for the necessity of meat eating in the presence of a healthy individual who foregoes meat entirely.

Importantly, Rothgerber (2014) acknowledges that dissonance may be aroused through recognition of any number of cognitive inconsistencies likely to be present in meat-eaters – each of which relates to a different cognitive dissonance model:

“At the heart of the meat paradox is the experience of cognitive dissonance whether one adopts classic dissonance theory focusing on inconsistency (Festinger, 1957: “I eat meat; I don’t like to hurt animals”), the new look dissonance emphasizing aversive consequences (Cooper & Fazio, 1984: “I eat meat; eating meat harms animals”), or self-consistency/self-affirmation approaches emphasizing threats to self-integrity (Aronson, 1969; Steele, 1988: “I eat meat; compassionate people don’t hurt animals”).” (Rothgerber 2014)

The notion of researchers ‘adopting’ a specific dissonance model seemingly implies that all of the models are equally valid, as opposed to recognizing that one model may describe the process which causes discomfort and triggers certain responses more accurately than the others for meat-eaters in general, or at least for one particular meat-eater. As with the cognitive dissonance literature in general, little effort is made in the studies related to meat consumption to determine which of the processes described by the various models is at play. It may be possible to exclude various dissonance models from consideration through a process of logical reasoning based on the nature of the dissonance resolution strategies employed (e.g. claiming that “meat is tasty” does nothing to reduce the aversive consequences of meat eating behaviours, which are the central concern of the new look model (Cooper and Fazio 1984), whereas claiming that “animals cannot suffer” would better achieve this goal). Deducing the relevant model through such reasoning assumes perfect logic on the part of study participants,

however, when it has already been shown that respondents frequently commit the naturalistic fallacy in arguing from the 'naturalness' of meat consumption to the 'desirability' of meat consumption: from 'is' to 'ought' (Hume 1888).

Further confounding such deduction is that fact that most of the studies listed here offer participants only limited opportunities to alleviate any dissonance they may be experiencing; studies into denial of mind, for instance, typically offer a mind attribution scale as the only avenue for participants to mitigate their complicity in the harming of animals. The fact that participants take advantage of this opportunity in a contrived laboratory situation does demonstrate that they are motivated to resolve their dissonance, but it does not demonstrate that denial of mind is their preferred technique for doing so. So while cognitive dissonance in meat-eaters is well documented, the exact process through which this dissonance is generated remains black-boxed. Nevertheless, this question is of the greatest importance to those seeking to circumvent the defensive psychological reactions of meat-eaters in order to encourage behavioural change.

## **2.7 Cognitive Dissonance and Activist Communications**

The phenomenon of cognitive dissonance revealed in the aforementioned studies is relevant to activist communications in several ways. Most importantly, it demonstrates that individuals, on average, are motivated by the issue of meat consumption when it is activated; the ambivalence detected by Berndsen & van der Pligt (2004) does not amount to indifference, which should be encouraging to activists. The question is how this motivation is likely to manifest itself: as the behavioural and attitude change desired by activists, or in the form of dissociation, rationalization, or other strategies designed to defend the individual's self-identity and/or current behavioural patterns.

A report by the UK Ministry of Agriculture, Fisheries and Food reveals fears that behavioural change will follow communications about animal agriculture, in warning that animal welfare messages should not be targeted directly at consumers because of "the risk of reducing demand by reminding consumers of the link between animals and meat" (MAFF, 1999). 'Ag-gag' legislation enacted in many American and Australian states to criminalize the broadcasting of undercover footage from farms and abattoirs acts on these industry concerns. Such fears among industry bodies may be unfounded or overstated, however; one would expect far more vegetarians in the world if vegetarianism was the typical response of meat-eaters to receiving such information. The conventional cognitive dissonance model (Festinger 1957) states that individuals facing a discrepancy tend to modify the cognition which is most amenable to change. Given that one's behaviours are often known to other people (particularly behaviours relating to such social occupations as eating), cognitions regarding past behaviours are generally harder to change than beliefs and attitudes which are held privately. Individuals may be able to

convince themselves that they eat less meat than they actually do – thereby reducing the perceived extent of the harm inflicted (Cooper & Fazio 1984) – but most meat-eaters will be unable to convince themselves or others that they do not eat meat at all. Changing future behaviours may also be perceived as extremely difficult relative to changing certain beliefs; all vegans have heard “I could never be vegan” from their meat eating counterparts who have never even attempted the experiment.

Beyond the immediate challenge of stopping meat consumption, there is a further psychological barrier to changing behaviours as a way to resolve dissonance arising from meat consumption: augmenting one’s future behaviours amounts to an admission that past behaviours were wrong, or at least sub-optimal. If the dissonance aroused by the violent realities of meat consumption constitutes a threat to one’s self-identity, then such making admissions is likely to increase dissonance in the short-term, rather than resolve it. In such cases, one is likely to focus on the immediate goal of self-defence – e.g. through rationalization or abdicating responsibility – as opposed to engaging in a rational analysis of the available alternatives. In this way, Cohen and Sherman (2014) find that cognitive dissonance posing a psychological threat to identity may impede long-term learning and raise a barrier to adaptive change. For the meat-eater experiencing dissonance, defending their consumption behaviours may or may not adequately maintain the integrity of their self-image, yet attempting to reduce their dissonance in this way means foregoing an opportunity to actively enhance their self-image by aligning their behaviours with the personal values which generated the dissonance in the first place; this situation is liable to be repeated in the future, albeit with better developed defensive reactions which further reduce the prospect of adaptive change. For the animal liberation advocate, the triggering of defensive reactions has effectively closed down the receptiveness of their audience.

Dissonance, then, represents a motivating force which may be triggered by animal activists in their audiences by highlighting behaviour/value discrepancies. Without such recognition of a problem or inconsistency in their behaviours, meat-eaters are unlikely to take action to reduce their meat consumption. High levels of dissonance on the other hand – particularly when related to threats to self-image – are likely to generate defensive reactions among audiences, who then become unreceptive to potentially valuable information and alternative perspectives. In order to communicate effectively, the activist must navigate the narrow path between these two extremes.

The disposition for dissonance to be aroused with respect to a given topic is dependent on a range of individual behavioural and personality traits. Matz et al. (2008), for example, find that introverts experience greater dissonance discomfort than extraverts as a result of holding views disparate from the majority population, and are therefore more likely to change their attitude to match the majority view. As individual factors such as these are beyond the control, or even the detection capabilities, of the average activist, they are addressed only briefly in the next section; activists must accept that some individuals cannot be easily motivated to act at this

stage, and instead concentrate on other targets. On the other hand, activists may have agency to moderate the degree of dissonance aroused in their audiences through a range of techniques elucidated in the literature. Which technique is most applicable depends on the nature of the inconsistency responsible for the dissonance: i.e. the dissonance model at play. The following section is therefore devoted to a discussion of the various dissonance models, together with the respective dissonance reduction interventions.

## 2.8 Competing Cognitive Dissonance Models

Festinger's original theory of cognitive dissonance (1957) failed to specify *why* a cognitive discrepancy results in the arousal of dissonance. Subsequent contributions to the field have sought to explain this black-boxed process and have generated a number of models – each with empirical support as well as contradictory findings – but there is no consensus as to which model explains the arousal of dissonance in general, or in the case of meat-eaters in particular.

The meat-related studies discussed in the previous section do not attempt to address this question; they detect dissonance indirectly by measuring the degree to which study participants seek to make use of the dissonance resolution strategies which are made available to them, but are not concerned by the nature of the inconsistency which causes the dissonant state. This differentiation is important however, as the different models suggest different communication strategies which could be employed by animal rights activists to reduce defensive reactions and increase receptivity to their messages. The various models under consideration are:

**Conventional dissonance theory** (Festinger, 1957): drive to reconcile incompatible cognitions.

**New Look model** (Cooper & Fazio 1984): drive to reduce the aversiveness of one's behaviour.

**Self-perception theory** (Bem 1967): drive to rationally reconcile inconsistent cognitions in the absence of affective reactions.

**Self-consistency theory** (Aronson 1969): drive to align behaviours with perception of self.

**Self-affirmation theory** (Steele 1988): drive to maintain the integrity of one's global self-image.

**Self-standards theory** (Stone & Cooper 2001): drive to reconcile inconsistencies between behaviours and either normative or personal standards.

**Action-based model** (Harmon-Jones et al. 2009): drive to eliminate inconsistencies which may act as barriers to effective functioning in an adaptive and evolutionary sense.

### 2.8.1 Conventional cognitive dissonance theory

The conventional ‘inconsistency elimination’ theory states that it is the cognitive inconsistency itself which causes discomfort, manifest as a variety of negative affective states, and drives the individual to seek resolution (Festinger 1957). An example of a dissonance arousing inconsistency could be “I eat meat; eating meat hurts animals; I don’t like to hurt animals” (adapted from Rothgerber 2014), but dissonance will result only if these three cognitions are simultaneously salient. The underlying motivation to resolve this paradox is claimed to be an innate drive for consistency: a view supported by studies which find that the degree of discomfort experienced is mediated by personality characteristics such as the individual’s *preference for consistency* (Cialdini et al. 1995). The affected individual is motivated to resolve their discomfort by eliminating the inconsistency by applying one or more of a variety of resolution techniques (Festinger 1957):

- ignoring or eliminating one or more of the dissonant cognitions
- adding or creating new cognitions
- altering the importance (or lack thereof) of certain cognitions
- changing actions

Once an action has been performed and becomes a cognition, e.g. “I eat meat”, it cannot be undone in order to achieve harmony with the attitude: “I don’t like to hurt animals”. Beliefs such as “eating meat hurts animals”, on the other hand, can be subtly shifted to match behaviours by selectively scanning one’s memory for cognitions which are consistent with the behaviour. It might come to mind that intelligence is prerequisite for suffering, for example, and one might recall an incident which they interpret as an animal displaying a lack of intelligence. The salience of this new cognition may be sufficient to convince the individual that “eating meat does not hurt animals”, which resolves the inconsistency between the behaviour and the attitude towards animals without changing either. Importantly, when these new cognitions are brought into focus, the individual is left with the feeling of always having thought that way (Cooper 2007), such that they are unaware of their own delusion. Negatively affected individuals therefore generally employ the first three strategies to alleviate their dissonance, and it is in this respect that cognitive dissonance is regarded as a driver of attitude change. The general principle is that the cognitions most amenable to modification will be the ones ultimately changed. The implication is that meat-eaters, when required to, are likely to reflect on their meat eating behaviour and conclude that such behaviour is ethically justified – even when this conclusion necessitates a modification of existing beliefs. In this context, educational campaigns and other persuasion attempts by animal advocates to proliferate animal rights messages are frequently met with staunch resistance or fall on deaf ears.

Conventional dissonance theory suggests a single strategy for enhancing attempts at persuasion: induced compliance (Festinger & Carlsmith 1959). Through their contrived peg turning experiment, these researchers demonstrated that attitudes can be influenced by

inducing an individual to perform a task which is contrary to their initial attitude. Cohen (1962) obtained similar results by applying the technique to real-world attitudes, and further determined that the magnitude of the attitude change was inversely related to the size of the incentive provided for completing the task. While such findings run contrary to traditional learning theories which predict a positive association between reward size and attitude change (Cooper 2007), the implication that induced compliance for effective persuasion must necessarily be a low-cost approach should be attractive to agents seeking this end. In practice, the theory suggests that if an individual can be persuaded to perform some minimal task congruent with the direction of the attitude change sought, they will be more likely to comply with more significant future requests. Such effects were demonstrated by Schwarzwald et al. (1979) who obtained significantly more donations from individuals who had previously signed a petition than those who had not been asked to: the explanation being that these individuals reflect on their already completed behaviour to learn that they are the 'kind of person' who acts in such (usually altruistic) ways, thereby causing future behaviours to follow this pattern. A meta-analysis found that compliance is increased by an average of thirteen percent through the use of this technique (Burger 1999), which is commonly applied as the 'foot-in-the-door' marketing strategy. It is essential that compliance with the first request is freely and actively chosen and that the nature of subsequent requests is consistent with the first. Effectiveness may be increased when some delay transpires between the requests, and when the subsequent request is made by a different person than the first (Burger 1999). Each of these caveats can feasibly be operationalised by vegan advocates.

### **2.8.2 New Look model**

While attractive, the inconsistency elimination mechanism is not the only explanation which has been proposed to underlie the dissonance resolution process. Indeed, as neither the cognitive inconsistency nor its elimination can be observed directly, the claim that an innate drive for consistency is the internal mechanism causing individuals to select from the available resolution strategies is mere speculation by researchers on what is essentially a 'black-boxed' process. Given the growing list of caveats attached to this process (freedom of choice, foreseeable negative consequences, value to individual), Cooper and Fazio (1984) sought a more parsimonious explanation which did not require the invocation of a drive for consistency. Recognising that virtually all previous dissonance studies had, either intentionally or inadvertently, found aversive consequences of the dissonant behaviour to be a necessary precondition for the triggering of dissonance resolution strategies, these researchers speculated that psychologically mitigating the foreseeable negative consequences of their actions provides the motivation for individuals to shift their attitudes – even in the absence of cognitive inconsistencies (Cooper 2007). The New Look model posits that dissonance begins with cognition of the aversive consequences of behaviour which fall outside of the perpetrator's 'latitude of acceptance' (Cooper & Fazio 1984). The individual then determines whether the

consequences were foreseeable and makes an attribution of responsibility for the action. Denial of responsibility has been empirically shown to be a common strategy for ending the process (Gosling et al. 2006), but if the locus of causation is deemed to be internal and the consequences are deemed foreseeable (although not necessarily foreseen), cognitive dissonance is aroused (Cooper & Fazio 1984).

Each of the prerequisite conditions under the inconsistency elimination model – free choice, aversive consequences, foreseeability – are integral to the process described by the New Look model. The two descriptions also concur regarding the existence of discomfort and the potential strategies for resolving dissonance once aroused. Where the models diverge is that the New Look model states that attitude change occurs to render the consequences of behaviour non-aversive, rather than to achieve consistency. In demonstrating that aversive consequences are a sufficient condition for arousing dissonance, Scher and Cooper (1989) provided persuasive evidence in favour of the New Look model, yet these conclusions are challenged by Harmon-Jones et al. (1996) finding that aversive consequences are not even a necessary condition for dissonance arousal. Common strategies employed by meat-eaters challenged by the ‘meat paradox’ include speaking to the naturalness of eating meat or citing religious justification, understating levels of meat consumption, playing down the ability of non-human animals to suffer, or denying animal mind (Bastian et al. 2012). These strategies are characterised by denial of personal responsibility, minimising the extent of the consequences, and denigrating the victims in order to make the consequences less aversive: all of which are consistent with the predictions of the New Look model. On the other hand, appeals that meat consumption is ‘normal’, ‘natural’ or ‘nice’ (Piazza et al. 2015) do nothing to mitigate aversive consequences and therefore speak against the applicability of the New Look model to this topic. Given the considerable uncertainty about the applicability of this dissonance model in general, and the lack of intervention opportunities for animal advocates, the New Look model it is not considered further in the current study.

### **2.8.3 Self-Perception Theory**

Alternatively, Self-Perception Theory (Bem 1967) seeks to explain the same outcome (attitude change) in individuals facing a cognitive paradox by regarding the individual as a rational observer of their own actions. It assumes that the individual applies logical analysis to infer the attitude that must have caused their behaviour in the same way that they would infer the attitude of another individual from their behaviour. A fundamental difference in this approach is that the individual acts to resolve the inconsistency even in the absence of a ‘negative drive state’. Of course, this explanation begs the question of what would then motivate such a response. Such a dispassionate and rational approach to resolving inconsistency could feasibly apply to the formation of new attitudes, but it does not mesh with the state of arousal frequently evident in meat-eaters who are challenged about their well established and strongly held beliefs

(Cooney 2013), nor with experimental findings (Kiesler & Pallak 1976), or neuroscientific manipulations (van Veen et al. 2009). Further, Self-Perception Theory does not suggest specific interventions which may be initiated by animal advocates to enhance their attempts at persuasion. As such, Self-Perception Theory is disregarded in favour of alternative theoretical approaches.

Animal advocates seek one particular outcome from their attempted interventions with meat-eaters: the recognition of a favourable attitude towards animals and a congruent shift in behaviour. Conventional cognitive dissonance theory has suggested that inducing appropriate behaviours may promote this process, while the New Look model suggests that reducing opportunities to deny responsibility may encourage individuals to confront the paradox they face, but does not suggest strategies for promoting favourable outcomes. At this stage in the review, prospects for animal advocates may seem dismal. But if meat-eaters routinely examine their behaviour and adjust their attitudes accordingly, how would one explain the significant number of former meat-eaters who have made the attitudinal and behavioural transition to vegan lifestyles? A related research stream offers an alternative perspective which raises some hope for the social movement.

#### **2.8.4 Self-Consistency Theory**

Also acknowledging the importance of cognitions regarding behaviours and the existence of psychological discomfort, Aronson (1969) argues that dissonance does not arise from just any cognitive inconsistency, but specifically from contradictions between an individual's behaviours and their perceptions of themselves. While the New Look model focuses on the aversive behaviour itself, it does not properly explain why people are motivated to mitigate aversive acts beyond reference to the individual's 'latitude of acceptance' (Cooper & Fazio 1984). By introducing consistency with the sense of self as an innate drive, Aronson's approach develops this notion of evaluative standards further to provide a fuller account of the underlying incentive. Self-consistency theory predicts that dissonance is aroused and attitudes are consequently shifted in order to restore congruence with personal expectations: whether high or low. The direction and magnitude of the attitude shift is dependent on the individual's self-expectations (Aronson 1969). According to the theory, restoring psychological equilibrium requires the individual to make changes to their cognitions regarding the specific inconsistency activated, such as: "I eat meat; compassionate people don't hurt animals" (Rothgerber 2014).

When faced with the aversive consequences of their actions, individuals with higher levels of self-esteem (and therefore greater expectations) are predicted to experience elevated levels of dissonance and to exhibit greater attitude change (Aronson & Carlsmith 1962). In our example, those with higher self-esteem should be more motivated to change their attitudes (or behaviour) than those with lower self-esteem, who have lower expectations for their own



conduct. Stone (2003) reveals that experimental findings have been mixed in this regard: some showing the expected pattern, some the reverse trend, and others showing no difference between high and low self-esteem groups. This review suggests that dissonance may not be restricted to inconsistencies related to an individual's concept of self, somewhat discrediting self-consistency theory relative to the alternative models. Furthermore, effective intervention in the dissonance arousal and resolution process would require messages to be tailored to individual audience members based on prior knowledge of their level of personal expectations and self-esteem, thereby precluding mass or group communication. Even in one-on-one communications such information is generally unavailable to animal advocates, who would therefore be acting blind and potentially counterproductively. An intervention to raise self-esteem, for example, may result in desirable levels of dissonance and a productive exchange, or it may boost already elevated personal expectations such that high levels of dissonance and defensive responses are triggered.

### **2.8.5 Self-Affirmation Theory**

The concept of self was integrated by Steele (1988) in the development of Self-Affirmation Theory, which holds that individuals are motivated to maintain a positive global image of themselves. This diverges from self-consistency theory in that it implies a different point of comparison for assessing one's behaviour – what is good and moral, rather than what is expected – and suggests multiple avenues for alleviating dissonance. When a threat to self-identity arises, people frequently employ defensive strategies which outwardly appear similar to attitude-changing dissonance resolution techniques. Unfortunately, this focus on the short-term goal of identity preservation may occur at the expense of long-term learning and adaptive change (Cohen and Sherman 2014). Exposure to confronting animal rights arguments may constitute such a threat to self-identity, as diets including animal products and other rituals necessitating the subjugation of non-human animals form an integral component of many cultural-, group- and even gender-identities (Rothgerber 2012). The perception of meat-related information as a threat to identity is evidenced by the finding that many meat-eaters feel judged by vegetarians presenting such information, who they feel are asserting their moral superiority (Minson & Monin 2011); such perceived threats commonly lead to defensive strategies such as denigrating the message carrier. Indeed, given the goal of maintaining the global self-image, changing behaviours is the least likely strategy to be employed (Cohen & Sherman 2014), as this implies an admission that past behaviours were sub-optimal. Self-Affirmation Theory is therefore a pertinent approach for examining communications between animal advocates and potential converts.

People have multiple self-concepts relating to the different roles they play (employee, artist, mother, etc.). Steele (1988) claims that the individual's objective is to maintain an overall narrative of the self's adequacy as a moral and adaptive actor across this constellation of

domains. It is not necessary that they excel or even perform satisfactorily (as implied by the term adequacy) in any one domain, as they are able offset specific weaknesses in one by pointing to strengths in others and thereby maintain a global sense of self-integrity. Steele is referenced as saying that it's the war, not than the battle, that has to be won (Cooper 2007). The implication for animal rights advocates is that people may be more receptive to the messages presented and even accept their own past failures regarding animal rights as long as their overall image is not threatened. Given the objective unimportance of any one facet of the global identity, it may appear perplexing that cognitions related to animals could be construed as a threat to self-integrity. In the heat of the moment however, feelingly besieged individuals may not adopt a holistic perspective which enables them to contextualise the information they are receiving and to accept it as being of potential value to them. Rather, the facet of their identity relevant to the issue at hand assumes their focus to the extent that an attack in that domain is perceived as an attack on their whole self (Steele 1988). These issues of perspective and focus at critical moments not only result in communication problems, but also point to potential remedies in the form of self-affirmation interventions.

Self-affirmations are claimed to broaden one's focus to a more expansive view of the self which may provide a buffer against stress and reduce defensiveness towards arguments which may otherwise have threatened the sense of identity (Cohen & Sherman 2014). Such affirmations may be obtained intentionally or incidentally by the individual in the course of their regular routine through activities such as meeting friends, volunteering, practicing religion, or even updating their Facebook status, but they can also be deliberately instigated by researchers or practitioners; the essential element is that a sense of adequacy is fostered in one personally valued domain which can then be imported into the threatened domain (Cohen & Sherman 2014). In contrast to self-consistency theory, self-esteem is predicted to lessen dissonance in the face of a potential threat, as higher self-esteem represents a greater pool of resources which can be drawn upon (Cooper 2007). External praise has been shown to be less effective in achieving this goal than providing opportunities for individuals to personally reveal their integrity, as the later induces more authentic feelings of being praiseworthy which are relevant to self-image (Leary 2005).

A review of studies employing self-affirmation theory by Cohen and Sherman (2014) revealed that timing is instrumental to the success of interventions in reducing resistance to threatening information; interventions may occur either before or soon after the threat is presented, but must take place before the individual has engaged in defensive rationalization. While acknowledging that self-affirmation may be induced in a plethora of ways, Cohen and Sherman (2014) focus primarily on the task of writing about core personal values, which is the most studied experimental manipulation. This technique is readily applicable in the education sector and may also work in the health sector – the two fields where self-affirmation interventions are

most widely applied – but it is infeasible for animal rights advocates to adopt such an approach to psychologically prepare the general public for the hard truths they wish to impart.

Recognising that the potential to reduce biased information processing through self-affirmation interventions has implications for researchers and practitioners from a diverse variety of fields, McQueen and Klein (2006) conducted a systematic review of the various manipulations which have so far been employed to test the theory; their focus was on the categorization of intervention techniques and the assessment of the effects of each intervention type on the dependent variables using standard effect size estimates. Affirmation techniques employed within the sample of studies included requiring participants to respond to specific scales (21 of 69 studies), answer short questions, write a list or an essay on a value identified as personally relevant (19 of 69 studies), use imagery techniques or think about personal positive qualities, as well as providing positive feedback, using indirect methods, or encouraging participants' expectation of an upcoming opportunity to perform a positive behaviour (McQueen & Klein 2006). Common to all of the studies examined is the duration of the affirmation exercise: those that ask participants to reflect on themselves generally specified that this process should last for three to five minutes, while the writing exercises inherently take at least this long. If such durations are a necessary condition for effective affirmation, this may constitute a barrier for animal advocates who have a limited window of opportunity to communicate their persuasive message in uncontrolled public settings. Fortunately, faster affirmations also appear feasible even if they have attracted less attention in the literature. Steele (1988) notes, for example, that simply putting on a white lab coat could be self-affirming for someone who values science.

Only two studies have employed multiple affirmation techniques in order to determine the relative efficacy of each: Schimel et al. (2004) determined that intrinsic affirmations were more effective than extrinsic ones; alternatively, Dillard et al. (2005) varied the timing and presentation of affirmations undertaken by various groups of participants. Further attempts by McQueen and Klein (2006) to meta-analyse the effectiveness of various affirmation manipulations were thwarted by the small sample size and the use of differing dependent variables in each study. Choice of affirmation intervention therefore remains a significant knowledge gap for researchers, policy makers and practitioners who seek to scale-up social psychological interventions demonstrated under experimental conditions in order to realise the potential benefits at societal levels (Cohen & Sherman 2014). For animal advocates seeking to present ethical arguments which challenge the actions of meat-eaters and may be perceived as a threat to identity, the question remains as to which affirmation techniques may be feasible to employ in order to encourage receptivity of their important messages. The difficulty in scaling-up of interventions by practitioners, researchers, and policy makers is recognized by Cohen and Sherman (2014) as “a particularly challenging issue given that attention to local conditions, personalization of the intervention materials, considerations of timing and other theoretical principles can be difficult to maintain in the scaling-up process.”

There is good reason to suspect that effective interventions must be personalised to the target individual, which constitutes an argument against the broad application of a single generic strategy. In particular, the personal value affirmed should be of specific importance to the individual and should be unrelated to the identity domain threatened by the challenging information presented, in order to broaden the individual's perspective beyond the immediate threat (Steele 1988). The latter may be a simpler criterion to fulfil when the threat relates to a specific domain (e.g. the health, animal welfare or environmental arguments often presented by animal advocates) than when it represents a wider ethical challenge which, on accord of its basic nature, has implications across a wide range of identity domains. Perhaps for this reason, affirmation interventions have not yet been applied to receptiveness toward fundamental ethical arguments, and have instead tended to focus on the more specific and independent domains of education and health. The application of self-affirmation theory to broader ethical threats can therefore be seen as a novel aspect of the current study which may inform this research field.

### **2.8.6 Self-Standards Model**

Opposing predictions about the moderating effects of self-esteem on dissonance arousal between the self-consistency model (direct relationship), self-affirmation model (inverse relationship) and the New Look model (no relationship) led Stone and Cooper (2001) to examine the conditions under which each of these outcomes may occur, which they incorporated into the self-standards model of cognitive dissonance. Each of the models describes a cognitive process involving judgements being made – determining levels of aversiveness, goodness, or morality of behaviours – which implies comparison to a standard. Stone and Cooper (2001) note that such standards may be either normative (considering what most people would think according to a sense of shared understanding) or personal (considering one's own judgement, values and desires), and that each may lead to a very different assessment of the consequences of one's actions.

This is abundantly true for the issue of animal rights. Applying a normative standard would acknowledge the widespread practice of meat consumption and invariably lead to the conclusion that such behaviour is not problematic: not morally transgressive. Using personal standards – engaging in ethical reasoning – on the other hand, may lead to alternative or less definitive conclusions. The standard applied in practice is determined by the accessibility of each to the individual, who may exhibit chronic tendencies to favour one over the other, but accessibility can nevertheless be influenced through the provision of appropriate cues (Stone & Cooper 2001). In the absence of systematic tendencies or relevant cues, the normative standard appears to be employed by default (Cooper 2007), reflecting our evolution as social animals (Joy 2010). This tendency towards moralization rather than ethical reasoning is revealed by those who point to the 'normality' of meat consumption as a justification for imposing suffering on

animals (Joy 2010; Piazza 2015). It also explains the continued dominance of meat-eaters within western

societies even as the meat paradox becomes more acute through ever more information coming to light regarding the extraordinary mental and emotional lives of animals on the one hand, and the horrific conditions for animals on factory farms on the other. Animal advocates may apply this observation by ensuring that appropriate cues are available to encourage comparisons with personal standards. It may also be preferable to communicate in one-on-one settings, rather than public or group settings where normative standards may be readily evoked.

By highlighting the role of the judgement standard applied, the self-standards model of cognitive dissonance also addresses the varying predictions made by the three preceding models regarding the moderating effect of self-esteem. Self-esteem is irrelevant to dissonance arousal when normative standards are applied (as predicted by the New Look model), but has one of two effects when personal standards are applied, depending on which personal attributes are primed (Cooper 2007): if personal values relevant to the discrepant behaviour are activated, self-esteem is directly related to dissonance and attitude change (as predicted by the self-consistency model), whereas the moderating effect of self-esteem is reversed when the values activated are unrelated to the threat (in accordance with self-affirmation theory). Given that animal advocates are unlikely able to gauge the self-esteem of their audience, however, this is unlikely to have implications for their work.

### **2.8.7 Action-based dissonance model**

In a more recent development, Harmon-Jones et al. (2009) attempt to reconcile the differences between the competing models by integrating them into a comprehensive consolidated framework. The resulting action-based model is entirely consistent with the original explanation of the dissonance process proposed by Festinger (1957): that the unpleasant state of 'dissonance' results from a 'cognitive discrepancy' (in contrast to much previous research, these authors differentiate the two as separate constructs). The primary innovation is that Harmon-Jones et al. (2009) extend the original model by providing an explanation as to why the cognitive discrepancy should cause a motivational dissonant state: namely that this is an adaptive response designed to ensure that discrepant cognitions do not interfere with the effective functioning of the organism. The logical basis of this argument is the proposition that cognitions serve as action tendencies (Smith & Semin 2004). Discrepant cognitions which imply conflicting action tendencies have the potential to impede the execution of effective action, which may have implications for the very survival of the organism. The arousal of a motivating negative affective state and the consequent reduction of dissonance through the adaptation of the inconsistent cognition most amenable to change can therefore be viewed as an adaptive psychological process with evolutionary underpinnings. While claiming this 'adaptive' process to be generally advantageous, Harmon-Jones et al. (2009) note that it may not prove beneficial

in all cases as it can also enable individuals to maintain sub-optimal behaviours – knowledge of which is generally assumed to be the cognition most resistant to change. The cognitions “I eat meat” and “I don’t like hurting animals” clearly lead to opposing action tendencies, which could produce an evolutionarily disadvantageous indecisive state: causing, for example, the hunter to forego scarce prey. Under the assumption that the former cognition is the more established, the conflicted individual would likely modify the latter cognition or add additional cognitions (e.g. “eating meat does not hurt animals”; “I have no choice but to eat meat”) in order that the behavioural commitment to meat consumption becomes unconflicted.

This explanation provides a useful framework for integrating the varied and sometimes conflicting experimental results derived from the previous models. Dissonance is proposed to arise in situations where cognitive discrepancies imply conflicting action tendencies, including situations where none of the conflicting cognitions relate to aversive consequences. This aligns with experimental findings (e.g. Harmon-Jones et al. 1996) that perceived responsibility for aversive consequences is unnecessary for the arousal of dissonance; seemingly contradicting the main tenet of Cooper and Fazio’s (1984) New Look model. The considerable empirical evidence supporting the role of aversive consequences on dissonance arousal can be explained, according to Harmon-Jones et al. (2009), by considering the awareness of aversive consequences merely as one additional cognition which may influence the participant’s reaction: a relevant, and potentially sufficient, but unnecessary factor.

The action-based model seeks to incorporate experimental findings from Self-Affirmation research in a similar way. Whereas Self-Affirmation theory suggests that affirming a personally relevant value reduces the arousal of dissonance regarding an unrelated topic by lessening the perceived threat to the integrity of one’s global self-image, the action-based model seeks to explain such findings as resulting from the attribution of lower importance to the discrepant cognitions following the unrelated affirmation, in line with Simon et al. (1995). This interpretation does not differ markedly from the explanation provided by Steele et al. (1988), except that it fails to identify why increasing the salience of one value would diminish the importance of another. This phenomenon appears difficult to explain without reference to some holistic context, such as global image integrity, within which the importance of the various cognitions is attributed. Harmon-Jones et al. (2009) conclude that self-aspects are unnecessary to arouse dissonance, but that they moderate dissonance processes.

These extensions to the original theory and incorporation of the findings from divergent research streams, if not the theoretical descriptions, make the action-based model a parsimonious explanation for the dissonance process. So how does this theory apply to the arousal of dissonance in meat-eaters? Firstly, it is clear that a discrepancy exists between the cognitions of compassion for animals and meat consumption behaviours, and that the conflicting cognitions imply divergent behavioural tendencies. The action-based model would therefore predict the arousal of dissonance in this case and the subsequent application of

dissonance reduction strategies in order to facilitate unconflicted action on the part of the individual: the relative resistance of the inconsistent cognitions to change should determine the outcome of this process. However, it is also possible that an individual may maintain conflicting attitudes over time, even in the presence of negative affect (Harmon-Jones et al. 2009), particularly where the degree of dissonance resulting from the discrepancy is not sufficiently high to motivate dissonance reduction. One's dispositional action-orientation has been shown to determine the degree to which dissonance reduction strategies are employed (Beckmann & Kuhl 1984), whereby more decisive individuals (high action-orientation) show greater attitude change following a decision than do less decisive (state-oriented) individuals. Such alternative spreading outcomes are predicted by the action-based model according to the assumption that action-oriented individuals are more motivated to ensure the efficacy of their actions.

The question which remains, and is most pertinent to animal rights advocates, is which cognition is most amenable to change? As indicated above, an individual with a strong commitment to meat eating behaviours (i.e. in a post-decisional state) will most likely apply dissonance reduction techniques which: 1) modify their perception of inconsistent cognitions; 2) derogate the importance of inconsistent cognitions; or 3) enable the individual to avoid the cognitive discrepancy altogether.

More encouraging for activists is an experiment conducted by Harmon-Jones et al. (2003) which showed dissonance to be aroused when empathy (in this case toward other humans) is effectively induced (manipulation 1) and past failures to act in accordance with the resulting action tendencies (namely helping those in need) are made salient (manipulation 2). Participants in this condition demonstrated greater willingness to modify future behaviours in order to align them with the logical behavioural consequence of their empathic experience, which seemingly contradicts the common assumption that past behaviour represents the cognition least amenable to adaption. This finding is not only consistent with the theory regarding persuasion through hypocrisy, which is discussed in due course, but also suggests that behavioural (rather than attitudinal) change can be the outcome of dissonance reduction processes – even when the attitude is not outwardly expressed.

## **2.9 Individual and cultural differences**

Research has also indicated that other individual and cultural differences may mediate the arousal of dissonance and the effectiveness of affirmation interventions. While some studies indicate differences in effects between introverted and extroverted personality types (e.g. Steele et al. 1993; Matz et al. 2008), this finding is disputed by other evidence (such as Spencer et al. 2001). In any case, it does not seem feasible for animal rights advocates to accurately assess the personality type of their audience and to tailor their communication strategy accordingly. The relevance of social class to dissonance was investigated by Snibbe and Markus

(2005), who find that individuals with lower levels of educational attainment experience less dissonance and exhibit less attitude change than more educated individuals. They explain this finding by asserting that people with higher socio-economic status expect to make optimal choices and therefore experience greater dissonance when their behaviours fall short. In contrast, expression of choice is believed not so important to people with lower socio-economic status, who are concerned with maintaining personal integrity and defending against a hostile environment, so they experience less dissonance. In an additional finding, less educated participants in the study were found to exclusively derogate the non-chosen alternative in order to resolve their (lesser) cognitive dissonance, rather than also elevating their attitude of the chosen alternative, as done by more educated participants (Snibbe & Markus 2005). As many cues as to an individual's socio-economic status may be readily available to animal rights advocates, it may be feasible for them to tailor their communication strategies accordingly: at the very least, the activist can be prepared to receive varying responses to their animal rights arguments from different societal groups. However, as is discussed in defence of the sampling procedures used in the current study (see the methodology section), personal advocacy for animals tends to target a specific group with little variability across these variables.

Some evidence exists to suggest that cultural dimensions effect the stimulation of dissonance, particularly following Miller's (1984) distinction between agentic cultures (e.g. the US and Western Europe) where people are regarded as independently responsible for their own outcomes, and holistic cultures (e.g. East Asia and India) where outcomes are seen as resulting from relationships and social obligations. It follows that inconsistency between thoughts and personal actions is more objectionable to individuals from western cultures, who are therefore likely to experience a greater degree of dissonance. In addition, the same cultural difference leads to varying interpretations of what constitutes an aversive outcome: holistic cultures placing more weight on impacts experienced by others and effects on interpersonal relationships (Cooper 2007). In a similar vein, individuals from more collectivistic cultures may be more motivated by threats – and calmed by affirmations – related to their collective identity (Hoshino-Browne et al. 2004). This finding again highlights the importance of personal choice of the affirmed value, which practitioners should ensure, but also makes salient the fact that affirmations can only be effective in the presence of a distinct threat to identity. Briñol et al. (2007) take this point further to suggest that affirmations may have a counterproductive effect in the absence of a threat by raising self-confidence and thereby increasing resistance to change. Although it is ambiguous how this information should be incorporated into communication strategies, it would appear that those who do not feel threatened by a given ethical challenge either agree with the message being portrayed or deem it unimportant to their self-image; in either case, the advice for practitioners would be to concentrate their communication efforts on targets showing more potential for persuasion. The current study seeks to inform the work of animal advocates in Western Europe, where dissonance is likely more pronounced, yet the



findings from these studies may be relevant to the generalisation of significant findings to other populations.

## **2.10 Applications of dissonance to behavioural change interventions**

Cooper (2007) draws attention to the emergence of dissonant states in individuals undergoing psychotherapy designed to change attitudes, emotions and behaviours to render the individual's responses more adaptive to their social world. Effort justification responses have been demonstrated in cases where the patient selects the treatment or therapist through free choice, with the level of dissonance created and resulting personal change exhibited directly related to the amount of effort exerted through the course of the treatment – even when the physical, monetary or psychological effort exerted does not (directly) contribute to the condition being treated. These findings may be viewed as an addendum to the induced compliance technique: the greater the effort involved in the task, the greater the attitudinal and behavioural response which can be expected. For an animal advocate engaging voluntary audiences, however, increasing the effort required by a foot-in-the-door exercise implies a trade-off in the form of lower compliance rates. Perhaps more importantly, psychotherapy is designed to pursue the goals of the patient, not the therapist. Goals of animal liberation are likely not shared by the audiences facing many animal rights activists, which therefore brings into question the relevance of these findings for informing the work of activists. More pertinent is the application of dissonance theory to the field of persuasion.

### **2.10.1 Persuasion through hypocrisy**

As discussed already, dissonance is likely to be aroused when inconsistent cognitions for which an individual feels personally responsible are made simultaneously salient, leading the conflicted individual to seek resolution by modifying the cognition most amenable to change. When one of the germane cognitions is a privately held attitude and the other a publically acknowledged and irretraceable behaviour, it follows that the attitude will be modified for congruence with the behaviour, rather than the other way around. However, those seeking the alternative result may be able to influence this outcome by inducing the individual to act upon their attitude by publically making a pro-attitudinal statement (Stone et al. 1994). The inconsistency in this situation is no longer between an attitude and behaviour, but between two behaviours – commonly recognised as hypocrisy. The most direct way to reduce the resulting dissonance is to change future behaviour (Cooper 2007).

Such hypocrisy procedures have been examined primarily with regards health messages, where target individuals already believe in the objective of the message (by viewing health normatively), but (sometimes) act contradictorily. The case of animal rights is analogous in that

it has been suggested that most people already hold pro-animal attitudes, yet consume animal products. Cooper (2007) finds that “arousing dissonance through hypocrisy procedures has proven to be a robust way to accomplish pro-social behaviour change”, with the behaviour changed being specific to the domain of the hypocrisy, even when individuals are given the opportunity to make themselves feel better through other routes (as suggested by self-affirmation theory). In particular, such manipulations have been successfully applied (causing the desired behavioural change) with respect to problematic behaviours relating to: water use in drought conditions (Dickerson et al. 1992); littering (Fried and Aronson 1995); racism (Son Hing, Li, and Zanna 2002) and; speeding (Fointiat 2004).

The necessary conditions for the arousal of dissonance through hypocrisy procedures align with those already established:

- The individual must feel personally responsible for making the pro-attitudinal statement (Cooper 2007). This implies that the individual has a large degree of freedom in choosing to express their attitude and should not feel obliged to do so. Potential statements with regards animal rights may include, “I love animals” or “it is wrong to unnecessarily kill/harm animals”.
- The prior discrepant behaviour must be brought to their attention. In the context of animal rights, reference to the inclusion of animal products in the diet should be sufficient to make the inconsistency salient.
- The behaviour (eating meat) must have consequences deemed to be significant and aversive by the hypocritical individual. Meat eating is clearly significant and aversive for the impacted animal and therefore may be interpreted as falling short of personal standards of judgement, although it is likely to be viewed as acceptable if normative standards are applied.

Hypocrisy generation may be a useful tool for animal advocates if they are able to elicit explicit pro-animal statements from their audience early in the discourse. The clear and public expression of these extant attitudes through behaviour may render them more difficult to retract and less amenable to later modification relative to problematic anti-animal behaviours.

## **2.11 Dissonance and disassociation and in animal rights discourses**

As indicated previously, many people hold ambivalent attitudes with regard the consumption of meat (Berndsen & van der Pligt 2004). That is to say that they exhibit a degree of uncertainty and a lack of confidence about the right course of action to follow as a result of competing and often irreconcilable cognitions. People generally do not want to cause harm to others – which is implicit in the killing of animals for human consumption and is committed by the consumer by proxy – yet they simultaneously reap hedonic benefits from consuming meat and may even believe it necessary in order to maintain health. These inconsistent cognitions seemingly coexist within many individuals over long periods of time, even lifetimes, without requiring the holder

of such thoughts to definitively resolve the contradiction. It is posited here that dissonance is not aroused to an actionable level because the competing cognitions are rarely salient at the same time; people in western cultures generally do not consider their ethical stance when ordering meals or shopping for groceries (McEachern & Schröder 2002), nor do they usually accommodate thoughts of the meat they are consuming as originating from a living, feeling being (Hoogland et al. 2005).

According to Joy (2010), cultural features assist the dissociation of actions from impacts, particularly through the use of language which differentiates the terminology used to represent living animals (cow, pig, deer, sheep, etc.) from the terms applied to the flesh that originates from these sources (beef, pork, venison, mutton, etc.). Although this distinction is not always as clear in various other languages, it can nevertheless be recognised as an etymological characteristic of most modern European languages. Even in cases where the terms are similar (such as 'chicken' being used to represent both the animal and the meat), they are used differently in practice. Whereas the animal is referred to in either the singular with the use of an article (a chicken; the chicken) or plural (chickens), the meat is referred in the abstract form (chicken) which divorces it from its source as an individual being. The distinction becomes clear when one considers the phrases "I am eating chicken" (which is most often used and which conjures images of plated meat) and "I am eating *a* chicken" (which is seldom heard and which conjures images of a living animal). This linguistic subterfuge makes it easy for meat-eaters to consume meat without considering its animal source, and therefore avoid any dissonance which might cause them to change their attitudes or behaviours. Scully (2002) observes that avoidance of issues and shrouding them euphemism is "usually a sign of inner conflict, of unsettled hearts, a sign that something has gone wrong in our moral reasoning".

Economic interests involved in the production and distribution of animal products have a clear incentive to maintain their customers' cognitive distinction between animal and meat (Foer 2009). This is facilitated by the fact that the supply chain is generally out of the customers' sight; as Paul McCartney once observed, "If slaughterhouses had glass walls, everyone would be a vegetarian". The geographic isolation of production facilities cannot simply be explained as the outcome of economic efficiency considerations. Land-use planning represents one way in which regulatory bodies and policy creators have deliberately ensured the isolation of the industry at the behest of industry lobbyists (Foer 2009): ag-gag legislation represents another.

'Ag-gag' legislation, which is in effect in various forms in Australian, American and European states, aims to censor whistle-blowers who seek to who expose animal welfare abuses by making it a criminal act to disseminate images and video footage collected during undercover investigations of farms and slaughterhouses. The Austrian Association Against Animal Factories (Verein Gegen Tierfabriken – VGT) has been targeted by both the Austrian Farmers' Association as well as the Austrian People's Party (ÖVP) with charges of terrorism relating to their non-violent investigations into animal welfare, and several members have been charged for

belonging to a 'criminal organization' (derStandard 2011). Similarly, members of the Finnish group Justice for Animals (Oikeutta eläimille) were charged recently with aggravated defamation after publishing video showing the poor condition of pigs on a factory farm (sikatehtaat.fi 2011). Of course, given that truth is a valid defence to defamation, these charges were never going to stick, but these cases are representative of a wider effort by the animal agriculture industry to put pressure on animal rights activists through legislative and judicial channels. The campaign has already led to the classification of animal right activists as terrorists by the international crime and terrorism organization EUROPOL: "In Europe, the term [Single-Issue Terrorist] is generally used to describe animal rights groups and environmental eco-terrorist groups" (EUROPOL 2011). Ag-gag laws and the systematic persecution of animal advocates each testify to the importance to the animal agriculture industry of maintaining the cognitive disconnect between consumers and the production processes which deliver them cheap meat.

The deliberate efforts by meat producers to circumvent the arousal of dissonance in their customers also rely on the use elaborate marketing techniques to distance meat for consumption from its animal source. Unlike historical precedents and contemporary practices in other cultures, meat is presented for sale in western supermarkets in a form which is as unrecognisable as the source animal as possible: cut, trayed and plastic wrapped. Identifiable organs are generally entirely absent from the offer, particularly those which may arouse empathy such as heads and eyes, but even bones and internal organs are becoming less frequently offered – despite their nutritional value. Such developments enable consumers to contemplate their meat-based meal without considering the animal rights implications of their dietary choice (Joy 2010).

When animal rights advocates make their case to an audience they tend not to do so in an abstract and philosophical fashion, but to make specific references to the ubiquitous violations of the ethical principles that people espouse in everyday life. The presentation of contemporary practices as being problematic forms the basis of, and motivation for, their arguments. In an inherently consequentialist approach, the ethical stance espoused is promoted not for some conceptual benefit for the ethical agent, but in order to ameliorate the very concrete impacts on the ethical subject. Through the discussion of both ethical arguments and extant practices in the single context, existing cognitive discrepancies are made salient to the audience – perhaps for the first time. The simultaneous consideration of inconsistent attitudes and behaviours is likely, according to the theories presented here, to arouse a dissonant state if the necessary preconditions are met. This situation differs somewhat from the majority of situations studied through the cognitive dissonance lens under experimental conditions, in that most documented laboratory manipulations induce the participant to generate new cognitions through the performance of some (usually counter-attitudinal) behaviour. The activist, on the other hand, need only bring (presumably) existing cognitions into focus in order to produce the dissonant state. This raises the question of how much dissonance is useful for the advocate to evoke.

## 2.12 Lessons for animal advocacy from dissonance theory

Dissonance, whether arising from adverse consequences, inconsistencies between cognitions, or comparisons to standards, can be understood as motivation for change (Festinger 1957). It is therefore useful for advocates to create conditions in which a motivating level of dissonance is likely to be aroused. At the same time, extreme levels of dissonance have been shown to provoke defensive reactions and to render individuals unreceptive to potentially valuable information (Cohen & Sherman 2014). The successful advocate must therefore manage a discourse which navigates a narrow trajectory between their audiences' comfort- and defensive-zones. The conditions for raising dissonance are discussed first, before the techniques for limiting dissonance.

Dissonance is likely to result from an inconsistency between an attitude and a behaviour when: the individual feels that the behaviour is freely chosen (Beauvois & Joule, 1999); the individual perceives undesirable consequences of their behaviour (Cooper & Fazio, 1984), and could foresee these consequences when the behaviour was enacted (Staw 1974); and the cognitions are relevant and valued by the individual (Aronson, 1969). Of the three conditions for the arousal of dissonance, individual responsibility for one's own meat-eating behaviours is probably the easiest to establish. The very existence of the vegetarian or vegan delivering the animal advocacy message demonstrates the non-necessity of meat consumption from a human health perspective, which largely neutralizes the most common attempt at absolving responsibility. However, advocates may still need to address other irrational attempts to shift responsibility by, for example, noting that permission to eat meat inferred from scripture or other divine sources does not amount to a mandate to eat meat.

Central to both the perception of adverse consequences and the relevance to the individual is the assumption – which will be tested with respect to study participants – that people care about animals and deem them worthy of moral consideration. The spreading of one's sphere of moral concern beyond the self to include other beings is based on empathy (Hoffman 1991); it is necessary for an individual to reflect on their own experience and to project fundamental aspects of self-knowledge onto others in order to reach the conclusion that they too deserve moral consideration. This process may include the recognition that 'I think/feel/want', and that other beings do too. We have no direct knowledge of the capacity of other people to suffer, yet we infer that they do based on our own experience and recognition of relevant similarities between us. With respect to the capacity to suffer, many species of non-human animals are apparently similar to us in all relevant ways; their physiological reactions to stimuli that we know would cause us to suffer are often identical to our own reactions (Morris 2005). This is not surprising, as the same forces which confer an evolutionary advantage from the experience of pain (by triggering flight or fight responses) have acted equally on other species. Indeed, the development of the central nervous system which is fundamental to this process occurred long prior to the evolutionary divergence of *Homo sapiens* from other species (Balavoine 2003).

Empathizing with other animals requires humans to project their own human experience onto of those species: termed anthropomorphism.

Although anthropomorphism has long been regarded as ‘unscientific’ – even regarded as a ‘cardinal sin’ by psychologists working to understand the human condition through experimentation on animals (Singer 2009) – similarities between humans and other species nevertheless implicitly motivate their work. It may be that humans can never know exactly ‘how it is’ to be a member of another species – in the same way that one human can never know exactly how it is to be another human – so the conclusion we reach is likely to be largely dependent on our starting assumptions. The fact that charges of anthropomorphism carry such negative connotations within the academic community reveals that the scientific community, like society at large, has retained a Cartesian perspective of human exceptionalism: the starting assumption being that humans are distinct from other species in all meaningful ways, and the burden of proof being placed on those who seek to demonstrate any similarities. The Darwinian revolution – if there ever was such thing (Ruse 2009) – should logically have reversed the burden of proof, such that humans and other animals are assumed to be the same until specific evidence is brought to bear which disconfirms this hypothesis. Extant knowledge of the capacities of non-human animals would likely be dramatically different if scientists had adopted this approach. This begs the question of what prevented such a change in perspective from accompanying our developing knowledge of evolutionary processes: could it be that the instrumental use of beings similar to us for food and vivisection have clouded rational thought on the issue? Is the vilification of anthropomorphism a defensive strategy adopted by society to avoid the arousal of dissonance which may otherwise ensue?

The inference that animals have a capacity to suffer which is similar to that of humans is the most parsimonious of all potential conclusions which can be drawn, and this conclusion is supported by an ever growing body of work (see, for example, Lynch & Slaughter 2001; Linzey 2009). The way in which the experience of suffering is cognitively processed is not relevant to the extension of moral concern; it is sufficient that the animal has an interest in avoiding the experience. Bentham (1823) expressed this distinction succinctly as “the question is not can they reason, nor can they talk, but can they suffer?” Nevertheless, evidence is also mounting to support the notion of consciousness (in the sense of self-awareness) among non-human animals: leading an international group of prominent neuroscientists to ratify the Cambridge Declaration on Consciousness, which declares:

“... the weight of evidence indicates that humans are not unique in possessing the neurological substrates that generate consciousness. Nonhuman animals, including all mammals and birds, and many other creatures, including octopuses, also possess these neurological substrates.” (Cambridge Declaration on Consciousness 2012)

Although the self-evident truth of animal suffering need not be explained to most children (Pallotta 2008), it seems that this understanding gets lost (or buried) through the process of acculturation known as carnism (Joy 2010). Nevertheless, it is assumed that most people possess some degree of compassion and some pro-animal beliefs. Braithwaite & Braithwaite (1982) find that public attitudes are largely supportive of animal welfare and animal rights, yet that these attitudes are not always reflected in behaviour. They recommend that animal advocates should place more emphasis on raising people's awareness of the inconsistencies between their attitudes toward animals and their behaviour concerning them.

More recent research highlights the high level of societal concern for animals and the associated value-behaviour gap. A 2008 Gallup poll found that 97% of Americans believe that farm animals should be protected from cruelty, with 25% stating that animals should have “the same rights as humans to be free from harm and exploitation” (Newport 2008). Given the small number of vegans in America, a significant proportion of these respondents clearly act contrary to their stated pro-animal attitudes: the same applies to many of the 12% of Britons that say animal slaughter should be illegal (VegSocUK, cited by Cooney 2013). In this vein, Scully (2002) expresses the idea that many people hold radically contradictory views with respect to animals, allowing for benevolence in some cases and disregard in others. He foresees that reforms will come “not as we change our moral principles, but as we discern and accept the implications of principles we already hold” (Scully 2002).

It could be, however, that meat consumption and concern about harm to non-human animals are not necessarily perceived as inconsistent by those who have limited knowledge about the realities of modern production processes. After all, Knight et al. (2003) demonstrate a negative correlation between respondents' knowledge of animal production procedures and support for animal use: indicating that the reality of factory farming is objectionable to many and suggesting that the majority is poorly informed about modern farming practices. This speculation is supported by other studies into knowledge levels about animal agriculture in the general public (e.g. Kellert 1989), and even among individuals enrolled in animal science courses (Heleski and Zanella 2006). For these reasons, educating the public about the realities of modern day farming practices is instrumental in generating the dissonance necessary to motivate behavioural change. As the industry has no motivation to educate customers about their ‘products’, this task has fallen to animal advocates.

Experience has shown that audiences are often unreceptive to such messages, however. One explanation may be that the level of dissonance raised triggers defensive reactions from the audience which inhibit acceptance of new information. Investigating this issue, Prunty & Apple (2013) used an experimental approach which measured differences between the persuasiveness of an informational booklet pertaining to animal welfare issues on a control group, and a group which had previously been asked to express their opinion regarding animal suffering in meat production. This manipulation could be seen as an induced-compliance exercise or, as the

expression is communicated to others, the induction of a hypocrisy scenario. As anticipated, those who first expressed their 'commitment' to animal welfare were found to be more concerned by the issues presented in the information booklet, more accepting of the basic claims presented, and more open to reducing their meat consumption: yet the manipulation did nothing to increase perceptions of the source credibility. These findings support the authors' hypothesis that individuals were more sympathetic to the educational intervention after they had voluntarily supported the central premise of the intervention (Prunty & Apple 2013). This study demonstrates that animal advocates need not change their core message in order to communicate effectively with the public, but that subtle psychological manipulations and framing can increase message receptivity.



### 3 RESEARCH PURPOSE

The arguments presented to meat-eaters by animal advocates, including the ethical imperative of veganism, have thus far been relatively ineffective in achieving the widespread social change sought by the movement. While audiences are generally unable to present valid counterarguments which simultaneously reflect state of the art scientific understanding and stand up to logical scrutiny, they are nevertheless generally unreceptive to animal advocacy messages. The current research investigates the mainstream resistance to such ethical arguments, and seeks to inform the communication strategies employed by animal liberation campaigners.

Note that this study does not address the ethical question of whether people should or should not eat meat: such an approach would be deemed unscientific by many, although not all, scholars (e.g. Harris 2010). Rather, this study acknowledges the ethical stance of a particular group and systematically examines the ways in which this particular message can be more effectively communicated.

#### 3.1 Primary Research Questions

The overarching research question which is derived from the purpose of the study is:

**How can the ethical message espoused by animal liberation advocates be more effectively and persuasively communicated to meat eating audiences?**

The objective sought through vegan advocacy is to shift audience attitudes in order to change subsequent behaviors, but the required attitudinal shift is no small feat. In many cases it will require individuals to re-evaluate their perception of the relationship between humans and other species: that is, to reconsider their very worldview about what it means to be human. Although this seismic shift cannot be easily captured through the use of simple measurement scales, it is clear that the direction of the desired shift should be towards those attitudes held by the animal advocates. This raises two significant questions:

**How can one characterise the attitudes of vegan advocates?**

**What degree of heterogeneity exists within vegan advocacy movement?**

Extant research has already demonstrated that dissonance is likely to be aroused in carnists who are challenged by ethical arguments regarding animal rights, and that excessive dissonance triggers defensive reactions which constitute a barrier to successful persuasion. However, the dissonance arousal process remains a black box: illuminating this process could provide clues as

to how advocates can circumvent their audience's defensive reactions. Important questions which may have implications beyond the theme of meat consumption are therefore:

**Which cognitive dissonance model (if any) best describes the arousal of dissonance in carnists whose beliefs are challenged by animal advocacy messages?**

**What strategies can advocates employ to minimise the arousal of dissonance in their audiences in order to increase receptiveness to their messages?**

Further questions which could be instructive to animal advocates include:

**How can the experience of the audience be characterized, and what changes could improve their willingness to engage?**

**What are the primary arguments used by audiences to avoid the consequences of the ethical argument presented; in which way(s) do respondents disagree with the argument?**

**Are there any discernible patterns between audience responses and easily identifiable demographic characteristics?**

## 4 METHODOLOGY

Animal advocacy communications are deemed effective to the degree that they successfully shift audience attitudes towards those held by the advocates. As the preceding discussion has revealed, simple questions probing the degree to which individuals care about animals or oppose cruelty towards animals are unlikely to differentiate between the attitudes of the average individual and the most committed animal advocate: both respondents would be expected to answer affirmatively in both cases. Even those with little compassion for non-human animals are likely to be influenced by the obvious social desirability of responding positively, but, more importantly, it is a basic premise of this study that most people hold positive attitudes towards animals yet that their food consumption behaviours are misaligned with such beliefs.

With respect to the value-action gap frequently observed in environmental discourses, Leiserowitz et al. (2004) note that while US surveys generally show high levels of environmental concern, “the critical question...[ ]... is which values are prioritized and what trade-offs, implicit or explicit, between values are made”. Rather than scales asking about environmental concern in isolation, public inaction is better explained by US surveys which consistently show environmental concerns to *rank* lower in priority than all other national issues (Leiserowitz et al. 2004). The lesson for the current research is that understanding behavioural patterns necessitates knowledge of a wide range of attitudes which may impinge on the behaviour of interest in some way. The phenomenon of animal lovers eating meat becomes more understandable once we consider that the same individuals may hold positive beliefs regarding the taste of meat or its contribution to their health, and that these incongruous beliefs may override compassion towards animals in guiding their dietary decisions. The beliefs and attitudes of interest, therefore, are broader in scope than just concern for other species, extending to encompass topics such as taste preferences, health, religious belief and environmental concerns, among many others. Moreover, it is the relative (rather than absolute) strength of each of these convictions which is likely to provide the best guide to behavioural tendencies.

Measuring the efficacy of vegan advocacy communications therefore requires a comprehensive understanding of the attitudes prevalent among animal advocates across these broad topics as they relate to the use of animals for food. As movement towards this particular viewpoint is the objective of vegan advocacy, it would also be desirable that the attitudes are expressed in comparative terms: preferably across a quantitative scale. One methodological approach lends itself to these challenges: Q methodology.

## 4.1 Q Methodology

Q Methodology was developed by William Stephenson in the 1930s as “a systematic and orderly means for investigating individuals' judgments, attitudes, and points of view on a particular topic or in a given situation” (Brown 1986). The primary purposes are to identify and understand the range of shared views on a given topic which exist within a given population and to measure individuals' affinity with those viewpoints. While attitude research is often considered to be best approached through qualitative methods due to greater opportunities for in-depth exploration of subjective viewpoints, such approaches are also criticized for their lack of systematic comparability across research subjects and – when this is attempted – for a lack of transparency in interpretation and the scope for researchers to unduly influence this process. By providing richer insight into subjectivities than surveys and offering more structure and better replicability than purely qualitative approaches, Q methodology seeks to bridge the qualitative/quantitative divide (Davis & Michelle 2011). As Q is essentially a ranking exercise, the data collected is ipsative in nature and therefore meets the ‘relativity’ requirement for understanding the prioritization of some attitudes over others in defining behavioural outcomes. The fact that the output of the factor analyses which are central to Q are quantitative in nature – a loading for each respondent across the revealed factors – allows for the unambiguous interpretation of similarities and divergences between individuals, as well as within individuals across time. Finally, the feasibility of including a large number of items into a single data collection instrument which respondents find novel and enjoyable due to its game-like quality (Brown 1986) accommodates the requirement of addressing a wide range of topics in a unified setting. The essential steps in developing the Q-methodological research instrument are discussed below.

### 4.1.1 Developing the Q sample

The Q sample represents the set of items to be sorted by respondents – the P set – according to a specific ‘condition of instruction’. Note that the terminology has been transposed from standard ‘R’ methodological approaches, in that ‘sample’ here refers to the items (read: questions) rather than the respondents. This change is indicative of a wider sense in which Q represents an inversion of the logic underlying R analytical approaches. R methodologies seek the factoring of traits by correlating a small number of variables which have been observed across a large number of subjects; according to this logic, greater numbers of respondents (n) enable the variables to be better described, and thereby increase the validity of results (Watts & Stenner 2012). In contrast, Q involves the factoring of persons by correlating a small number of subjects across a large number of variables; statistical validity is improved in this case by enabling extant subjectivities to be better represented through the data collection instrument by including a greater number of items (n) (Watts & Stenner 2012). The implications are that the Q sample should be large, but that the number of research subjects need not be. Various authors

have suggested appropriate dimensions for the Q sample of 40 to 140 items (Kerlinger 1986), 55 to 75 items (Schlinger 1969), 40 to 80 items (Stainton Rodgers 1995), or, by reversing the ratio commonly applied in R methodological research of “at least two more [items] than twice the number of participants” (Thompson 1981, cited by Sexton et al. 1998). While some degree of consensus exists as to the optimal number according to statistical demands, decisions regarding the final number of items must also take into account the capacity and convenience of respondents. The present study has opted for a Q sample of fifty items, each of which is a card containing a phrase. So what do these phrases represent, where are they drawn from, and how are they selected?

The first step is to develop the ‘concourse’, which is a set of statements (or any other manifestation of human culture) representing the sum of the discourse on the given research topic. For the purpose of this step, the research topic was defined as “the use of animals for food in Europe”. While animal advocacy groups are ultimately interested in achieving protection for animals worldwide, pre-testing found that global diversity makes it difficult for respondents to react confidently to certain stimuli when considering the global situation. For example, meat consumption may be necessary for human health at certain times in certain places due to the limited availability of alternative sources of nutrition and economic opportunity, but it is objectively unnecessary within the developed market economies of Europe where meat consumption can be fairly construed as a choice facing consumers. The geographical restriction of the research topic to Europe is therefore intended to standardize the types of economic contexts considered by respondents as those in which they commonly make their consumption decisions. In doing so, ‘desert island’ hypotheticals are precluded, yet some degree of cultural diversity is retained.

The literature recommends that Q sample statements be sourced largely from qualitative interviews regarding the research topic, as well as popular media, publications, websites, letters, newspaper articles, previous focus groups or interviews (Watts & Stenner 2012). This technique, as opposed to the researcher/theory led approach to survey research, largely accounts for the characterization of Q methodology as participant led, democratic, and egalitarian (Davis & Michelle 2011). Following these recommendations, the researcher first consulted literature and other materials generated by animal advocacy groups and activists, including the following websites: People for the Ethical Treatment of Animals (PETA) <http://www.peta.org/>, the Vegan Society <https://www.vegansociety.com/>, Verein Gegen Tierfabriken (VGT – Society Against Animal Factories) <https://www.vgt.at/>, Vegane Gesellschaft Österreich (VGÖ – Austrian Vegan Society) <https://vegan.at/>; as well as the YouTube channels of prominent activists Gary Yourofsky <https://www.youtube.com/channel/UCLWOTEV3YEt-J56pYZm-TgA> and Bite-sized Vegan <https://www.youtube.com/channel/UCluiFIVPK1uGkB8TFUVgX5w>, each of which has over 100,000 subscribers and can be considered among the most popular of all vegan-related YouTube channels.

The objective at this stage was to collect quotations covering as wide a diversity of themes as possible, yet the materials distributed through these sites were strikingly consistent in promoting the reduction or abolition of animal exploitation according to five main arguments: animal rights, animal welfare, human health, social justice (related to human groups), and environmental conservation. Statements relating to each of these issues formed the basis of the anti-meat discourse. The comments sections attached to videos featured on the YouTube channels also proved to be a valuable source of quotations regarding meat consumption, both in support of the respective video’s messages or presenting opposing arguments. For example, one comment to an environmentally focused video – from which was extracted quotations regarding the excessive ecological footprint, water consumption, land use, and energy input of omnivorous diets relative to plant-based diets – raised the point that human consumption of animals is necessary to control their otherwise rampant populations. Whether or not this particular line of reasoning is valid in an objective sense is not important to the present study: what matters is that this contention shapes the way in which (at least) one individual thinks about meat consumption and, as such, the quotation was added to the pro-meat consumption list. The foray into consumer culture theory was instructive throughout this phase, in highlighting the applicability of comments relating to issues of personal and group identity.

Pro-meat consumption arguments have already been collated and categorized by researchers including Joy (2010) who identified the three Ns of meat eating justifications as Normal, Natural, and Necessary, and Piazza et al. (2015) who extended this taxonomy to include Nice as the fourth N. In operationalizing the 4Ns for empirical validation, Piazza et al. (2015) generated four items per N to make the subscales reported in Table 5 with their respective Cronbach’s  $\alpha$ .

TABLE 5: FOUR NS OF MEAT EATING JUSTIFICATION (PIAZZA ET AL. 2015)

<b>N Category</b>	<b>Scale Items</b>
<b>Natural</b> $\alpha = .78$	It is only natural to eat meat
	Our human ancestors ate meat all the time
	It is unnatural to eat an all plant-based diet
	Human beings are natural meat-eaters –we naturally crave meat
<b>Necessary</b> $\alpha = .87$	It is necessary to eat meat in order to be healthy
	A healthy diet requires at least some meat
	You cannot get all the protein, vitamins and minerals you need on an all plant based diet
	Human beings need to eat meat
<b>Normal</b> $\alpha = .65$	It is normal to eat meat
	It is abnormal for humans not to eat meat
	Most people eat meat, and most people can’t be wrong
	It is common for people to eat meat in our society, so not eating meat is socially offensive
<b>Nice</b> $\alpha = .84$	Meat is delicious
	Meat adds so much flavor to a meal it does not make sense to leave it out
	The best tasting food is normally a meat-based dish
	Meals without meat would just be bland and boring

These four categories were together shown to account for 83% of the justifications offered as responses to the instruction: “Please give three reasons why you think it is OK to eat meat” (Piazza et al. 2015). While useful in describing the most common responses to an artificial situation – social norms dictate that people are not normally required to defend the consumption of certain meat products – these four categories were considered inappropriate as the basis for a Q sample, which should be characterized by comprehensiveness rather than representativeness (Brown, 1986) so that participants are able to properly represent their point of view using the items provided to them. From this perspective, the 4N scales’ succinct descriptions of narrow constructs, as indicated by the measures of internal consistency, are an undesirable characteristic. Furthermore, the fact that the categories were theoretically derived (by Joy 2010) and only later empirically verified (by Piazza et al. 2015), runs contrary to the participant-led spirit of Q methodology. Consequently, only those scale items which were corroborated by other sources informed the final items admitted into the Q sample.

The work by Rothgerber (2012), on the other hand, relied on interviews with vegetarians and non-vegetarians, as well as a literature review, to identify 27 rationalizations and other techniques commonly used by meat-eaters in order to overcome or avoid the dissonance that they would otherwise experience in certain situations. The use of these rationalizations was later validated in experimental settings (Rothgerber 2012; 2014) where dissonance was aroused in meat-eaters by the mere presence of vegetarians; it follows that similar responses should be anticipated by animal advocates. The 27 dissonance avoidance techniques, later grouped into nine major strategies, comprise the Meat Eating Justification (MEJ) Scale (Rothgerber 2012) found in Table 6. The name Meat Eating Justification is somewhat of a misnomer given that only seven of the nine strategies directly embrace meat consumption and unapologetically seek to justify the practice; these approaches are used by males to a greater extent than females (Rothgerber 2012). The two strategies preferred by females involve the dissociation of food from its animal source and avoidance of thoughts about how the consumed animals had been treated during their lives and deaths (Rothgerber 2012), which can be categorized as indirect, apologetic strategies rather than direct justifications. While Piazza et al. (2015) note that their 4N categories incorporate many of Rothgerber’s direct justification categories (‘Natural’ incorporating Hierarchy, Fate, and Religion; Necessary being aligned with Health; Nice being similar to Pro-meat), Rothgerber’s additional indirect strategies go beyond such rationalizations to reveal that some individuals may prefer to ‘look the other way’ rather than cognitively process the implications of their own behaviours. These additional strategies, which are also informative for the present study, indicate that the interview process used to generate these items was somewhat more organic than a contrived survey question.

TABLE 6: MEAT EATING JUSTIFICATION SCALE (ROTHGERBER 2012)

Strategy / Classification		Scale Measurement Items
Direct strategies	Pro-Meat	I enjoy eating meat too much to ever give it up.
		Meat tastes too good to worry about what all the critics say.
		There is no food that satisfies me as much as a delicious piece of meat.
	Health Justification	Meat is essential for strong muscles.
		We need the protein we can only get in meat for healthy development.
		We need meat for a healthy diet.
	Deny	Animals don't really suffer when being raised and killed for meat.
		Animals do not feel pain the same way humans do.
		Meat is processed so that animal pain and discomfort is minimized and avoided.
	Hierarchical Justification	Ultimately, animals are here to serve our needs.
		It's acceptable to eat certain animals because they're bred for that purpose.
		Humans are at the top of the food chain and meant to eat animals.
	Religious Justification	God intended for us to eat animals.
		God gave us dominion over animals.
		It is God's will that humans eat animals.
	Human destiny/ Fate Justification	It wouldn't surprise me to learn that the human body has evolved to eat meat.
		It violates human destiny and evolution to give up eating meat.
		Our early ancestors ate meat, and we are supposed to also.
Dichotomization	I am more sensitive to the suffering of house pets like cats and dogs than other wild animals.	
	To me, there is a real difference between animals we keep as pets and animals we eat as food.	
	It seems wrong that people in some cultures eat dogs and cats.	
Indirect strategies	Dissociation	When I look at meat, I try hard not to connect it with an animal.
		I do not like to think about where the meat I eat comes from.
		When I eat meat, I try not to think about the life of the animal I am eating.
	Avoidance	I try to stay away when people talk to me in graphic terms about how the animals we eat suffer.
		I try not to think about what goes on in slaughterhouses.
		I would have problems touring a slaughterhouse.

These various sources generated a combined total of 138 quotations relating to the use of animals for food in Europe, which were considered to comprehensively summarize the current discourse surrounding the consumption of animal-based foodstuffs. The next step was to narrow the discourse down to a set of fifty items – the ‘Q sample’ – which would eventually be sorted by participants. The Q sample should be “a well-rounded set representing the larger, theoretical set of all possible items that relate to the dimension being studied” (Stephen 1985);



that is, the Q sample should be a subset of the concourse which nevertheless retains its diversity. This process followed the recommendation by Brown (1986) that items be selected according to comprehensiveness rather than representativeness, by initially identifying groups of closely associated items and then eliminating items within each group to reduce the occurrence of overlaps. In some cases, multiple related items were combined and reworded to produce a single statement. Unique items were retained in their original formulations. As the Q sorting procedure requires participants to rank these items across a semantic differential scale – from Most Strongly Disagree to Most Strongly Agree – negatively worded statements were reformulated into positive statements in order to avoid the confusion which can arise from the double negative of disagreement with a negative statement.

The fifty selected statements were checked for their clarity of expression during a pre-testing phase by ensuring that each statement evoked an unambiguous meaning for each of the five participants, including three participants for whom English is a second language: the wording of three statements was changed as a result. Note that this process did not check for consistency of interpretation, either between subjects or with the researcher, as no assumptions are made about a commonly accepted understanding of a given statement in Q, wherein interpretation of the data is conducted in conjunction with the research participants at a later stage. Finally, pre-testing subjects were asked if they believed that any topics were missing from the Q sample by encouraging them to create a new item for the set in order that they can better represent their own points of view. Of the three items proposed, two were eventually substituted into the final Q sample in place of items which lacked placement variability (and therefore discriminatory power) across the test-sorts. The Q sample used in the current study can be found in Appendix 1, where each statement is presented with information about its source and the original wording.

The fifty statements in Appendix 1 are grouped into five sets of ten items according to thematic similarities, whereby each set contains the items relating to two or more themes. Subjects participating in the Q sorting procedure are presented the statements on cards arranged in a particular order in these five sets. Although the extant Q methodology literature is silent on the topic of framing effects (see Scheufele 2004), it is hypothesized that participants may respond differentially to a given stimulus item depending on the item which they considered immediately prior. While no effort was expended in attempting to determine an optimal order for the cards (from a persuasiveness perspective, for example, which could be a topic for future research), presenting the cards in a stipulated order represents an attempt to standardize the experience of all participants in order to eliminate extraneous influences on the data they provide. Admittedly, such effects are only controllable by the researcher in respect to the first round of sorting done by the participant, yet this first decision stage is instrumental as few participants take the opportunity to later change items from the groups to which they were initially assigned. The grouping of thematically similar items into sets such that they will be processed by

participants within a short period of time is a further methodological novelty, which is intended to promote the generation of Q sorts which are logically consistent.

#### **4.1.2 Designing the Q grid**

Stephenson believed that trait measurement for a single person would cohere to “a distribution fitting the normal curve of error” (Burt & Stephenson 1939), according to the assumption that people display either indifference or ambivalence towards most things and have a limited number of particularly strong convictions. Following this logic, it has become standard practice to model Q grids on the normal distribution curve in order to provide greater opportunities for respondents to express indifference between items located towards the centre of the grid, and requiring them to select fewer items to populate the extremes. Fixing the number of rows in each column to conform to the bell-shaped curve defines these Q grids as ‘forced choice’ configurations in which the mean and standard deviation are predetermined and identical for each respondent; one implication being that the resulting data lack independence and thereby render measures of internal consistency inappropriate (Watts & Stenner 2012). Although Block (2008) has shown that other configurations – including asymmetrical and free distributions – allow for the same analyses and generate approximately the same factors, forced choice designs have remained favoured by the literature as a pragmatic approach which is less taxing on participants by limiting their response options (Watts & Stenner 2012). The present study follows this mainstream approach in stipulating a forced choice configuration which approximates a bell-shaped curve.

Further decisions related to the Q grid involve the dimensions of the cells and the degree of kurtosis of the grid. Following the recommendations of Watts & Stenner (2012), the statements to be sorted are: printed on cards of 5.5cm x 2.5cm to enable easy handling yet conserve space; uniform in style (same colour, consistent font) to ensure that it is the content being sorted rather than some other characteristic; and numbered randomly so as not to identify items related by theme. The dimensions of the cards define the dimensions of the cells in which they are to be placed.

The kurticity of the grid should be determined largely by the complexity of the topic and the familiarity or expertise of the participants. Whereas simpler topics recommend platykurtic distributions to enable familiar participants to use their knowledge fully in making fine distinctions at the extremes of the distribution, complex topics recommend leptokurtic distributions which provide participants greater possibilities for expressing indifference (Watts & Stenner 2012). While the topic of animal-based food is generally non-technical and largely familiar to participants, it is an inherent characteristic of the carnist ideology that many of the ideas in the Q sample will not have been explicitly considered by the research subjects prior to engaging in the study. As such, a moderate degree of kurticity is employed, with the number of

columns restricted to nine: fewer than the recommendation by Brown (1980) of a nine-point distribution for sets of 40 items or less, and 11 point distribution for sets with 40 to 60 items.

A final point of differentiation from standard Q methodological practice involves the numbering of the columns which, in the case of a nine point scale, would run from -4 to +4. As these numbers are merely identifiers for the columns which express the position of the items contained therein relative to all other items, the numbers should be considered as an ordinal scale: the valence and magnitude of the numbers should not be interpreted in an absolute sense. Likewise, the zero point is not an absolute value representing complete indifference: this column simply means greater agreement than the -1 column and lesser agreement than the +1 column. Participants who are unfamiliar with the relativity of the ranking exercise may become distressed, however, if they are forced to place an item with which they minimally agree on the 'negative' side of the distribution (Watts & Stenner 2012). As the numbers are of no significance to the research subjects (who require only the semantic differential phrases at the extremes of the grid) and are only used by the researcher at the time of data entry, they have been excluded from the present data collection instrument.

The Q grid, which was printed out in A2 size for use by study participants, is presented in Figure 1. The question which guides participants through the sorting process is displayed prominently across the top in order to remain constantly in mind. This question forms part of the conditions of instruction, which were verbally administered to study participants and can be found in full in Appendix 2 for a thorough description of the Q sorting procedure.

It should be noted at this stage that Q methodological data collection can theoretically be performed either in person, via physical mail, or using online platforms. The traditional face to face format has been applied in the current study, mainly because methodological consistency is sought across all study participants who will complete the Q sort, and the experimental subjects will need to be present in person. This format promises further advantages over the postal format, including the expectation of lower attrition rates (incomplete sorts), and lower incidence of flawed sorts. As the physical handling of the Q sample has been found to be engaging and even entertaining for participants (Brown 1986), it is also hypothesized that this format induces participants to invest greater cognitive effort into the task than would be inspired by a digital media format.

FIGURE 1: Q GRID EMPLOYED IN CURRENT STUDY (PRINTED IN A2 FORMAT)

**How do you feel about the use of animals for food in Europe?**

Step 1

Strongly disagree	Disagree	Mixed or no feelings	Agree	Strongly agree

Step 2

Most strongly disagree									Most strongly agree

### 4.1.3 Validity and reliability checks and pre-testing

As Q seeks to measure participants’ points of view, and given that there exists no external criterion by which to confirm whether a given participant’s point of view is truly reflected by the measurement, validity is essentially an irrelevant question to ask about Q-methodology (Watts & Stenner 2012). Participants are asked whether the sort accurately depicts their perspective as part of the process, and subsequent interviews can help to triangulate the measurements taken, but reference to other (behavioural) variables cannot be used to validate the measurement tool: particularly in light of the commonly observed value-action gap which is hypothesized to be prevalent among meat-eaters.

With respect to the reliability of the instrument, the interdependence of data which arises from a forced-choice format precludes the use of measures of internal consistency such as Cronbach’s  $\alpha$ . Instead, repeated testing was performed with three participants during pre-testing. The second round of testing was performed only 24 hours after the first round, such that the assumption could be applied that participants’ perspectives had remained relatively constant over this period and it was the reliability of the method (rather than the perspectives) that was being analysed. Several items whose positions were found to vary significantly between the first and second sorts across multiple participants were deemed to be unreliable indicators of

participants' perspectives and were consequently replaced with other items which had been identified as 'missing' from the set.

An additional test was performed with a further group of three pre-testing subjects in order to validate the data collection instrument. These meat-eating participants were instructed to complete the Q-sorting procedure, but to do so by adopting the perspective of a vegan activist (whatever that means to them), rather than presenting their own perspective. The statistical analysis of the resultant sorts showed the three sorts to converge on a single factor (factor loadings of 0.838, 0.691, 0.743), indicating that the three participants were each able to present a similar picture of the vegan activist's point of view using the resources available to them. The single un-rotated factor accounted for 57.7% of the variability across the three Q sorts (details of the factor extraction process employed and the calculation of the explained variance are presented in the following section on statistical analyses). According to Watts & Stenner (2012), such a result represents compelling evidence for the ability of the technique in general, and this specific instrument in particular, to generate a valid representation of particular viewpoints.

#### **4.1.4 Selecting the P set**

The P set refers to the human participants in a Q methodological study. Participants are considered to be the variables in Q studies according to the logic that there exists a range of shared views regarding a given topic, and that each individual will take on these views (i.e. load onto each factor) to varying degrees. In line with the conception of participants as variables, research subjects are purposively sampled due to their special relevance to the goals of the particular study. The Q component of the current research is used for two distinct yet related purposes, and therefore draws upon two distinct populations.

The first use is to characterise the attitudes of animal rights advocates regarding the use of animals for food and determine what degree of heterogeneity exists within the movement: tasks for which Q is particularly well suited. The P set for this part of the research was drawn from a population of 336 animal advocates assembled at the Conference for Animal Rights in Europe (CARE) held in Warsaw, Poland, during July 2016. Given the objective that "subjects should roughly reflect the range of views in the larger population but need not reproduce their relative frequency" (Woolley et al. 2000), invitations to join the Q study were issued to members of all of the organizations represented at the conference. The only stipulations were that participants must have a workable command of English (around one third of the conference sessions were conducted in Polish), and must self-identify as animal rights activists (following the criteria applied by Plous (1991; 1998) to exclude delegates with purely academic or other interests). A total of 20 conference delegates sacrificed their lunch break to voluntarily participate in the data collection exercise on the final day of the conference, and three of these participants

volunteered to be interviewed to aid the interpretation of the factor analyses. The interview process and statistical analyses are described fully in subsequent sections.

The number of participants required for a Q methodological study is generally less than that required for R methodologies, given that Q studies seek to correlate small numbers of participants across large numbers of variables. As the intention is to sample from a universe of perspectives rather than from a larger population, Brown (1980) suggests using “enough subjects to establish the existence of a factor for purposes of comparing one factor with another”, noting that “what proportion of the population belongs in one factor rather than another is a wholly different matter and one about which Q technique... is not concerned”. In practice, the literature shows 40 participants to be entirely adequate for multiple participant studies, with many studies using considerably fewer (Stainton Rogers 1995). Other authors base the decision on statistical requirements in applying the minimum 2:1 sample/variable ratio which is generally honoured in R methodological approaches (Watts & Stenner 2012), suggesting that there should be no more than half as many participants (variables) as items to be sorted (sample): or a maximum of 25 participants in the present study. The present number of 20 participants is considered sufficiently large to identify the various viewpoints within what was anticipated to be a reasonably homogenous group, yet small enough for the statistical demands of the factor analyses. The results from these analyses are presented in the results section.

The second way in which Q methodology is used in the current research is to characterize the attitudes of participants in the experimental part of the study, following their exposure to manipulations designed to increase the persuasiveness of animal advocacy communications. As the objective of these communications is to shift audiences attitudes towards those attitudes held by the animal advocates, the Q sort data – specifically the attitudinal proximity of experimental subjects to the animal rights advocates perspective – are employed as the dependent variable. The selection of research subjects for this component is explained in the description of the experimental design.

#### **4.1.5 Q sort data statistical analyses**

Factor analysis is central to Q methodology, yet it is applied differently to its typical R methodological use whereby correlation analyses underlie the reduction of observed variables (traits) to a smaller number of unobserved factors. Consistent with the conception of study participants as variables, factor analysis in Q seeks to describe the variability in individual points of view in terms of underlying factors: that is, to identify among the purposively selected participants a smaller number of shared points of view (applicable to the animal advocate participants) and to demonstrate the proximity of individual perspectives to those shared viewpoints (applicable to the experimental subjects). These tasks are performed in the current

study with the assistance of dedicated software, namely 'PQMethod 2.35' (available for download at <http://schmolck.userweb.mwn.de/qmethod/>), which was selected due to its popularity in the literature (Watts & Stenner 2012), the choice of various factor extraction and rotation methods, the thorough instructions provided online and the helpful email support provided by the site's developer Peter.Schmolck@web.de, and not least because of the fact that it is free-ware.

The Q sorting procedure is finalized once the participant is satisfied that the arrangement of statements within the Q grid represents an accurate portrayal of their attitude regarding the topic in question. The Q sort output for a given participant in the present study consists of nine sets (representing the nine columns of the Q grid) of numbers (each representing one of the fifty statements in the Q sample). Data entry involves the imputation of this information into PQMethod 2.35, along with the specifications of the Q grid and the list of statements in the Q sample.

The analytic strategy followed in the present study is informed by the objectives of: 1) exploring the diversity of perspectives among animal rights activists without any preconceptions as to what might be found; and 2) locating and describing any areas of consensus which might exist among activist attitudes in order to characterize the perspective of the majority (for interpreting the dependent variable in the experimental part of the study). These objectives recommend an inductive approach in which the data, rather than theory, are allowed to guide the many decisions required throughout the analytic process: as suggested by Stephenson (1953) for all new analyses. The first step in this process is the extraction of factors, or commonalities between the various Q sorts which represent shared viewpoints, based on a correlation matrix (see preliminary results section) which shows the inter-correlation of every Q sort with every other. PQMethod 2.35 permits factor extraction using either Principal Component Analysis (PCA) or Centroid Factor Analysis. Whereas PCA resolves itself to a single, mathematically optimal solution, the statistically simpler method of Centroid Factor Analysis is better regarded among Q methodologists due to its greater flexibility regarding data exploration, particularly the ability to rotate factors manually in order to highlight certain dimensions within the data (Watts & Stenner 2012): as such, Centroid Factor Analysis is used in the present study. The particular method employed is that described by Brown (1980) in what is widely considered to be the Q methodologist's bible. The default number of seven centroids (factors) were extracted according to the logic that this number is almost certainly sufficient to capture the common viewpoints – which often emerge at a rate of one factor per six or seven participants (Watts & Stenner 2012) – and that non-significant factors can be later discarded.

The Centroid Factor Analysis produces a table of unrotated loadings for each sort onto each of the seven factors extracted – see results section. The loadings are presented in the form of correlation coefficients, which can be squared to give a measure of the degree to which each factor explains the variance in the respective sort. The sum of the squared loadings of all the Q

sorts on a particular factor gives the eigenvalue for that factor. This value can be used to calculate the study variance explained by each factor according to the formula (Brown 1980):  $\text{Explained Variance} = 100 \times (\text{Eigenvalue}/\text{number of sorts in the study})$ . The Eigenvalues and associated explained variance values are an instructive criterion in deciding how many factors to retain, yet the literature also reveals a number of alternative objective criteria, as well as a number of theoretical and pragmatic considerations which may also influence this decision. This and other data-driven decisions are fully expounded in the results section.

Factor rotation has the purpose of shifting the perspective from which one can view the data in order to align the perspective with that represented by an individual Q sort or a cluster of Q sorts which share a similar perspective. The rotation can be automated through use of the Varimax procedure, or performed manually by using the PQROT function (an add-on to PQMethod 2.35). Brown (1980) and Stephenson (1953) advocate manual rotations, as they allow practitioners to reflect the substantive reality that not all of the Q sorts (or the individuals who created them) are equal in their agency to influence others or outcomes. Manual rotations enable researchers to use their theoretical knowledge by prioritizing the Q sorts of powerful individuals and opinion leaders to ensure that these important perspectives are well described by the factor arrays which emerge. Alternatively, research focussed on minorities may prefer this approach in order to highlight marginal perspectives which would be overlooked by purely mathematical approaches (Watts and Stenner 2012). In contrast, the Varimax procedure employs a purely mathematical approach which first ensures that each Q sort loads primarily onto a single factor and then maximises the explained variance for the study as a whole (Watts and Stenner 2012): a procedure which is appropriate for analysing the majority viewpoints of the participant group. Given the inductive, exploratory approach adopted at this stage of the current research and the concern with characterizing the attitudes of significant sub-groups rather than specific individuals, plus the lack of theoretical knowledge which could inform a manual rotation, the Varimax rotation has been used as a first step. Following this automated process, however, there is the opportunity to make final adjustments manually using the PQROT function. This was done in the present study in order to increase the number of study participants represented by the emergent factors from 19 to 20 out of 20 (see results section).

A similar approach was adopted for the flagging of particular sorts as defining the respective factors: the automated function in PQROT was first used to generate a mathematically optimal solution, before the distribution was visually inspected and theoretically informed adjustments were made. Following this decision, PQMethod automatically completes the Q analysis in order to generate a substantial amount of output – most importantly the factor arrays which depict the point of view represented by each factor using the items from the Q sample in an arrangement typical of the defining Q sorts. Interpreting the meaning of this output relies primarily on a series of interviews with study participants.



#### 4.1.6 Interviews and interpretation

No assumptions are made in Q about a common understanding between the researcher and the study participants regarding the meaning of the Q sample items. Interpreting the factor array generated through the statistical analyses therefore requires additional data, which is commonly elicited from study participants in an interview format, although Brown (1980) notes that this important step is often overlooked. With respect to the animal rights advocates, the objective of these interviews is to accurately characterize the viewpoint(s) which emerge from the factor analysis.

Three of the animal rights advocates who completed the Q sort agreed to be interviewed at the time; all three happen to share the majority viewpoint, although this fact was not known at the time of the interviews. Each interview lasted approximately ten minutes and was conducted as soon as the participant indicated that they had completed the Q sort and the other paper-based scales. Responses were noted in the appropriate place on interviewees' respective Q grids.

The interviews were semi-structured, beginning by exploring participants' understanding of the wider issue of the use of animals for food. The specific question asked was the same as that which guided the Q sort exercise: "What do you think about the use of animals for food in Europe?" This question was designed to elicit information about the most important aspects of the 'meat paradox' in order to triangulate the holistic picture presented in the Q sort. Subsequent prompts from the researcher encouraged the interviewees to provide more detail on the topics they volunteered as being important to them.

Further questions probed participants' understanding of, and attitudes towards, individual items from the Q sample in order to increase the richness of the data. In particular, interviewees were asked to explain what each of the items placed at the two extremes of the Q sort meant to them, and why they had placed these items as they did: "For each of the cards placed in the extreme left (right) column, please explain what you understand that statement to mean and why you placed it in the position that you did." Finally, participants were asked: "Is there anything else that you would like to discuss about your sort?" Analysis of the data which emerged from these interviews involved the detection of areas of consensus and disagreement between the three interviewees. This information was then applied in describing the consensus activist viewpoint and discussing its homogeneity across the study participants.

## 4.2 Experimental component

This part of the study seeks to address the following two research questions:

**Which cognitive dissonance model (if any) best describes the arousal of dissonance in meat-eaters whose beliefs are challenged by animal advocacy messages?**

**What strategies can advocates employ to minimise the arousal of dissonance in their audiences in order to increase receptiveness to their messages?**

In the tradition of most cognitive dissonance research, the current approach is experimental by nature. Inquiries of this kind typically involve requiring participants to engage in some manipulation which is hypothesized to arouse dissonance, then measuring the degree to which they make use of the dissonance resolution strategies made available to them, relative to a control group. While such approaches are widely accepted, the fact that participant dissonance is measured only indirectly leaves the studies reliant on certain assumptions which are open to criticism. One such assumption is that the degree to which dissonance resolution strategies are employed reflects the intensity of the dissonance experienced. This relationship becomes more uncertain when one considers that the particular dissonance resolution strategy made available in a given experimental condition is just one of the many potential strategies that individuals could use in an authentic situation; the failure by some participants to make use of the available strategy is commonly interpreted as reflecting a lack of dissonance arousal, when it could, alternatively, reflect their unwillingness to employ that particular strategy.

The present study takes an alternative approach in order to circumvent some of these uncertainties. Participants are exposed to an animal advocacy communication, which is anticipated to arouse dissonance in meat-eaters, yet the subsequent measurements are not limited to the degree to which participants make use of one particular dissonance resolution strategy. Rather, manifestations of all the potential dissonance resolution strategies are included in the Q sort instrument which generates measures of the dependent variable. The dependent variable is a measure of the persuasive impact of the animal advocacy message, which can be considered the counterpoint to the 'non-compliant' dissonance resolution strategies generally studied: research subjects may either accept the messages presented or they must engage in the various direct and indirect strategies communally referred to as Meat Eating Justification by Rothgerber (2012). The advantage of this model is that participants are free to use whichever dissonance resolution strategy they would authentically employ in a non-contrived situation. Importantly, participants can also use the Q sort to express attitudes consistent with the one dissonance resolution strategy which is generally overlooked in meat-related cognitive dissonance experiments: changing behavioural intentions.

While behaviour change is generally regarded in the cognitive dissonance literature as the least likely outcome of a dissonant experience, according to the assumption that individuals modify the cognition which is most amenable to change (Festinger 1957), this is nonetheless the outcome ultimately sought by animal rights advocates: the very existence of whom demonstrates it to be a possible (if unlikely) outcome. With the exception of Hoogland et al. (2005), extant studies apparently discount this possibility, in that the dissonance resolution strategies made available to experimental subjects relate exclusively to the justification of meat eating (for example: denial of mind in Loughnan et al. 2010 and Bastian et al. 2012; denial of capacity for suffering in Bratanova, Loughnan & Bastian 2011; multiple justification strategies in Rothgerber 2014). It could be, however, that the manipulated arousal of dissonance in these studies inspired certain individuals to modify their behavioural intentions rather than engage in justifying past behaviours, yet no attempt was made to measure such outcomes. Hoogland et al. (2005), on the other hand, measure subjects' consumptive behavioural intentions following dissonance arousing manipulations, demonstrating (intended) behavioural change to be a potential outcome of the dissonant experience. While this finding appears promising for animal advocates, study participants were again limited to a single strategy for alleviating the experienced dissonance: as such, it is not possible to conclude how they would react to an authentic situation offering multiple dissonance resolution strategies which either justify or reduce/modify/reject meat consumption. The holistic perspective captured using Q methodology enables the detection of attitudinal shifts in either direction following the (expectedly) dissonance arousing activist communications, and therefore makes the current experimental approach a closer approximation of real-world situations.

#### **4.2.1 Treatment conditions**

The procedure described thus far – attitudinal measurement following exposure to activist communications – represents one of the five treatment conditions employed in the present study, to which participants are randomly assigned. The dependent variable emerging from this treatment is a measure of each subject's level of consensus with the attitudes espoused by animal rights activists: namely the correlation of each experimental subject's Q sort with the Q sort representing the communal perspective of animal rights activists. These figures, for the treatment group as a whole, can be compared with those in a control group (which was not exposed to the activist communications) in order to determine the persuasive impact of the activist communications. The sequence of manipulations and measurements for these two treatment conditions are as follows (in all cases the collection of demographic information is preceded by the attaining of participant consent and the dissemination of ethical disclosures – which can be found in Appendix 2):

**A) Control:**

**demographics ----- man. checks ----- q-sort**

**B) Communication only:**

**demographics ----- man. checks ----- exposure to video ----- q-sort**

This analysis will determine the persuasiveness of the activist communication relative to non-exposure, but these conditions alone cannot illuminate the nature of the dissonance arousal process or inform techniques to improve the persuasiveness of this particular communication. Further treatment conditions are employed to address these questions. The manipulations in the remaining treatment groups are interventions designed to moderate the dissonance experienced by participants and consequently reduce the drive towards defensive reactions which constitutes a barrier to effective learning (Cohen & Sherman 2014). As each of the interventions are derived from the cognitive dissonance literature related to a specific dissonance model, the finding that one of the treatment conditions results in greater message receptivity than the others would therefore illuminate the black-boxed process of dissonance arousal.

While each of the competing dissonance models has already demonstrated various levels of empirical support in the literature, extant studies have examined the various models in isolation or, at most, in pairs. To the best of the researcher’s knowledge this is the first study attempting to distinguish between the competing models using comparative methods. Following the discussion in the literature review, the cognitive dissonance models under consideration are: Festinger’s (1957) conventional theory and the action-based model (Harmon-Jones et al. 2009), which cannot be easily distinguished experimentally; Steele’s (1988) self-affirmation theory and Aronson’s (1969) self-consistency theory, the opposing predictions of which enable their differentiation within a single treatment condition; and Stone and Cooper’s (2001) self-standards theory. The respective treatment conditions are depicted here with descriptions of the various manipulations and the respective manipulation checks. In addition to being informed by the literature, each of the manipulations has been designed to be fast and require no additional resources, so that they have the potential to be scaled up for implementation by animal rights activists in the field.

**C) Induced compliance:**

**demographics ----- induced compliance ----- exposure to video ----- q-sort**

The induced compliance condition seeks to set up a hypocrisy condition by asking subjects to make a short statement about their own attitude towards animal welfare before they are made

aware of the thematic nature of the study. It was anticipated that most subjects would express pro-animal welfare sentiments in response to the prompt:

“Different countries vary as to how animals can be treated according to the law. Would you prefer to live in a country with strict or loose laws regarding animal welfare? And why?”

The open nature of this question should ensure that the respondent feels personally responsible for making the statement (Cooper 2007). Pro-attitudinal responses were recorded, and those subjects were considered to have fulfilled the manipulation check. As presented in the results section, all participants in this treatment group fulfilled the manipulation.

The animal rights communication brings participants’ prior meat consumption to their attention, thereby highlighting the inconsistency between their stated values and the discrepant behaviour. The hypocrisy should be motivating only to the extent that the individual deems the consequences to be significant and aversive, yet these variables are beyond the control of the researcher (and of animal advocates). As they add relevant cognitions into the mix, the creation of hypocrisy conditions may increase the level of dissonance experienced. Nevertheless, dissonance resolution is likely to shift towards the modification of future behaviour (Cooper 2007), as that once malleable attitude regarding the desirability of animal welfare has been bolstered into an irretraceable statement and no longer represents the cognition most amenable to change. Given the formulaic nature of this process, whereby cognitions are weighted only according to their malleability and no other criteria, hypocrisy conditions relate most closely to Festinger’s (1957) conventional dissonance theory, but are also entirely consistent with the action-based model of Harmon-Jones et al. (2009). A finding that the induced compliance condition increases subject receptivity to the activist communications would therefore support the role of these two models in the dissonance arousal process.

#### **D) Affirmation:**

**demographics - - - - - affirmation exercise - - - - - exposure to video - - - - - q-sort**

Self-affirmation theory (Steele 1988) posits that dissonance arises when the global self-image is perceived to be under attack, but that deficiencies in one domain may be offset by accomplishments in another. Self-affirmation interventions bolster an individual’s sense of self-worth, rendering them more resilient to identity threats such as awareness of their complicity in the horrors of commercial meat production. Lesser dissonance arousal should reduce the drive towards defensive strategies which act as barriers to adaptive learning (Cohen & Sherman 2014). Subjects assigned to this condition were encouraged to self-affirm by considering an altruistic act, according to the prompt:

“Spend three minutes thinking about an occasion when you went out of your way to help another person. Who did you help, and how did you help them? How do you think it made the other person feel, and how did you feel about yourself?”

The manipulation check which immediately followed the affirmation exercise asked subjects to rate how they feel about themselves on a nine-point scale labelled “I feel very bad about myself” and “I feel very good about myself” at the two extremes. The resulting values were compared with those from the control group in order to ensure the effectiveness of the manipulation.

If this manipulation were found to increase message receptivity (relative to the ‘communication only’ condition), it would suggest the significance of self-affirmation theory in explaining the arousal of dissonance in meat-eaters. If this group were found to be less sympathetic to the message, on the other hand, it would suggest that the self-consistency model (Aronson 1969) is at play: failure to live up to personal expectations (artificially elevated through the manipulation) increasing dissonance and triggering defensive reactions.

#### **E) Self-standards:**

**demographics ----- self-standards cue ----- exposure to video ----- q-sort**

The self-standards model (Stone and Cooper 2001) notes that the myriad judgements relevant to dissonance arousal involve comparison to a standard, which can be either normative or personal. Individual predispositions notwithstanding (Stone and Cooper 2001), normative standards tend to be employed by default (Cooper 2007). The application of normative standards to the topic of meat consumption leads to the ‘normal’ justifications proposed by Joy (2010) and validated by Piazza et al. (2015). Personal standards offer more promise for successfully transmitting pro-animal messages, and these can be cued to make them more accessible (Stone and Cooper 2001). Personal standards are prompted in this manipulation by asking participants to:

“Please spend 3 minutes thinking about something which is commonly accepted by society, but which you personally think is wrong. Alternatively, consider something which society condemns, but which you personally find acceptable. Consider why you consider it to be either wrong or OK, and how it could be that society considers this thing differently to you?”

The manipulation check asked subjects to complete a single nine-point scale labelled “My views ALWAYS match those of the general society” and “My views NEVER match those of the general society” at the two extremes. The resulting values were compared with those from the control group in order to ensure the effectiveness of the manipulation.

#### 4.2.2 Animal advocacy message

As the animal advocacy message presented to the experimental subjects must be standardized across all treatment groups in order to isolate the manipulations as the only variable systematically influencing the dependent variable, a video presentation was selected for this purpose. Renowned vegan activists Emily Moran Barwick (BiteSizeVegan) and Gary Yourofsky were considered as eligible spokespeople to deliver the message given the popularity of their YouTube channels: each with over 100,000 subscribers.

The message itself was selected as being representative of effective vegan activist communications, which were described by activist Victor Sjodin of Vegan Outreach in his presentation to the 2016 CARE conference:

“You have to adapt your message to the audience, if they’re into the environment you can talk about that, or if they’re more concerned by health then you can talk about that. But always start and finish by talking about the animals... recidivism rates are lower among people who turn vegan for the animals than for the other reasons” (Sjodin 2016)

In line with the discussion of vegan advocacy in the literature review, the advice is to encourage behaviour change in audiences with veganism as the ultimate goal, using a message based in the concept of justice for animals but also referring to other issues as supporting arguments. Given these considerations, a short list of videos was selected from the YouTube channels of the two activists. Each of these videos took the form of an individual giving a verbal presentation before a live audience, and incorporating additional visual materials such as written statistics and images. As such, these videos closely approximate the experience of being approached on the street by an activist holding some limited materials to support their case. The videos on the short list were viewed by pre-test subjects, who were asked to assess them according to the clarity of the message.

The 35 minute video by BiteSizeVegan ([https://www.youtube.com/watch?v=kUTgZ7s\\_hiw](https://www.youtube.com/watch?v=kUTgZ7s_hiw)) was unanimously chosen, with comments referring to the diction of the speaker, the availability of subtitles, and the structure of the discussion. True to typical vegan communications, this video begins by discussing the problems associated with animal agriculture from both animal welfare and animal rights perspectives. The environmental and human health aspects of dietary choice are then briefly addressed, before the speaker returns to animals and makes an appeal to the audience by discussing how ‘good people’ react when faced with such dilemmas. This video was consequently downloaded from YouTube and was shown to experimental subjects as the standardized experimental stimulus.

### 4.2.3 Statistical Analyses

As indicated, the dependent variable in each of the experimental conditions is a post-manipulation measure of the attitudinal proximity of each respondent to the shared perspective of the animal rights activists, which is described in the first part of this study. This measure is the degree to which the experimental subject's Q sort correlates with the factor representing the shared animal rights activist viewpoint, according to the following procedure.

The data set containing the distributions for all experimental subjects was 'spiked' with the prototypical activist Q sort. Following a centroid factor analysis in PQMethod 2.35 using the method described by Brown (1980) and extracting the default number of seven factors, the emergent correlation matrix provided values representing the similarity (attitudinal proximity) between each research subject's perspective and that of the animal rights activists. Given the assumption that random assignment ensured consistent similarity levels across treatment groups prior to the manipulations, any differences between treatment groups detected immediately following the presentation of the standardized activist communications can be ascribed to the particular manipulations.

Differences in the dependent variable between the various treatment groups were analysed using SPSS 24. Group means were compared initially through one-way ANOVA to avoid type 1 error inflation as a result of multiple testing, then using t-tests for the pairwise investigation of any significant differences identified.

### 4.2.4 Sampling

Sampling of experimental subjects was performed from among the populations of undergraduate and master students at Modul University Vienna and IMC Krems, which comprise the sampling frame. The common use of student populations in experimental investigations of psychological phenomenon is sometimes criticized due to a lack of representativeness of the wider community in terms of age, education, and socio-economic status. These concerns are less relevant in the current study, however, as animal rights activists exhibit a strong tendency to target student populations with their communications (Cooney 2013).

Vegan Outreach, for example, focuses personal advocacy on student groups due to the fact that younger targets imply a greater potential for consequent behavioural change to yield positive consequences for animals (Sjodin 2016): that is, more animals can be helped by successfully converting a younger person to veganism than an older one, simply because they have more meals ahead of them. Moreover, once higher levels of misreporting in older age brackets are accounted for, younger individuals are more likely to convert to a meat-free diet (Cooney 2013). Conversion rates within this age bracket are further augmented by the fact that many activists



are themselves of university age, and the fact that this group tends to be characterized by progressive views rendering them more receptive to animal liberation messages (Sjodin 2016).

While even younger age groups typically show still greater affinity for animals, having not yet learned to suppress their compassion (Joy 2010), individuals below university age are generally not targeted by personal advocacy. One consideration is that school-aged pupils often lack the agency to determine what kinds of food are consumed in the family home where they reside, but activists also express concern about the capacity of the young to properly consider the issues at hand (Sjodin 2016). Such concerns are supported by stage development theories of moral reasoning (Kohlberg 1976); criticism of the necessity of fulfilling one stage before moving to the next notwithstanding, there is nevertheless broad agreement on the direct relationship between age and the sophistication of moral reasoning throughout the adolescent years. University students are also preferred targets due to the fact that those with higher levels of educational attainment are more likely to become vegetarian, as determined by a large-scale British and Finnish studies (Gale et al. 2007; Vinnari et al. 2008). University and college campuses represent convenient locations for addressing this age group, and are therefore favoured locations for leafletting and other forms of personal advocacy (Sjodin 2016). In terms of both age and education, the sampling frame is therefore considered to adequately represent the study population: the primary targets of advocacy communications.

As an internationally focused university, the student body at MODUL University Vienna is characterized by a high degree of diversity in terms of nationalities and cultural backgrounds. Students originate from 63 countries spanning five continents, with only 37% of students hailing from Austria and a further 39% of students from other European countries (MODUL University 2014). This level of diversity is significantly greater than that encountered at most European universities, and facilitates the generalization of findings beyond the country of the hosting institution. It was anticipated that this student body would also exhibit diversity in terms of religious and political persuasions.

The single variable according to which the sampling frame may not be representative of students in Europe is that of socio-economic status. As a private, fee-charging university located in a country where students can obtain tertiary education at public institutions for a nominal enrolment fee, it is likely that the socio-economic status of students at MODUL University Vienna is somewhat higher than national and European averages. This is acknowledged as a weakness of the present study, albeit one that should have no significant bearing on the outcomes of the study: while correlations between political views and attitudes toward animals have been proposed (Humane Research Council 2014) and will be examined in the present study, the literature has not determined any significant relationship to exist between socio-economic brackets and veganism or vegetarianism (Cooney 2013). Any departure from national averages across this variable is therefore not expected to exert undue influence of the dependent variable.

Having defended the use of a student population as the sampling frame, attention now turns to the specific sampling technique. Study participants were recruited at the two universities in two ways: through research design courses, and through an open call to all students. The researcher assumed responsibility for two undergraduate seminars on research design at MODUL University Vienna, each with approximately twenty students, as well as contributing to a research design course at IMC Krems. As the learning objectives for the particular sessions related to experimental designs, the students were asked to participate in the experiment and were then debriefed on their experiences with reference to the general principles of experimental designs. While participation in the experiment was voluntary for students, all of those enrolled joined the study rather than completing the alternative exercise offered. The students recruited through these seminars were randomly allocated in roughly even numbers to the various manipulations.

The second recruitment strategy was an open call to all students at MODUL University Vienna requesting their voluntary participation in the research, and was incentivised by a gift of €20. A further 20 participants were sought using this approach, bringing the total number of experimental subjects to 98: or around 20 within each treatment group.

### **4.3 Further analyses**

In addition to a range of demographic questions and the Q sort, all study participants were asked to complete a number of other scales which have been suggested in the literature to relate to attitudes towards meat consumption. The data collected across these scales was correlated with the attitudinal data from the Q sorts in order to seek empirical validation for these suggestions. Watts and Stenner (2012) note that the correlation of factors emerging from Q sort data with demographics and other scales constitute entirely valid forms of analysis: the present study correlates factor loadings, rather than factors.

The revised New Ecological Paradigm (NEP) scale (Dunlap et al. 2000) is perhaps the most extensively applied measure of environmental attitudes in the world. Consisting of fifteen statements to which respondents express their level of agreement on a Likert scale, the unidimensional NEP scale measures endorsement of a “pro-ecological” world view characterized by respect for natural processes and the rejection of human exceptionalism. Low scores indicate a strictly anthropocentric perspective which values only human interests and places immense faith in the capacity of humankind to manipulate the environment to their own benefit; high scores indicate a broader perspective which recognizes value extending beyond human interests and acknowledges limits to environmental and human capacities. In essence, the scale asks respondents to reflect on the place of humanity within our environment. This is the same challenge posed by vegan communications, including the popular films “Speciesim: The Movie” and “Earthlings”, which encourage a perspective of humankind as cohabitants with other

species, rather than overlords. While other species are not explicitly mentioned among the fifteen statements of the NEP, the relegation of humankind implies a more equal relationship. It was therefore hypothesized that those demonstrating pro-ecological world views on the NEP scale would also exhibit more animal-friendly perspectives through the Q sort. The NEP scale statements and scoring procedures can be found in Appendix 4.

**Hypothesis 1:** The New Ecological Paradigm Scale (or at least the Anti-anthropocentrism and Rejection of Exceptionalism sub-scales: items 2, 7, 12 and 4, 9, 14 respectively) is inversely related to speciesist attitudes.

According to a poll by the Humane Research Council (2014), those who hold liberal political views display more favourable attitudes toward animals than those who hold conservative views. The two main dimensions differentiating conservatives from liberals, tolerance for inequality and intolerance for change (Jost et al. 2004), are both believed to contribute to this relationship: conservatives being more content to preserve the highly unequal prevailing relationship between humans and other species. Allen et al. (2000) find social dominance orientation, the approval of inequality and hierarchical relations, to be one of two ideologies underlying differences in ethical judgements about meat consumption: the other being authoritarianism, or acceptance of control and aggression towards subordinates. The present study examines whether the common factor of tolerance for inequality translates into a significant relationship between socio-political persuasion and attitudes regarding the use of animals for food. Q sort loadings were correlated with a measure of socio-political persuasion across a five point scale from 'liberal' to 'conservative'.

**Hypothesis 2:** More conservative political views are positively related to speciesist attitudes.

Those who are willing to accept differential treatment of various human groups may also be more tolerant of the differential treatment of other species: that is, speciesism may be linked to other forms of discrimination. In fact, it has been proposed by some activists that speciesism forms the basis of all bigotry, as it is first with respect to other species that we learn how to cast beings as 'other', and treat them accordingly (Yourofsky 2015): the same psychological process underlying other forms of discriminatory behaviour. Some evidence suggests that our differential responses to various animals are innate rather than learned, but – with the apparent exception of snakes and spiders – these inborn tendencies manifest only as general trends, such as preferences for certain body sizes depending on our own life-stage, or preferences for more anthropomorphic features (Morris 2005). Such generalized tendencies cannot explain the differential treatment of highly similar animals like pigs and dogs, which is typical of western societies: Joy (2010) would cite cross-cultural variation as further evidence that this discrimination is a learned response. It has long been recognized that cruelty towards animals is an expedient risk indicator of escalation to domestic violence (Walton-Moss et al. 2005), so it seems entirely possible that speciesism could be associated with other forms of discrimination.

This relationship is assessed by correlating participants' Q sort loadings with their responses to a discrimination tolerance scale. Participants are required to indicate how ethically problematic they find each of twelve descriptions of discriminatory behaviours by using a five point Likert scale extending from "not ethically problematic" to "highly ethically problematic": the measure of discrimination tolerance is the simple sum of scores across these twelve items. The discrimination tolerance scale items can be found in Appendix 5.

**Hypothesis 3:** Tolerance of discrimination among human populations is positively related to speciesist attitudes.

Joy (2010) posits that the carnist schema is adopted from our surroundings through a process of acculturation. Accordingly, judgements about the appropriateness of various animal-based foodstuffs rely primarily on normative rather than personal values: on moralization rather than ethical reasoning. This is in line with Stone and Cooper's (2001) claim that societal standards rather than personal standards are the default setting for most moral judgements. Given that omnivorous diets constitute the norm across Europe, it is postulated that reference to societal standards will result in moral judgements consistent with meat consumption. The use of personal standards (ethical decision making) may lead individuals to pro- or anti-meat judgements, but, on average, it is expected that they will tend to oppose meat consumption to a greater degree than those relying on normative standards. To test this hypothesis, participants completed a ranking exercise to indicate their propensity to engage in ethical decision making (see Appendix 6). Resulting values were correlated with participants' Q sort loadings.

**Hypothesis 4:** The tendency to engage in ethical reasoning (as opposed to moralization) is inversely related to speciesist attitudes.

It is proposed that individuals who are better informed about the nature of animal agricultural production processes will be more averse to animal-based food products than those who are ill- or misinformed: this belief underscores the many animal advocacy communications which seek to inform the public about the hidden realities of modern supply chains. A series of 4 questions are used to probe respondents' knowledge of the legality and common usage of various production techniques, which are presented as images with brief written description. The production knowledge questions can be found in Appendix 8. Participants' knowledge levels are assessed by allocating one point for each correct answer and zero points for answers of 'I don't know', before subtracting one point for every incorrect answer (according to the logic that misinformation is more influential than lack of awareness: according to Stephen Hawking, "The greatest enemy of knowledge is not ignorance; it is the illusion of knowledge").

**Hypothesis 5:** Knowledge levels regarding animal agriculture regulations are inversely related to consumption levels.

Finally, in line with essentially all behavioural models, it is posited that a relationship exists between behaviours (consumption levels) and attitudes towards animals.

**Hypothesis 6:** Consumption levels of animal-based food products are positively related to speciesist attitudes.

#### 4.4 Qualitative interviews

To aid the interpretation of their completed Q sorts, further information was solicited from some experimental subjects using the same interview guide as was used with the animal rights advocates:

“What do you think about the use of animals for food in Europe?”

“For each of the cards placed in the extreme left (right) column, please explain what you understand that statement to mean and why you placed it in the position that you did.”

“Is there anything else that you would like to discuss about your sort?”

The questions then broadened to investigate the experience for the research participant as a whole, but with a particular emphasis on how they perceived the animal rights video. The interviews adopted a semi-structured format which allowed for deeper investigation of those topics which were of particular interest to either the researcher or interviewee. The basic structure is as follows:

- “How did you find the experience of watching the video?”
- “Did you learn anything new?”
- “Do you feel that it shifted your views?”
- “Which anti-meat argument (health, environment, animal welfare/rights) did you find most compelling?”
- “What would make the video more persuasive (content/format/presentation)?”
- “Do you think meat consumption in Europe can be justified?”
- “Do you have any intentions to change your consumption of animal products?”

Analysis of the interview transcripts first sought areas of consensus between subjects within each of the treatment conditions, as any differences between the various treatment groups could prove valuable in understanding the impact of the various manipulations. Following this analysis, areas of consensus and dissention were investigated for the participant group as a whole in order to extract any general principles which may be valuable to animal rights advocates.

## 4.5 Ethical considerations

It was the intention of the researcher to induce dissonance in the experimental subjects. As dissonance is characterised as a sensation of psychological discomfort, its intentional arousal poses a potential ethical problem. In defence of the proposed methodology it can be noted that such sensations are ubiquitous and an inherent component of the human condition: dissonance is likely to be aroused in wide array of research settings, often unbeknown to the researcher or the research subject. According to the definitions applied herein, however, the widespread performance of a specific act may influence the morality of that act, but not the ethical judgement of that act.

More important in the current context is the fact that the inconsistent cognitions which are hypothesized to generate the dissonance are already present in each of the participants: each individual is aware of how they feel about the unnecessary killing of animals, and they know that their own consumption of meat necessitates such killing. While any incompatibility between these ideas may be generally concealed through selective attention, the use of euphemisms, and other features of the carnist schema (Joy 2010), the underlying inconsistency remains a dormant source of psychological tension which can re-emerge at any time. By making the inconsistency salient, this study presents participants with an opportunity to ultimately resolve this tension for the rest of their lives. Indeed, dissonance arousal has been successfully used as a therapy technique to help people change their unhealthy attitudes and behaviours (see Becker et al. 2008 for an intervention promoting healthier eating). The underlying philosophy in such cases is that the (potential) benefit for the participant more than compensates the small discomfort likely to be experienced during the intervention process: the same applies in the current study.

One final defence relates to the fact that the only aspect of the current study which raises ethical questions is the presentation of factual information to the study participants through the activist communication video. Sources for each of the claims made in the video are cited and available to the study participants, but they are in any case uncontroversial. It is widely recognized that modern production methods used in animal agriculture are far from animal friendly, and it is for this very reason that the majority of individuals shy away from such information. In accordance with the claim by Austrian author Ingeborg Bachmann that "people can reasonably be expected to accept the truth" („Die Wahrheit ist dem Menschen zumutbar“ Bachmann 1959), truth constitutes the final defence for any discomfort experienced by meat-eating participants in the study. This claim is particularly valid in the present case, given that the uncomfortable truths presented are direct consequences of the participants' consumption behaviours.

Participation by all research subjects is entirely voluntary. Those who are offered the chance to participate in the experimental component of the study in the context of the Research Design course in which they are enrolled were also offered the option of completing an alternative task

set by the regular lecturer in order to fulfil the course requirements for that respective unit of the course, but none chose this option.

Informed consent was sought from all participants by informing them about the tasks they will be asked to perform throughout the experiment and the duration of the procedure prior to them giving their consent using the Research Participant Consent Form (see Appendix 2). While experimental subjects were not informed about the subject matter in advance (in order to ensure the internal validity of their responses), they were free to withdraw from the process once the subject matter became apparent. Students were informed both verbally and via the consent form that:

“Participate is entirely voluntary. You may refuse to participate or stop at any time during the procedure and keep all of the materials you have completed up to that point.”

No students chose to withdraw from the study once it was underway. With respect to the security of the data collected, students were informed via the consent form that:

“If you choose to participate, all of the information you provide will be kept confidential by the researcher (David Leonard). When the data is communicated further (e.g. in the dissertation, through presentations, or as journal articles) it will always be presented in an aggregated and anonymized way so that you cannot be identified.”

In summary, the proposed experimental design is not considered to pose any unreasonable risks to participants – either during the experiment or thereafter. The MODUL University Vienna Institutional Review Board reviewed the research design, data collection instruments, and the experimental protocol, and found them compliant with the University guidelines.

## 5 RESULTS AND DISCUSSION

Due to the multiple populations and analyses described in this section, a brief discussion of the findings accompanies each of the results presented: the important theoretical, methodological and applied implications of the findings are then addressed further in the conclusions chapter which follows.

This section begins by presenting the investigation into the attitudes of animal rights activists, before using this information to inform the experimental results and the further psychographic scales.

### 5.1 Characterising the attitudes of animal rights advocates

#### 5.1.1 Activist demographics

Efforts were made to maximise the diversity of the study participants across a range of demographic variables, with the restriction that they must have a workable command of English and must self-identify as an animal rights activist. The 20 participants were characterized by the following demographics.

Participants were relatively balanced according to gender, with (10) females, (9) males, and (1) participant identifying as 'non-binary'. This evenly balanced distribution is surprising given the greater prevalence of veganism and vegetarianism among females than males (Smart 1995), and the finding that gender significantly moderates attitudes regarding animal rights (Rothgerber 2012). Indeed, the gender balance for the conference as a whole was probably skewed slightly in favour of females. Participants' ages ranged from 20 to 46 (mean 31.6 years; std. dev. 7.5 years), which closely approximated the researcher's impression of the age distribution for the conference as a whole.

Participant nationalities were skewed towards the hosting country, as can be expected at any conference, yet still offer a diverse representation of central European countries: Poland (10), Finland (3), France (2), Germany (2), Italy (2), and Lithuania (1). The highest levels of completed education were higher than European averages, yet lower than those expected at most academic conferences, thereby reflecting the fact that the C.A.R.E. conference was designed as a combined academic/practitioner conference involving presentations tailored for both groups: secondary school (4), bachelor studies (4), master studies (10), PhD (2). Only three of twenty participants claimed to identify with a formal religion (all Christian denominations), while a further three indicated that they subscribe to an alternative spiritual philosophy without specifying which. Finally, four participants stated that they consume eggs and/or dairy products, and two of those four also consume meat. Participants were asked about their actual



consumption because individuals often use dietary labels inconsistently, but they can now be classified as: vegan (16), vegetarian (2), and meat-eaters (2).

**5.1.2 Q Sort Analyses**

Intercorrelating the Q sorts produced by each participant using PQMethod 2.35 generated the correlation matrix shown as Table 7. Even a cursory glance reveals the consistently high and positive correlations between the sorts of all participants, except for Sort 1 which is negatively correlated with all other sorts. This distinctively patterned table already provides an indication of what is likely to emerge from the process of factor extraction.

TABLE 7: CORRELATION MATRIX BETWEEN SORTS

<b>SORTS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
<b>1</b>	100	-56	-40	-39	-57	-53	-62	-52	-16	-40	-50	-44	-52	-41	-43	-44	-52	-55	-48	-42
<b>2</b>		100	67	70	75	77	79	81	60	79	79	78	78	73	67	68	78	72	68	70
<b>3</b>			100	70	80	74	64	80	59	77	76	75	74	69	66	58	72	71	71	74
<b>4</b>				100	75	77	69	76	66	67	67	65	64	62	65	66	71	74	76	73
<b>5</b>					100	86	79	87	62	80	79	83	83	70	79	66	88	81	80	75
<b>6</b>						100	79	89	62	77	75	83	82	75	78	68	88	76	82	75
<b>7</b>							100	78	58	75	73	71	72	77	70	65	83	79	73	77
<b>8</b>								100	67	83	83	89	85	78	80	67	87	77	83	81
<b>9</b>									100	68	57	69	56	71	60	64	62	45	60	65
<b>10</b>										100	79	84	81	83	79	68	89	73	78	81
<b>11</b>											100	85	83	76	72	64	76	72	78	71
<b>12</b>												100	80	80	79	67	83	64	76	74
<b>13</b>													100	75	74	68	82	75	79	81
<b>14</b>														100	67	71	78	63	72	79
<b>15</b>															100	57	83	76	82	68
<b>16</b>																100	70	52	66	76
<b>17</b>																	100	86	83	82
<b>18</b>																		100	76	73
<b>19</b>																			100	77
<b>20</b>																				100

Centroid Factor Analysis following the method described by Brown (1980) and extracting the default number of seven centroids produced the unrotated factor matrix shown as Table 8.

TABLE 8: UNROTATED FACTOR MATRIX

SORTS	Factors						
	1	2	3	4	5	6	7
1 act1	-0.5424	0.2365	0.3638	-0.1833	0.2281	0.0726	-0.0732
2 act2	0.8601	0.0309	-0.1828	0.0187	-0.0614	-0.1041	0.0156
3 act3	0.8204	0.0686	0.0738	0.0173	-0.0716	0.0361	0.0080
4 act4	0.8045	-0.0408	0.0501	0.0080	0.0986	-0.2091	0.0659
5 act5	0.9168	-0.1354	0.0789	0.0305	-0.1346	-0.0190	0.0216
6 act6	0.9117	-0.1236	0.0901	0.0305	-0.0665	-0.1062	0.0169
7 act7	0.8635	-0.1511	-0.2454	0.0628	0.0976	-0.0953	0.0216
8 act8	0.9432	0.0128	0.0848	0.0151	-0.1383	-0.0022	0.0227
9 act9	0.6968	0.2684	0.2139	0.1624	0.2300	-0.2111	0.1361
10 act10	0.9012	0.1615	0.0337	0.0325	0.0867	0.1850	0.0576
11 act11	0.8732	0.1024	-0.0470	0.0096	-0.1879	0.1249	0.0676
12 act12	0.8939	0.1857	0.1319	0.0691	-0.1758	0.0039	0.0378
13 act13	0.8912	0.0545	-0.0921	0.0040	-0.1387	0.1432	0.0526
14 act14	0.8472	0.2627	-0.0928	0.0768	0.1374	0.0239	0.0251
15 act15	0.8376	-0.1221	0.2206	0.0878	0.0193	0.1336	0.0249
16 act16	0.7582	0.1356	-0.0846	0.0195	0.1226	-0.1678	0.0527
17 act17	0.9373	-0.1304	0.0275	0.0190	0.0916	0.0787	0.0198
18 act18	0.8356	-0.3506	-0.0234	0.1328	0.0197	0.1616	0.0363
19 act19	0.8807	-0.1101	0.0924	0.0279	0.0715	0.0677	0.0134
20 act20	0.8700	0.1068	-0.0536	0.0107	0.2243	0.0140	0.0667
Eigenvalues	14.4179	0.5317	0.4076	0.1055	0.3658	0.2804	0.0527
% expl. Var.	72	3	2	1	2	1	0

Table 8 shows that the first factor is able to account for 72% of the variance in the data set, and that the second factor contributes only a further 3%, yet the decision of how many factors to retain was informed by a range of objective criteria, as well as pragmatic considerations.

The Kaiser-Guttman criterion instructs the retention of factors with eigenvalues greater than 1, because eigenvalues of less than one would mean that the factor accounts for less variance than that in a single Q sort (Watts and Stenner 2012). According to this criterion, only one factor should be retained in the current study.

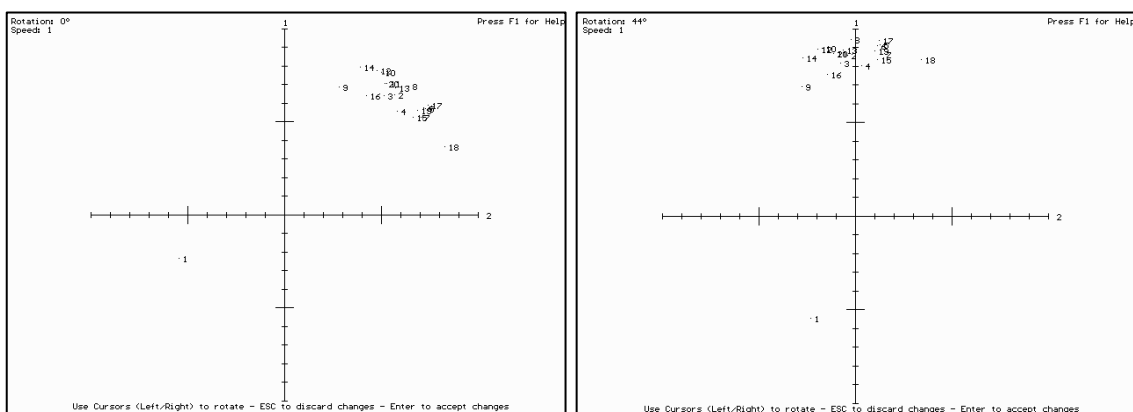
Humphrey's rule, as outlined in Brown (1980) instructs the retention of factors for which the cross product of its two highest loadings exceeds twice the standard error, where the standard error is calculated as  $1 / \sqrt{\# \text{ items in Q sample}}$ . The standard error in the current study is therefore  $1 / \sqrt{50} = 0.141$ , and twice the standard error is 0.283. The product of the two highest loadings (ignoring the signs) on second extracted factor ( $0.351 \times 0.268 = 0.094$ ) falls significantly below the cut-off point, and therefore suggests that only one factor should be retained.

The ‘two or more significant loadings’ approach, also outlined in Brown (1980) instructs the retention of factors which have two or more significant loadings, where the lower limit for a significant loading is calculated by  $2.58 \times \text{standard error} = 2.58 \times 0.141 = 0.365$ . As none of the loadings on the second factor reach this threshold, this approach also suggests that only one factor should be retained.

Each of these objective criteria suggests extracting only a single factor, which is a desirable result in terms of the apparent attitudinal unity of the animal rights movement (as discussed in the preliminary results section), as well as conveniently providing a single measure against which to evaluate the attitudes of subjects in the experimental part of this research. The present concern, however, is the characterization of that one dominant factor which represents the common perspective of the animal rights advocates. The axes representing the factors within the concept space are not necessarily aligned with any particular Q sort or any group of sorts, however, making it desirable to rotate the solution to provide a perspective on the data which approximates the perspective of the group. PQMethod, like most other widely used Q software packages including PCQ for Windows, only allows for orthogonal rotations which maintain the perpendicularity of the factor axes and preserves the independence of the factors (Watts and Stenner 2012). Rotations of this sort therefore require the retention of a minimum of two factors. This pragmatic consideration, which will be shown to improve the factor loadings and increase the number of participants represented in the final solution, motivated disregard of the objective criteria in favour of a two factor solution.

The rotation was performed first with the automated Varimax procedure, producing the conceptual space depicted in Figure 2, before a further manual rotation through 44 degrees was applied to bring the first factor into closer proximity of the dominant cluster of Q sorts, as shown in Figure 3. The latter rotation produced the additional benefit of aligning the single outlying Q sort (# 1) with the axis representing the first factor, albeit in a bi-polar fashion.

FIGURE 2: CONCEPT SPACE FOLLOWING VARIMAX ROTATION    FIGURE 3: CONCEPT SPACE FOLLOWING MANUAL ROTATION



As each of the 20 Q sorts loaded predominantly onto only one factor following rotation, none are considered confounded. Each of the predominant loadings are also deemed 'significant' in that they exceed the cut-off value of 2.58 x standard error (Brown 1980), even exceeding 0.60 on their primary factor and amounting to less than 0.40 on all other factors, which is the strictest of criteria employed the literature (Watts & Stenner 2012). According to these criteria, none of the sorts require exclusion from the calculation of factor estimates. According to the factor loadings, the automatic pre-flagging function in the PGROT add-on to PQMethod 2.35 selects all 20 cases as defining sorts on factor 1. However, the bi-modal distribution along the first factor is characterized by a tight cluster of nineteen Q sorts around the positive pole, representing a high level of consensus between the perspectives of the respective nineteen participants, and a single Q sort which expresses a view which is almost diametrically opposed to that of the cluster. Despite the mathematical alignment along the same axis, it is clear that Q sort 1 represents a disparate perspective to the rest and should be analysed separately. The flag for this case was therefore manually changed to the second factor, and both factors were saved in order that the output should provide details regarding the distinguishing items for each factor. The Q analyse function completed the analysis: generating the factor arrays displayed in Table 9.

For each of the two retained factors, Table 9 presents an image of a hypothetical Q sort which typifies the various Q sorts which were flagged as defining that factor. This is achieved by ranking the Q sample items according to their z-scores, which are composed from the rank of that item in defining Q sorts weighted by the proximity of the respective sort to the factor axis. Accordingly, Q sort 8 has the largest bearing on the determination of the rankings for factor 1, while Q sort 18 will be least the influential. The ranks are then used to determine the Q grid column in which the item should be positioned (labelled as 'Array' in Table 9), although this step involves a reduction in information relative to the rankings. 19 Q sorts define factor 1, which is characterized by a composite reliability of 0.987 and a standard error from its factor z-scores of 0.114. As factor 2 represents a single defining Q sort, it has a lower composite reliability of 0.800 and a higher z-score standard error of 0.447. Table 9 has been ordered according to the item ranks for the first factor for ease of interpretation: that is, the items at the top of the table are those with which the 19 members of the majority group most strongly agree, and the items at the bottom of the table are those with which the majority group most strongly disagree. This arrangement, together with interviews conducted with members of this group, informs the interpretation of the majority perspective of animal rights activists towards the use of animals for food. The thematic sets in which the cards were presented to participants are indicated in the second column of the Table 9, and further inform the tendency of the majority group to emphasize particular issues over others when considering the topic. Given the radically different perspective of the single participant who defined factor 2, the Q sample items in Table 9 are not arranged in a meaningful order relative to the second factor. However, the final column of the table highlights the items which differed in their placement most dramatically between the two factors and are instrumental for distinguishing the differences between the two points of view.

TABLE 9: FACTOR ARRAYS AND DISTINGUISHING ITEMS

Q sample items and numbers (see Appendix 1 for full wording)	Card set	Factor 1			Factor 2			Diff. *P<.05 **P<.01
		Z- Score	Rank	Array	Z- Score	Rank	Array	
41 other species feel pleasure and pain	B	1.83	1	4	0.85	14	2	*
22 animals suffer when raised for food	B	1.67	2	4	0.85	14	2	
33 pigs and dogs should be treated similarly	D	1.51	3	4	0.85	14	2	
3 lives of other species matter to them	B	1.45	4	4	1.27	9	3	
35 killing an unwilling being is never humane	B	1.37	5	3	0.85	14	2	
18 I consider that I care about animals	E	1.27	6	3	-1.27	46	-3	**
4 vegan dishes can be delicious	A	1.25	7	3	1.27	9	3	
46 meat uses much land and water	E	1.12	8	3	0.42	21	1	
5 meat produces more greenhouse gases	E	1.12	9	3	0.42	21	1	
28 thought about ethics of animal products	C	1.03	10	2	0.42	21	1	
17 vegan diet nutritionally adequate	A	1.01	11	2	1.7	4	4	
23 meat is an ethical question	C	0.96	12	2	0.85	14	2	
13 meat choice, not necessity	A	0.89	13	2	1.27	9	3	
1 meat linked to health problems	A	0.86	14	2	1.7	4	4	
32 human superiority means protect, not kill	C	0.85	15	1	1.27	9	3	
39 socially acceptable to eat meat	E	0.81	16	1	-0.42	36	-1	**
44 see meat, think of animal	D	0.8	17	1	1.27	9	3	
45 thought that meat means killing animals	D	0.69	18	1	0	29	0	
9 socially acceptable to be vegan	E	0.5	19	1	1.7	4	4	**
26 wouldn't eat meat if friends didn't	E	0.35	20	1	-1.7	50	-4	**
12 god says care for animals	C	0.33	21	1	-0.85	41	-2	*
14 hunting better than farming	B	0.3	22	0	0.42	21	1	
48 vegan diets are more expensive	A	-0.03	23	0	-1.27	46	-3	**
38 vegan alternatives too much effort	E	-0.04	24	0	0.42	21	1	
30 being vegan would damage relationships	E	-0.1	25	0	-0.42	36	-1	

Q sample items and numbers (see Appendix 1 for full wording)	Card set	Factor 1			Factor 2			Diff. *P<.05 **P<.01
		Z-Score	Rank	Array	Z-Score	Rank	Array	
21 difference between pets and food	D	-0.23	26	0	0	29	0	
11 avoid animal rights activists	D	-0.23	27	0	0	29	0	
6 mixed feelings about animal products	D	-0.24	28	0	0	29	0	
19 EU laws ensure ethical treatment	B	-0.46	29	0	-0.42	36	-1	
16 shouldn't critique cultural practices	E	-0.5	30	-1	-0.85	41	-2	
43 god says kill and eat animals	C	-0.51	31	-1	-0.85	41	-2	
40 killing fine if the life was good	B	-0.55	32	-1	0.42	21	1	*
10 other species eat meat	C	-0.58	33	-1	-0.42	36	-1	
42 need meat for healthy diet	A	-0.6	34	-1	-1.7	50	-4	*
34 prepared to kill animals myself	D	-0.63	35	-1	1.7	4	4	**
36 meat is a matter personal choice	C	-0.65	36	-1	-1.7	50	-4	*
7 humans have souls, animals don't	B	-0.71	37	-2	-1.27	46	-3	
37 evolved eating meat so should continue	A	-0.93	38	-2	-0.85	41	-2	
31 human destiny to eat meat	A	-0.99	39	-2	-0.85	41	-2	
8 humans top of food chain	C	-1.01	40	-2	-1.7	50	-4	
2 comfortable thinking about slaughterhouse	D	-1.09	41	-2	0	29	0	*
49 killing acceptable if bred for purpose	C	-1.12	42	-3	-1.27	46	-3	
20 comfortable with killing for meat	D	-1.15	43	-3	0	29	0	*
27 welfare condition on FF satisfactory	B	-1.21	44	-3	0.42	21	1	**
29 meat tastes too good to worry	A	-1.24	45	-3	-0.42	36	-1	
50 humans conscious, animals not	B	-1.28	46	-3	-0.42	36	-1	
47 meat OK because most people do it	E	-1.34	47	-4	-0.42	36	-1	*
25 have to kill or too many animals	D	-1.36	48	-4	0	29	0	**
24 taste preferences more important	A	-1.43	49	-4	0	29	0	**
15 animals here to serve our needs	C	-1.79	50	-4	-1.27	46	-3	

### 5.1.3 Interpreting activist attitudes towards the use of animals for food in Europe

The interpretation of the factor(s) emerging from the factor analysis begins with an inspection of the rankings and factor arrays which typify each viewpoint, with attention focused on those items which populate the extremes of the distribution. The discussion here is limited to the interpretation of the first factor which represents the shared viewpoint of 19 of the 20 animal rights activists. The justification for this restriction is primarily that all three of the activists interviewed following their sorts belong to the first factor – although this fact was not known at the time of the interviews – which allows for a rich description of the majority viewpoint. Not all of the three interviewees provided reflections on every one of the items at the extremes of the factor array presented in Table 9, because their individual Q sorts differed to some degree from the quintessential activist sort represented by the first factor. Nevertheless, sufficient comments were available to gain a sound understanding of the meanings inferred from the items and of the motivation behind the pattern of their placement. Any interpretation of the second factor, on the other hand, would be mere speculation based on the researcher’s own understanding of the Q sample items. To compound this problem, no clear patterns are immediately discernible with respect to the placement of items in the factor array for the second factor, which appears to feature numerous logical inconsistencies; it is quite possible that the divergence of items from the first factor reflects language difficulties on the part of the sorter, rather than a divergent perspective. Finally, and most importantly, a primary objective of this phase of the study is to characterize a single ‘animal rights activist perspective’ on the topic of eating animals which can be used to benchmark the perspectives of the participants in the experimental part of the study: a thorough treatment of the majority group suffices to this end. Given this, in preparation for the experimental component, the single respondent comprising the second factor was deleted from the data set to leave a single comparison group with relatively homogenous perspectives. The objective in this section is to better understand that perspective.

An immediately apparent pattern within Factor 1 is the prominence of items from Card Set B at the right side of the distribution. Specifically, the items which were typically selected to populate Array 4 (i.e. the four items with which the respondents most strongly agreed), all concern animals: as do two of the five items assigned to Array 3. The meanings of these items to respondents were probed during the three interviews and are discussed here, before a general discussion of the attribution of importance to this set of items.

Two of these items (41B: Like humans, other species can experience pleasure and pain–Rank 1; 22B: Animals suffer when being raised and killed for meat–Rank 2) relate to the perceived experience of animals raised for food, and can be classified as welfare concerns. The importance of such considerations to the activists is highlighted by the selection of “18E: I consider myself to be someone who cares about animals” at Rank 6. The idea that farming practices cause physical harm to animals is considered self-evident to the activists, as revealed by one respondent: “... of course it is painful to be burned [branded] or have your beak cut off... you

know they do all this without pain relief". The zoomorphic – or reverse anthropomorphic – language employed in referring to “your beak” reveals empathy as underlying concern for the welfare of animals, as expressed more succinctly by another respondent: “I just imagine how it would be for me if I was treated like that”.

Another two animal-specific items (3B: The lives of other species matter to them—Rank 4; 35B: Killing a healthy being is never ‘humane’ if it is against their will—Rank 5) relate to the issue of killing. In emphasizing such items, the activists recognize that the deprivation of life constitutes harm to a sentient being even in the absence of physical pain. While one respondent relates this harm to the frustration of explicit desires (“we all want to live, so you have to think about that”), another reflects the importance of unconsidered interests in presenting a rationale consistent with the preference utilitarian argument from marginal cases: “it’s still wrong to kill a baby even if you do it painlessly because then they don’t have the opportunity to live their life”.

The fifth item (33D: It is unjust to treat highly similar animals like dogs and pigs so differently—Rank 3), relates to a concept of justice: namely the moral equivalence of individuals. One respondent noted that “there has to be some good reason for treating beings differently, otherwise it’s just unfair... killing pigs but not dogs is like saying that girls can’t go to school but boys can... it’s wrong because there’s no real difference between them”. Regarding this point, the respondent clarified the way that the inconsistent treatment of pigs and dogs should be resolved by highlighting the applicability of this principle across other species: specifically by again making reference to item 41B: “Like humans, other species can experience pleasure and pain” —Rank 1. The implication here is that the perception of moral equivalency between pigs and dogs extends to humans and is rooted in their capacity for sentient experience. The relevance of conceptions of justice to animal rights activists in considering the use of animals for food in Europe is further supported by the assignment of two ethics-related items (28C: I have spent time thinking about the ethical aspects of animal products—Rank 10; 23C: Whether or not to eat meat is an ethical question—Rank 12) to Array 2. These are supported by an additional two items (17A: Vegan diets can be nutritionally adequate—Rank 11; 13A: Meat consumption is a choice, not a necessity—Rank 13) which establish the non-necessity of meat consumption and therefore make ethical deliberations pertinent.

The right extreme of the factor array typifying the viewpoint of activists is rounded out by several items which depart from concern about animals (as individuals), and refer instead to the environmental impacts of animal agriculture (46E: Diets including meat require much more land and water to produce than vegan diets—Rank 8; 5E: Diets including meat produce dramatically more greenhouse gasses than vegan diets—Rank 9). The highest ranked item to reflect inherently individualistic concerns appeared only at Rank 7 (4A: Well prepared vegan dishes can be delicious), and was supported by concern for the health implications of meat consumption at Rank 14 (1A: Meat consumption is linked to many health problems). It is noteworthy that individualistic concerns should be relegated to such subordinate positions behind altruistic



concerns. The appearance of taste considerations at Rank 7 seems even higher than the general pattern of responses would suggest, and may reflect the fact that the data collection took place during the lunch break at the C.A.R.E. Conference and immediately followed a much anticipated and well-received all-vegan menu. Respondents considered the meanings of these four items to be self-explanatory and the factuality of the statements to be self-evident. They were placed prominently in the distribution primarily because “even though they are true, many people seem not to know them, so they are things that we often have to communicate to others”. Nevertheless, the prominence of these items supports the findings by numerous researchers (Cooney 2013; Hoffman et al. 2013; MacDonald 2000; MacNair 2001) that vegetarians and vegans are likely to maintain pluralistic motivations for their dietary choices and are likely to add motivations over time.

To summarize the right side of the distribution representing the attitudes of animal rights activists to the use of animals for food in Europe, it is apparent that concern for the interests of animals are prioritized over personal or holistic environmental concerns. This focus on animals is based in the recognition that animals are sentient beings whose interests are deserving of consideration, and the belief that justice entails that the essential interest of animals in maintaining their bodily integrity trumps the interests of those individuals who would use them for food. This position is reflected by respondents’ answers to the broad question posed in the Q sort: “What do you think about the use of animals for food in Europe?” One respondent replied: “When I think about people using animals for food, the most important thing to me is the effect on the animal... how can you even think about taste or something like that when it means the death of an animal”. Another reflected on the disparate consequences for the two parties involved and the power imbalance between them using an intersectional metaphor:

“when we think about rape, any thought about the benefits to the rapist are secondary to thoughts about the harm to the victim... that’s if we think about the rapist at all... the way I look at meat is very similar... the important thing is what happens to the victim, the animal, and I really don’t care how the aggressor feels about it... for one it’s taste, for the other it’s life or death... there’s really nothing to think about”.

The prioritization of the victim is also evident from examination of the factor arrays representing the left side of the animal activists’ Q sort distribution. As a general reflection on the Q sorting procedure, respondents said that they had no problems populating the extremes of the distribution given that there were many items with which they either strongly agreed or disagreed. They had rather more difficulty distinguishing between the items placed towards the middle of the distribution, and were relieved to learn that these items are not so influential on the outcome of the factor analysis: and as such are not discussed in this section. Interpretation of the lowest ranks is instructive, however, as respondents also express strong feelings regarding these items (Stephenson 1953). The left-most columns (Arrays -4, -3, and -2: representing ‘most

strong disagreement’) are populated with a litany of Rothgerber’s (2012) Meat Eating Justifications.

In a clear rejection of anthropocentrism, item 15C: “Ultimately, animals are here to serve our needs” was relegated to Rank 50. One respondent reflected that: “I don’t know what the meaning of life is, but there’s no reason to think that it’s about humans any more than other animals”. Similarly, another stated that: “evolution shows that we’re all the same really... that we’re all here for the same reason”. The third provided the theist interpretation that: “the Garden of Eden was vegan, so God didn’t make animals for humans to kill them”. Further supporting the rejection of anthropocentrism is the disagreement expressed in Array -2 with the differentiation of humans from other species according to conceptions of the ‘food chain’ (8C–Rank 40), human destiny (31A–Rank 39), evolution (37A–Rank 38), or souls (7B–Rank 37). While the science on the issue of consciousness is not yet definitive – in large part due to the competing notions of the central concept – activists even reject the dichotomization of humans and animals on the basis of consciousness (50B–Rank 46). Fortunately, most ethical positions supporting the moral consideration of animals are not predicated on the attribution of consciousness by scientists, but rather rely on the less restrictive and less controvertible attribution of sentience. It is quite possible that some of the activists participating in the Q sorting exercise may not be aware of the subtle distinctions between the two.

Given the sentiocentric perspective of the activists, it is unsurprising that they felt uncomfortable with the very idea of animal slaughter (2D–Rank 41) and would not be prepared to do it themselves (20D–Rank 43), regardless of whether the animal was bred for that purpose (49C–Rank 42). Ignoring the issue of slaughter for a moment, the conditions in which animals are raised on factory farms is also deemed unacceptable (27B–Rank 44). Respondents strongly disagreed that “Humans need to kill animals to avoid the world being overrun by animals” (25D–Rank 48), and in fact found the proposition quite humorous – “how could anyone even think that?” – until they were saddened to learn that this justification can be found quite commonly across a range of social media forums. Items such as this one highlight the immense challenge in formulating a comprehensive Q sample which remains meaningful for participant groups as diverse as meat-eaters and animal rights activists.

A final group of strongly rejected items deserve some additional attention. Two of these (24A: My taste preferences are more important than the lives of other animals–Rank 49; 29A: Meat tastes too good to worry about what all the critics say–Rank 45) represent the counterpoint to the items with which activists most agreed. Acknowledging that the hedonic contention of ‘meat is nice’ (Piazza et al. 2015) is a legitimate argument in favour of meat consumption, and perhaps the only one (Fetissenko 2011), these two items probe the strength of this argument in comparison to the many counter arguments which can be raised: in doing so, they condense the entire Q sort into single comparative statements. The activists clearly reject the notion that the hedonic benefits for human can override the interests of the animals: on the one hand by

selecting pro-animal arguments for the right extreme of the distribution, and on the other hand by selecting these items for the extreme left.

Finally, the contention that “Most people eat meat, so it must be OK to do so” (47E–Rank 47) was relegated to Array -4. When asked about this decision, respondents revealed that their disagreement was not with the notion that “most people eat meat”, but with the idea that popular acceptance of a social norm legitimizes that norm. The responses from the interviewees were particularly revealing, with one respondent stating that: “just because the people around me kill doesn’t mean that it is OK for me to kill...” The rightness or wrongness of the act, in other words, is not considered endogenous to the social norm, but is determined by the individual based on exogenous considerations. The interviewee is thereby expressing a preference for ethical deliberation with respect to the use of animals for food, rather than relying on public morality to guide their judgements. They continue: “... but I guess if everyone was killing and I had to kill to survive then it would be alright to do it too...” This caveat does not change the situation, for it is not that the moral precept held by the individual must change to accommodate the social norm, but that the moral facts pertinent to the decision have changed such that applying the same moral precept may lead one to an alternative conclusion. The respondent concludes: “... but that’s not the case with killing animals... we don’t have to do it to survive”; the moral facts in the case at hand do not lead them to the conclusion that killing animals for food is permissible.

Given that animal rights activists represent a minority group whose behaviours differ markedly from accepted social norms, it should come as no surprise that the group can be characterized by a rejection of prevailing public morality in favour of ethical reasoning by the individual. Demonstrating the interplay between public morality and ethical reasoning, one particularly insightful respondent observed that: “of course, if everyone around me was eating meat that might influence whether I thought that eating meat was wrong”. It is perhaps not surprising that the interviewee who gave this response revealed that she was familiar with Melanie Joy’s (2010) work on carnism, which is reflected in this observation. Nevertheless, the act would be considered right or wrong based on the individual’s adjudication given the information available to them – including the beliefs and behaviours of others – and not purely on account of the majority view.

To briefly summarize the perspective of the 19 animal rights activists on the topic of using animals for food in Europe, one may conclude that these individuals have engaged in some form of ethical reasoning to reach the conclusion that their paramount consideration is the plight of the victims. Arguments related to personal desires and holistic environmental issues, whether supporting or opposing the use of animals, are relegated to secondary importance and do not exert significant influence on the summary decision that it is improper to subject sentient beings to an untimely death when this state of affairs can be so easily avoided. This is the perspective which activists hope to impart to their audiences through their personal advocacy efforts. The remainder of the dissertation will focus on how they can best achieve this goal.

## 5.2 Experimental Subject Descriptives

### 5.2.1 Sample demographics

A total of 98 students partook in the experimental component of the study. They were recruited in three groups: 1) 39 MU students, and 2) 39 KU students participating in the context of their respective Research Design courses; and 3) 20 MU students who answered a social media call for volunteers and had their participation incentivized with a 20EUR gift. Given the face-to-face nature of the data collection procedure and the consequent ability of the researcher to examine each instrument presented for completeness, the data set is complete with no missing items for these 98 subjects.

All participants were randomly allocated to one of five treatment groups. Randomization was achieved through the application of a counting algorithm to student numbers in the classroom settings, and by drawing numbers in the case of the volunteers.

Given the international nature of the MODUL University Vienna student body, it is unsurprising that less than half of the respondents (41 of 98) indicated Austria as their country of origin. Despite currently living in Austria, the remainder come from the following European and international countries, as listed according to descending participant numbers: Germany (8), Albania (6), Serbia (6), Croatia (4), Italy (4), Slovenia (4), Bulgaria (3), Saudi Arabia (3), China (2), Jordan (2), Armenia (1), Australia (1), Bosnia (1), Greece (1), India (1), Israel (1), Kazakhstan (1), Luxembourg (1), Poland (1), Romania (1), Slovakia (1), Spain (1), Thailand (1), Ukraine (1), United States (1), and Zambia (1). The proportions of Austrian and foreign participants are approximately equal across the five treatment groups. The diversity of cultural backgrounds represented in the sample is seen as benefitting the generalizability of the study's findings.

Other important sample demographics are presented using cross-tabulations which demonstrate that their distributions across the five treatment groups do not differ significantly from the proportions in the total sample. Included here are all of the scales completed by participants prior to the manipulations which distinguish the various treatment groups.

#### 5.2.1.1 Gender

The total sample included more females (57.1%) than males (42.9%), which is almost exactly representative of the total MU student body (59% female, 41% male; MU Sustainability Report 2017, forthcoming). As shown in Table 10, these proportions are also reflected in each of the treatment groups: none of the column proportions were found differ to significantly at the .05 level.

TABLE 10: CROSSTABULATION OF GENDER AND TREATMENT GROUP

			Treatment group					
			A	B	C	D	E	Total
Gender	Female	% within group	56.5%	50.0%	63.2%	63.2%	52.9%	57.1%
	Male	% within group	43.5%	50.0%	36.8%	36.8%	47.1%	42.9%
Total	Count		23	23	20	19	19	17
	% within group		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**5.2.1.2 Education**

58 of the 59 MU participants were bachelor students whose highest level of completed educational attainment was high school equivalency; the other had just graduated from the bachelor program. Their ages ranged from 18 to 26 years, with a mean of 21.0 ( $\sigma_{\bar{x}} = 1.78$ ). All 39 IMC Krams (hereinafter KU) students participants were master students whose highest level of completed educational attainment was a bachelor degree. Their ages ranged from 19 to 30 years, with a mean of 23.4 ( $\sigma_{\bar{x}} = 1.93$ ). Table 11 shows that the participant proportions from the entire sample are roughly reproduced across each of the treatment groups, reflecting the even allocation of students from each university to each treatment group, which can therefore be considered homogenous in terms of ages and education levels. No column percentages differ significantly at the .05 level.

TABLE 11: CROSSTABULATION OF EDUCATION AND TREATMENT GROUP

			Treatment group					
			A	B	C	D	E	Total
Educational attainment	high school	% within group	56.5%	70.0%	52.6%	63.2%	52.9%	59.2%
	bachelor	% within group	43.5%	30.0%	47.4%	36.8%	47.1%	40.8%
Total	Count		23	20	19	19	17	98
	% within group		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**5.2.1.3 Religion**

The religious persuasion of the participants was also considered a potentially important influence on their personal position regarding the treatment of animals. Approximately half of all respondents (n = 48) indicated that they identify with a formal religion, with the majority (n = 39) naming Christianity, followed by Islam (n = 7), Buddhism (n = 1), and Judaism (n = 1). Theists and non-believers were evenly distributed across the treatment groups, as shown in Table 12, as were the various religions represented. Only 5 participants indicated that they subscribe to some alternative spiritual philosophy. No column percentages differ significantly at the .05 level.

TABLE 12: CROSSTABULATION OF RELIGION AND TREATMENT GROUP

			Treatment group					
			A	B	C	D	E	Total
Formal religion	No	% within group	65.2%	40.0%	47.4%	63.2%	35.3%	51.0%
	Yes	% within group	34.8%	60.0%	52.6%	36.8%	64.7%	49.0%
Total	Count		23	20	19	19	17	98
	% within group		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

#### 5.2.1.4 Dietary behaviours

Rather than asking participants to self-classify their dietary consumption, they were asked to report the number of breakfasts, lunches, and dinners per week which include meat products and/or dairy products and eggs, as well as a range of other foods. These quantities were later combined to generate a total number of animal products consumed per week by each participant: “Dairy and meat”. The range in consumption levels is presented in Table 13. As no participant entirely avoids animal products, there are no vegans in the sample. However, 2 participants consume no dairy or eggs and 6 forego meat entirely; the latter can be labeled as ovo-lacto vegetarians. Although precise statistics are difficult to obtain, this proportion of vegetarians is close to that reported for Austria of 9% (IFES 2013), and the truth may be even closer considering the well-recognized issue of over reporting in self-classification exercises (Cooney 2013), as was employed in the IFES study.

TABLE 13: DIETARY BEHAVIOURS OF PARTICIPANTS

	N	Minimum	Maximum	Mean	Standard Deviation	ANOVA between treatment groups
Dairy	98	0	21	9.18	5.182	p = .641
Meat	98	0	20	8.33	4.913	p = .984
Dairy and meat	98	2	39	17.51	8.052	p = .976
Valid N (listwise)	98					

As the question regarding diet asked for the number of meals consumed per week which contain a variety of foodstuffs, but did not specify a specific serving size, it is not possible to comment on how representative the study participants are of the wider community in this respect. However, it seems very likely from the rather modest mean quantities of 9.18 meals including dairy and 8.33 meals including meat that most participants counted only meals which contain a significant proportion of these products: ignoring, for instance, the butter in their breakfasts or the milk in their coffee. Such omissions notwithstanding, the reported quantities are nevertheless regarded as serving the intended purposes of 1) reminding participants of their consumption in order to make salient potential inconsistencies between their actions and beliefs, and 2) differentiating between heavy and light consumers. An ANOVA test seeking

differences in mean consumption levels between the treatment groups proved highly non-significant, as seen in the final column of Table 13, thereby indicating homogeneity across the treatment groups in this respect.

### 5.2.1.5 Propensity for ethical reasoning and socio-political persuasion

In order to gauge participants' propensity for engaging in ethical reasoning, they were asked to rank a variety of potential sources of moral guidance according to how influential they are in shaping the subject's beliefs about what is 'right' and what is 'wrong'. The rank ascribed to "my own reasoning" was taken as a measure of the subject's disposition towards ethical deliberation (whereby 1 represents a strong tendency to engage in ethical reasoning and 6 a strong tendency to avoid such deliberation). Table 14 shows only moderate variance around a mean of 1.74, which demonstrates that participants believe ethical reasoning to be an important moral epistemological process. A Kruskal Wallis test further demonstrated that there were no significant differences between the treatment groups in this respect. Somewhat surprisingly, a Mann-Whitney U test was unable to establish significant differences ( $p = .120$ ) between religious participants ( $n = 48$ ; mean rank = 53.71) and non-religious participants ( $n = 50$ ; mean rank = 45.46) regarding their use of ethical reasoning in differentiating right from wrong.

TABLE 14: PROPENSITY FOR ETHICAL REASONING AND SOCIO-POLITICAL VIEWS

	N	Minimum	Maximum	Mean	Standard Deviation	Kruskal Wallis between groups
Ethical reasoning tendency	98	1	4	1.74	.816	$p = .114$
Socio-political views	98	1	5	2.34	1.005	$p = .942$
Valid N (listwise)	98					

Asked to rate their socio-political views on a five point scale from (1) liberal to (5) conservative, participants exhibited considerable diversity with answers ranging to both extremes around a mean of 2.34 ( $\sigma_{\bar{x}} = 1.005$ ), which is modestly left of the centre. This characteristic of student bodies in general is one of the reasons they form a key target demographic for animal advocacy campaigns, although it could be argued that the participants from these private universities fall rather closer to the middle of the spectrum than is typical. Table 14 shows that a Kruskal Wallis test was also unable to establish the presence of significant differences between the treatment groups in this respect.

### 5.2.1.6 Environmental attitudes

The Revised New Ecological Paradigm scale (Dunlap et al. 2000) measures respondents' environmental attitudes in terms of endorsement of either the dominant social paradigm (DSP)

or the new environmental paradigm (NEP). It was hypothesized that differences in worldviews across this spectrum may be correlated with specific attitudes towards other species. As each of the 15 items are rated across a five point Likert scale (with even numbered reverse coded) and scores are typically presented as an average across all items, potential scores range from 1 (strong endorsement of DSP) to 5 (strong endorsement of NEP). Scores among the study participants averaged 3.53 ( $\sigma_{\bar{x}} = .477$ ), which exceeds the commonly accepted boundary of 3 (Rideout et al. 2005; Van Petegem and Blicek 2006) and therefore indicates a tendency within the sample towards a pro-ecological worldview. As the NEP scale is perhaps the most frequently used measure of environmental attitudes worldwide, this figure can be compared with results obtained using student samples in other regions: Nigeria 2.95 (Ogunbode 2013); the United Kingdom 3.31 (Pahl et al. 2005); Turkey 3.50 (Erdoğan 2009); Brazil 3.55 (Schultz et al. 2005); the United States 3.57 (Kortenkamp and Moore 2006); Australia 3.96 (Blaikie 1992). The outcome of 3.53 in the current study would form the median of this set of findings, thereby indicating that the environmental attitudes of the current experimental subjects are not atypical. A Kruskal Wallis test was unable to detect significant differences between the treatment groups in this respect, as shown in Table 15.

TABLE 15: ENVIRONMENTAL ATTITUDES OF PARTICIPANTS

	N	Minimum	Maximum	Mean	Standard Deviation	Kruskal Wallis between groups
NEP scale (complete)	98	2.40	4.40	3.53	.477	p = .696
Anti-anthropocentrism sub-scale	98	1.33	5.00	3.69	.822	p = .367
Valid N (listwise)	98					

While the NEP scale addresses a diversity of environmental considerations, one particular sub-scale is of greatest interest in the context of the present study: the anti-anthropocentrism sub-scale consisting of NEP items 2, 7, and 12 (Dunlap et al. 2000).

2. Humans have the right to modify the natural environment to suit their needs.
7. Plants and animals have as much right as humans to exist.
12. Humans were meant to rule over the rest of nature.

The sub-scale was found to be only moderately internally consistent, with a Cronbach's  $\alpha$  of .601 falling under the commonly accepted threshold of .70, but this could not be improved by the removal of any items. While the mean score for this sub-set of items ( $\bar{x} = 3.69$ ,  $\sigma_{\bar{x}} = .822$ ) exceeded that for the entire NEP scale ( $\bar{x} = 3.53$ ,  $\sigma_{\bar{x}} = .477$ ), the responses also revealed a greater diversity of opinions among the participants. Nevertheless, no significant differences were detected in terms of anthropocentric tendencies between the treatment groups.



A striking finding from this scale is the particularly high level of agreement with item 7 ( $\bar{x} = 4.10$ ,  $\sigma_{\bar{x}} = 1.13$ ), which greatly exceeded the (reverse scored) values for items 2 ( $\bar{x} = 3.27$ ,  $\sigma_{\bar{x}} = 1.12$ ), and 12 ( $\bar{x} = 3.64$ ,  $\sigma_{\bar{x}} = 1.11$ ). In the present sample, 73.4% of respondents endorsed the statement that “plants and animals have as much right as humans to exist” and another 15.3% held ambivalent attitudes, while only 11.3% disagreed with this statement. Such a result is no anomaly, as other researchers have obtained comparable findings with similar student samples: Erdoğan (2009) and Denis and Pereira (2014) reporting 91% and 94% support for this proposition, respectively, and Atav et al. (2015) obtaining an identical mean score of 4.11. However, this result presents an apparent inconsistency with other scales completed as part of this study: namely, the finding that 73.4% of respondents believe that certain practices for the raising and killing of chickens are ethical, and that 78.6% of respondents believe that these practices should be legal. It is not easy to reconcile these apparently contradictory findings: the majority view that animals have as much right as humans to exist, and simultaneously that it is ethical to kill animals unnecessarily. A remote possibility is that some respondents do not believe that humans have a right to life or bodily integrity. Perhaps more likely is that the environmental context in which the NEP statement was embedded induces a conception of animals which is restricted to wild animals (who are considered to have a right to life) but does not include farmed animals (who are perceived to have no such right). Such an explanation would reflect the dichotomization strategy of Rothgerber’s (2014) Meat Eating Justifications. A final possibility is that both questions were fully considered and understood, and that many respondents simply hold incongruent beliefs regarding this issue: a circumstance that is likely to arouse cognitive dissonance.

While this study is restricted to the consideration of attitude change, it is motivated by the implicit connection between attitudes and behaviours. An interesting side-note at this juncture is therefore the revelation of a significant correlation between participant attitudes (the anti-anthropocentrism sub-scale) and behaviours (self-reported consumption levels) prior to the experimental component. As shown in Table 16, attitudes appear not to be correlated with the consumption of dairy products, but the statistically significant negative correlation between attitudes and meat consumption reveals that the rejection of an anthropocentric worldview is associated with lower levels of meat consumption. This is an important finding, because a lack of correlation between these variables would raise questions about a key premise motivating this study. While a discussion of the causality underlying this relationship must wait to be informed by further results in this section, the prominence of cognitive behavioural models such as Ajzen’s (1991) Theory of Planned Behaviour provides justification for investigating attitudes as behavioural drivers.

TABLE 16: CORRELATION OF ANTI-ANTHROPOCENTRISM AND DIETARY CONSUMPTION

		Dairy	Meat	Dairy and meat	
Spearman's rho	Anti-anthropocentrism	Correlation Coefficient	-.009	-.351**	-.208*
	NEP sub-scale	Sig. (1-tailed)	.466	.000	.020
		N	98	98	98

\*\* Correlation is significant at the 0.01 level (1-tailed); \* denotes significance at the 0.05 level (1-tailed).

### 5.2.1.7 Discrimination Tolerance

Speciesism is a form of discrimination which some find objectionable, yet is normatively tolerated. The 12 item discrimination tolerance scale was created to investigate the possible relationship between speciesism and other forms of discrimination, as postulated under the term intersectionality. Presented with a range of vignettes describing discriminatory behaviours and policies (see Appendix 5), participants were asked to indicate on a five point scale how ethically problematic they perceived the situation (1 = highly ethically problematic; 5 = not ethically problematic). Despite being restricted to discrimination towards specific human groups, the vignettes intentionally address a diverse range of scenarios and target groups, with items ranging from the socially unacceptable (e.g. “on public transport, certain seats are reserved for white people”) to what is often condoned as ‘positive discrimination’ (e.g. “an employer considers only older people for an open position”). Across the entire sample ( $n = 98$ ), the 12 items generated a Cronbach’s  $\alpha$  of .723, thereby indicating that the scale measures a single construct: namely, the respondent’s tolerance for discrimination. Participant scores were subsequently averaged across the 12 items to produce a discrimination tolerance score with a potential range of 1 to 5, whereby higher scores indicate a higher tolerance for discrimination. The mean for the entire sample was 2.15 ( $\sigma_x = .49818$ ), and a Kruskal Wallis test revealed no differences between the treatment groups (see Table 17).

TABLE 17: PARTICIPANT TOLERANCE FOR DISCRIMINATION

	N	Minimum	Maximum	Mean	Standard Deviation	Kruskal Wallis between groups
Discrimination tolerance score	98	1.42	3.67	2.1514	.49818	$p = .949$
Valid N (listwise)	98					

## 5.3 Experimental results

The dependent variable used to determine the degree of attitude change resulting from the combined effect of the experimental manipulations and exposure to the animal advocacy stimulus is the correlation between each participant’s Q-sort distribution and that which emerged as the prototypical animal activist Q-sort (as discussed in the methodology section). In

order to derive this correlation coefficient, the PQ-method data set containing the entire sample of 98 experimental subjects was 'spiked' with the quintessential activist sort, before a Centroid Factor Analysis was run to generate a between-sorts correlation matrix. The correlation coefficient describing the holistic attitudinal proximity between each participant and the activist position), hereinafter termed *correlation with activists*, was then used as the dependent variable. These figures proved to be rather variable across the entire sample ( $n = 98$ ), with coefficients ranging from  $-.3529$  to  $.8456$  ( $\bar{x} = .334$ ,  $\sigma_{\bar{x}} = .273$ ).

Establishing the validity of Q-methodological data such as these coefficients generally relies primarily on triangulation with interview data. This had been done in the present study for a portion of the respondents and will be discussed later, but two additional scales completed by participants after the Q-sort can also help to validate the meaningfulness of the dependent variable. Given eight pictures of production techniques with accompanying descriptions (see Appendix 8), participants were asked to indicate (among other questions): 1) which of the practices should be legal, and 2) which of the practices are ethical. The number of boxes checked for each question formed each participant's score for that question. Spearman correlations between each of these scales and the *correlation with activists* dependent variable (coefficients of  $-.422$  and  $-.474$ , respectively) both proved to be highly statistically significant ( $p < .001$ ). The expected negative correlations indicate that participant Q-sorts more closely resembling activists Q-sorts are associated with the evaluation that fewer of the practices presented should be legal, or are ethical. While the strength of the correlation may be considered only moderate, it should be borne in mind that many of the Q-sort items (e.g. those relating to health or hedonic effects) carry only tangential legal and ethical implications, and are therefore likely to vary across participants and activists alike. These two scales are therefore believed to provide strong validation for the use of *correlation with activists* as a dependent variable measuring participants' proximity to the attitudes of the activists.

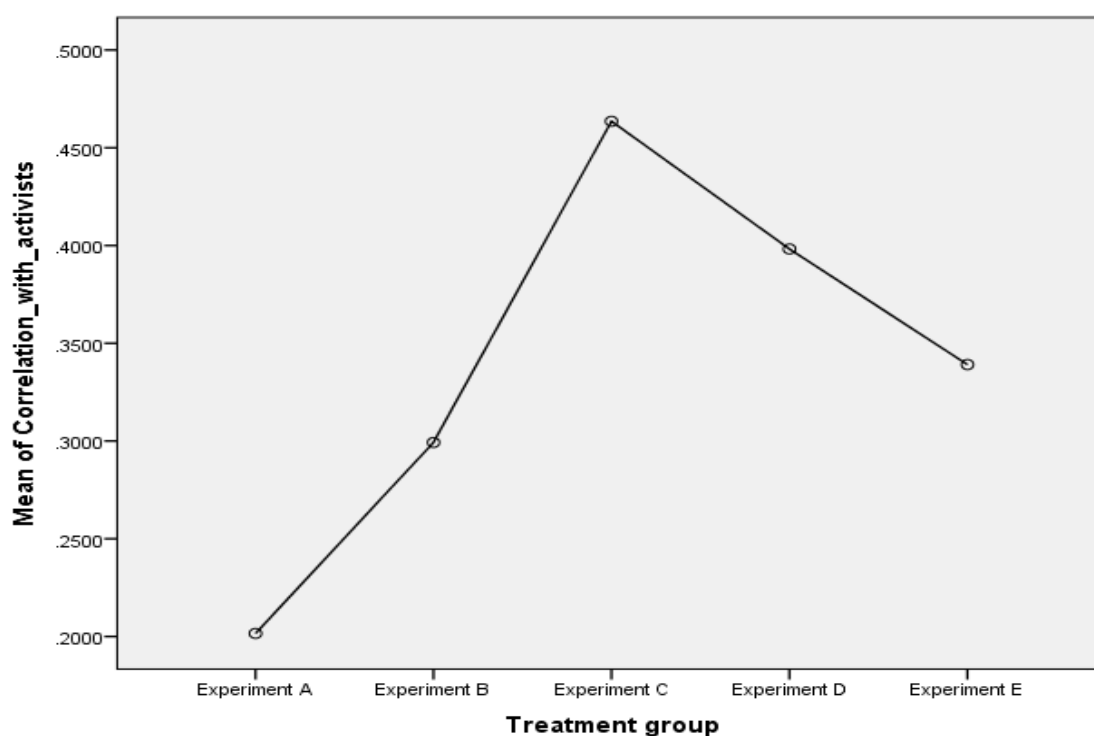
Neither histograms nor Kolmogorov-Smirnov tests ( $p = .054$ ;  $.200$ ;  $.132$ ;  $.200$ ;  $.200$ ) showed the distribution of the correlation coefficients within any of the five treatment groups (A; B; C; D; E, respectively) to deviate significantly from normal. As a Levene test also revealed no violation of the homogeneity of variances assumption ( $stat = .397$ ;  $p = .810$ ), ANOVA was employed for the global (treatment) group comparison test, with Scheffé employed for post-hoc pairwise comparisons.

Table 18, below, shows that the variability in the entire data set is also represented in each of the treatment groups: each of which include research subjects whose attitudes are closely aligned with those of the activists (strong positive correlations), as well as subjects who view the topic very differently (medium negative correlations). This variability notwithstanding, the means plot in Figure 4 shows apparent differences between the treatment groups in terms of central tendency.

TABLE 18: ATTITUDINAL PROXIMITY OF EXPERIMENTAL SUBJECTS TO ACTIVIST PERSPECTIVE

	N	Mean	Std. Dev.	Std. Error	95% C.I. for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Group A	23	.2016	.2831	.0590	.0792	.3239	-.3235	.6728
Group B	20	.2992	.2393	.0535	.1872	.4112	-.3382	.6838
Group C	19	.4636	.2346	.0538	.3505	.5766	-.2587	.8088
Group D	19	.3982	.2837	.0651	.2615	.5349	-.3529	.8456
Group E	17	.3391	.2622	.0636	.2043	.4739	-.2610	.7059
Total	98	.3343	.2728	.0276	.2796	.3889	-.3529	.8456

FIGURE 4: MEANS PLOT OF CORRELATION WITH ACTIVISTS BY TREATMENT GROUP



A cursory glance reveals that participant attitudes were most different from those of the activists in the case of Group A (who were not exposed to the animal advocacy message). Those exposed only to the message (Group B) displayed rather more similar perspectives to the activists, and the application of the three manipulations (Groups C, D, and E) is associated with even greater similarity. ANOVA was able to demonstrate the existence of significant differences between the groups at the .05 level, as shown in Table 19.

TABLE 19: ANOVA OF CORRELATION WITH ACTIVISTS BETWEEN TREATMENT GROUPS

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.825	4	.206	3.002	.022
Within Groups	6.391	93	.069		
Total	7.216	97			

Despite the pattern evident in the means plot, the post-hoc Scheffé test concluded that the only statistically significant difference ( $p = .041$ ) was that between Group A and Group C, as shown in Table 20. A superficial interpretation of this result is that the presentation of the activist communication stimulus did not have a significant effect on holistic participant attitudes, except when it was accompanied by an induced compliance manipulation in treatment Group C. In order to explore the findings more deeply, each of the treatment groups is examined in turn in the following sections, with the statistical findings discussed in the context of the various manipulations employed.

TABLE 20: POST-HOC SCHEFFÉ COMPARISONS OF CORRELATION WITH ACTIVISTS BETWEEN TREATMENT GROUPS

Treatment group (I)	Treatment group (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Experiment A	Experiment B	-.0976	.0801	.828	-.3496	.1542
	Experiment C	<b>-.2619*</b>	.0812	.041	-.5174	-.0065
	Experiment D	-.1966	.0812	.220	-.4520	.0587
	Experiment E	-.1375	.0838	.613	-.4010	.1259
Experiment B	Experiment A	.0976	.0801	.828	-.1542	.3496
	Experiment C	-.1642	.0839	.435	-.4282	.0996
	Experiment D	-.0989	.0839	.845	-.3629	.1649
	Experiment E	-.0398	.0864	.995	-.3116	.2319
Experiment C	Experiment A	<b>.2619*</b>	.0812	.041	.0065	.5174
	Experiment B	.1642	.0839	.435	-.0996	.4282
	Experiment D	.0653	.0850	.964	-.2019	.3326
	Experiment E	.1244	.0875	.732	-.1506	.3995
Experiment D	Experiment A	.1966	.0812	.220	-.0587	.4520
	Experiment B	.0989	.0839	.845	-.1649	.3629
	Experiment C	-.0653	.0850	.964	-.3326	.2019
	Experiment E	.0591	.0875	.977	-.2159	.3341
Experiment E	Experiment A	.1375	.0838	.613	-.1259	.4010
	Experiment B	.0398	.0864	.995	-.2319	.3116
	Experiment C	-.1244	.0875	.732	-.3995	.1506
	Experiment D	-.0591	.0875	.977	-.3341	.2159

\*. The mean difference is significant at the 0.05 level.

### 5.3.1 Treatment Group A

Group A was asked to complete the demographic questions and the manipulation checks pertaining to other treatment groups, and then proceeded directly to the completion of the Q-sort measuring their attitudes toward the use of animals for food in Europe, before finally completing several additional scales related to the use of animals. In contrast to all other groups, Group A was not exposed to the animal advocacy message – which is intended to be persuasive and hypothesized to induce dissonance – and therefore represents a control condition with which the other treatment groups may be compared. Given the random allocation to the various treatment groups, the perspectives expressed by Group A participants through their Q-sorts are assumed to be reflective of the attitudes present in all of the other groups prior to their exposure to the various stimuli applied.

The Q-sorts generated by Group A correlated with the activist sorts to the lowest degree of any of the treatment groups ( $\bar{x} = .202$ ,  $\sigma_{\bar{x}} = .283$ ), but also exhibited a high degree of variability. A principal components analysis of the sorts for these 23 participants – following the procedure outlined in section 5.1.2, but excluding the manual rotation – revealed four factors (1, 2, 4, 6) which meet the Kaiser-Guttman criterion, as shown in Table 21. These factors together account for 55% of the variance in the data. Three of these factors are now discussed, in turn, as they each represent an important viewpoint endorsed by study participants to various extents. Factor 6 is excluded from the discussion as no participant loaded primarily on that factor (indicated by \* in Table 21).

TABLE 21: FACTOR LOADINGS FOR PARTICIPANTS IN TREATMENT GROUP A

SORTS	Factors						
	1	2	3	4	5	6	7
1 MUA01	0.6863*	0.2252	0.0399	-0.3573	0.3248	0.3361	0.1655
2 MUA02	0.5487*	0.2351	0.0430	-0.3029	-0.1586	0.1656	0.0714
3 MUA03	0.8063*	0.1859	0.0286	-0.1465	0.0719	-0.4428	0.1715
4 MUA04	0.5954*	0.4971	0.1857	-0.0590	-0.1753	-0.0254	0.0238
5 MUA05	0.5758*	0.5269	0.2106	0.1673	-0.2597	0.0686	0.0424
6 MUA06	0.4210	0.1748	0.0253	0.5896*	-0.0635	-0.1631	0.2091
7 MUA07	0.4734*	-0.2226	0.0205	0.0234	0.0099	-0.1413	0.0228
8 KUA08	0.4982	-0.6236*	0.2369	-0.0738	-0.2797	0.0350	0.0460
9 KUA09	0.1671	-0.5210*	0.1528	-0.0445	0.0966	-0.3450	0.1032
10 KUA10	0.5984*	0.3565	0.0943	0.3204	0.0431	0.0200	0.0412
11 KUA11	0.4680*	-0.1921	0.0141	0.0133	-0.1534	-0.0510	0.0192
12 KUA12	0.6857*	0.0969	0.0095	0.3341	-0.1214	-0.0919	0.0694
13 KUA13	0.4950*	-0.3691	0.0682	-0.2873	-0.2012	0.1378	0.0728
14 KUA14	0.3969	-0.4602*	0.1140	-0.1798	-0.2107	0.2588	0.0582
15 KUA15	0.4914*	0.2675	0.0546	0.3679	-0.0502	-0.0689	0.0694
16 KUA16	0.6349*	0.1786	0.0264	-0.3690	0.2915	0.3511	0.1637
17 KUA17	0.6551*	-0.2608	0.0302	0.3535	0.3426	0.1995	0.1161
18 MUA18	0.3289	-0.5148*	0.1485	-0.1577	0.1931	-0.1500	0.0615
19 MUA19	0.3877*	0.0632	0.0049	-0.1506	-0.3028	-0.1593	0.0977
20 MUA20	0.7067*	0.2427	0.0457	-0.2879	0.2781	0.3226	0.1170
21 MUA21	0.5823*	-0.3750	0.0708	0.3620	0.2631	0.1952	0.0924
22 MUA22	0.8025*	0.1680	0.0240	-0.1761	0.0743	-0.3961	0.1500
23 MUA23	0.3956*	0.2529	0.0492	0.1241	0.0070	0.1266	0.0002
Eigenvalues	7.2068	2.6593	0.2272	1.6618	0.9367	1.1369	0.2400
% expl. Var.	31	12	1	7	4	5	1

### 5.3.1.1 Factor 1

The Q-sorts of 18 of the 23 Group A participants loaded primarily onto the first factor, which explains 31% of the data variance. The loadings of a further four participants reveal this factor as their second most endorsed viewpoint, with all the loadings of participants being positive: it is therefore discussed in detail. The defining q-sort for this viewpoint ranks the following items as those most strongly agreed with (Arrays +4 and +3, with items listed according to descending factor scores):

TABLE 22: MOST STRONGLY ENDORSED ITEMS FOR FACTOR 1

Item	Item Wording	z-score
36 C	Whether or not to eat meat is a matter of personal choice	2.25
41 B	Like humans, other species can experience pleasure and pain	2.05
9 E	These days it is socially acceptable to be vegan	1.85
13 A	Meat consumption is a choice, not a necessity	1.82
39 E	These days it is socially acceptable to be a meat eater	1.66
18 E	I regard myself as a person who cares about animals	1.58
4 A	Well prepared vegan dishes can be delicious	1.14
47 E	Most people eat meat, so it must be OK to do so	0.89
38 E	It is too much effort to seek out vegan alternatives	0.81

The following items are those most strongly disagreed with (columns -4 and -3, with items listed according to ascending factor scores):

TABLE 23: MOST STRONGLY REJECTED ITEMS FOR FACTOR 1

Item	Item Wording	z-score
30 E	Being vegan would damage my relationships with family or friends (or has)	-1.84
7 B	Humans have souls, whereas other animals do not	-1.71
26 E	If all of my family and friends gave up eating meat I would not eat meat	-1.60
25 D	Humans need to kill animals to avoid the world being overrun by animals	-1.43
44 D	When I look at meat, I often think about the living being it came from	-1.33
15 C	Ultimately, animals are here to serve our needs	-1.26
50 B	Only humans are conscious: other species are not	-1.24
2 D	I am comfortable thinking about what goes on in slaughterhouses	-1.16
31 A	Our early ancestors ate meat: it violates human destiny to give it up	-1.10

A striking pattern among the items evoking strong reactions, both positive and negative, is the prevalence of socially oriented statements. Q-sort item Set E contained ten items, including two items related to environmental considerations and the remaining eight addressing social concerns; seven of these eight items rank among the 18 most important considerations for this viewpoint. These are better explained after addressing the other items.

This viewpoint sees veganism as a genuine possibility: recognizing that meat consumption is unnecessary (13 A) and that vegan dishes can be delicious (4 A), as well as rejecting notions that humans need to kill animals (25 D) or that it is our inviolable destiny to do so (31 A). One interviewee stated that, “of course it is possible to be vegan, you just have to look at people who are already doing it – but that doesn’t mean it’s easy because you have to know so much about nutrition to do it right and I just don’t think that most people want to do it that much”.



The sentiment that veganism is too much effort is reflected in strong agreement with item (38 E): “It is too much effort to seek out vegan alternatives”. This perspective cares about animals (18 E), recognizing that they are like humans in terms of sentience (41 B), consciousness (50 B), and the presence – or absence – of a soul (7 B), and concluding that animals are not here to serve our needs (15 C). Several interviewees made reference to characteristics of their own pets as evidence for these claims about animals, while another referred to her knowledge of evolutionary processes.

The constitutive elements described so far of this dominant perspective among those not exposed to additional information (Group A) should be encouraging to vegan advocates. It appears that Austrian university students recognize the possibility of the vegan lifestyle and are sufficiently informed as to disregard various claims about the necessity of consuming animal products. Furthermore, the moral facts relating to human-animal similarities – on which ethical arguments for veganism are based – appear to be well accepted and even recognised as important. Indeed, it is this ability to recognize similarities and empathize with animals commonly used for food that makes individuals uncomfortable thinking about what goes on in slaughterhouses (2 D), as expressed in several interviews: “well, you can just imagine what it’s like for them – and I know I wouldn’t want it to happen to me”; “I couldn’t watch that – it would make me too sad. I know it has to happen and everything, but I couldn’t watch it”. However, these various cognitive beliefs and emotional tendencies, which comprise important psychological foundations for ethical veganism and are potentially motivating, do not necessarily lead to that conclusion. Rather, they are associated with dissociation in the food context, as this dominant perspective infrequently considers the living being from which their meat comes (44 D). Joy (2010) and Bratanova et al. (2011) would explain this phenomenon as resulting from the non-(directly)-motivated, but socially acquired, process of categorization. This view is supported by dismissive interview comments such as: “I don’t know why – I just don’t think of it”; “I don’t think about it – I never have”. On the other hand, some interviewees indicate that motivation and effort may play a role: “it must be terrible in there [the slaughterhouse], I mean horrific, and I’m very sensitive so I don’t like to think about it – connecting the meat and the animals – I guess I try to avoid it”. Bringing attention to the source of meat in order to connect this short-circuit in cognitive patterns represents an important project for vegan advocacy.

Still more problematic from the perspective of vegan advocacy is the nature of the societal and interpersonal issues which appear to be of greatest importance in this viewpoint. In discussing these items, it is important to reiterate that they are not merely scored highly on independent scales, but represent the *most important* cognitions for this viewpoint from a diverse set of 50 items. A laissez faire sense of non-judgement runs through these items, recognizing the value of liberty and individual expression within the context of social norms. Both meat consumption (39 E) and veganism (9 E) are considered socially acceptable, with the prevalence of meat

consumption apparently testifying to its legitimacy (47 E): “I mean, I can decide what I want about meat, but most people eat it and think that’s fine – so how can someone else tell them it’s not okay – I mean, we live in a democracy”. The importance of individualism and tolerance of other people is further demonstrated by rejection of the notions that they would follow (even all of their) family and friends to a vegetarian diet (26 E), or that changing their own diet would damage their relationships (30 E). The most strongly agreed with item, not just for this viewpoint but also for every one of the experimental groups (A,B,C,D,E), was item 36 C: “Whether or not to eat meat is a matter of personal choice”. Epitomizing the notion of personal liberty, this item appears to be considered a trump card operating on a higher level – maintaining its prominent position, as it does throughout the other treatment groups, even as ethical concerns displace other social considerations in terms of importance (as discussed in later analyses). According to one interviewee, “it’s a free world and no group should tell people what they can or can’t do – I can decide what I want to eat and you can decide what you want eat – no one should force their views on others”. However, other responses recognize some restriction to personal liberty: “as long as it’s legal people should do whatever they want to do”; “well of course there are some things that you shouldn’t do in a society even if they are legal, but I don’t think eating meat is one of them. There are so many more important things to concentrate on instead, like the well-being of people or the environment”.

To summarize this dominant viewpoint on the use of animals for food in Europe among participants who were not shown the animal advocacy message, the overall picture is that of a perspective which sees veganism as a viable alternative and is aligned with many basic tenets of ethical veganism, but which fails to connect the dots and, more importantly, which adopts an ego-centric position in relegating other concerns like ‘the animals’ subordinate to personal (human) liberty.

As factor 1 captured the first or second loadings of 22 out of the 23 sorts in Group A, discussion of the other factors is limited to consideration of the items which distinguish those viewpoints from factor 1.

#### **5.3.1.2 Factor 2**

The Q-sorts of four of the 23 Group A participants loaded primarily onto the second factor, all with negative loadings. The loadings of a further eight participants revealed this factor as their second most important viewpoint, with four loadings being negative and the others positive. Factor 2 was able to explain 12% of the variance in the Q-sorts. The items distinguishing this viewpoint from the first factor – according to differences between factor scores significant at the .05 level – are presented in Table 24, with the greatest differences at the top of the table.

TABLE 24: ITEMS DISTINGUISHING FACTOR 2 FROM FACTOR 1

Item	Item wording	Factor 1 Q array	Factor 2 Q array
26 E	If all of my family and friends gave up eating meat I would not eat meat	-4	4
12 C	God intends that humans should protect and care for other species	0	4
43 C	God intends that humans kill and eat animals	-2	3
44 D	When I look at meat, I often think about the living being it came from	-3	3
50 B	Only humans are conscious: other species are not	-3	3
14 B	Animals welfare conditions on factory farms are satisfactory	-1	2
7 B	Humans have souls, whereas other animals do not	-4	2
15 C	Ultimately, animals are here to serve our needs	-3	1
27 B	It is ethically better to hunt animals than to farm them	-2	-1
4 A	Well prepared vegan dishes can be delicious	3	-1
2 D	I am comfortable thinking about what goes on in slaughterhouses	-3	-1
39 E	These days it is socially acceptable to be a meat eater	3	-2
42 A	Humans need meat as part of a healthy diet	-1	-2
41 B	Like humans, other species can experience pleasure and pain	4	-2
18 E	I regard myself as a person who cares about animals	3	-3
16 E	If meat eating is part of a given culture, that practice should not be criticized	1	-3
20 D	I am comfortable thinking that animal lives must be ended to provide meat	0	-4
21 D	To me, there's a real difference between pets and animals we eat	1	-4
40 B	Killing animals for meat is fine as long as they have lived a good life	0	-4
36 C	Whether or not to eat meat is a matter of personal choice	4	-4

In stark contrast to factor 1, this viewpoint strongly supports conformity to the (eventual) vegetarian diet of (all) family and friends (26 E). Further demonstrating a preference for collectiveness rather than individuality, the notion of meat consumption being a matter personal choice (36 C) – of principal importance in factor 1 – is resoundingly rejected. Despite the fact that they express potentially contradictory beliefs, both items relating to God (12 C, 43 C) are strongly endorsed. Perhaps relatedly, animals are seen to a greater extent as being here to serve human needs (15 C), and recognition of similarities between humans and animals is significantly lower: whether relating to consciousness (50 B), souls (7 B), or sentience (41 B). Perhaps logically in this context, care about animals is lower (18 E), conditions on factory farms are seen as more satisfactory (14 B), and considering slaughterhouse operations is not so objectionable (2 D). It would seem to follow from this description that meat consumption is seen as less problematic

from this perspective than that of factor 1. However, this perspective does not recognise differences between animals we keep as pets and animals we eat (21 D) and is much more likely to equate meat with living beings (44 D). Accordingly, they are less comfortable thinking about the ending of animal lives for meat (20 D) regardless of whether they have lived a good life (40 B), find meat eating less socially acceptable (39 E), and believe it permissible to criticize meat eating cultures (16 E).

This viewpoint is more critical of meat consumption in general, yet the basis for this criticism appears not to rest on perceived similarities between humans and other animals – which is the basis for the various ethical arguments opposing meat consumption presented in this paper. In fact, a notion of human exceptionalism appears to render the lives and welfare of animals rather unimportant in their own right. This dichotomization of man and beast is further supported by the view that all non-human animals are somewhat equivalent in their moral standing. Belief in animal inferiority notwithstanding, this perspective nevertheless finds grounds to condemn the killing of non-human animals. It appears that this attitude towards animals, as well as the preparedness to judge others, stems from endorsement of an absolute morality rooted in religious belief. To test this interpretation, a Mann Whitney test was used to check for differences in loadings on factor 2 between those Group A participants who declared identification with a formal religion ( $n = 9$ ; incidentally all Christian) and those who didn't ( $n = 14$ ). The one-tailed test result proved significant ( $z = -1.953$ ,  $p = .026$ ), with the mean ranks being higher for religious participants (mean rank 15.44) than non-religious participants (mean rank 9.79) – in line with expectations. This result confirms the importance of religious belief in shaping the shared perspective on animal use expressed by factor 2.

It should be kept in mind that most noteworthy loadings on factor 2 were in fact negative loadings, but interpretation of the viewpoint is easier, and likely richer, if one focuses on endorsement of the position. The only one of the interviewees who loaded positively on this factor stated that she had not spent much time or effort considering the issue of using animals for food, as she believed human-related issues to be significantly more important: “human lives matter more”. This belief, she explained, forms part of her strong conviction that “man was created in the image of God” and given permission to manage (she preferred this term over “use”) other animals, which are seen as qualitatively different from humans. She considered contemporary factory farming methods to be inappropriate management techniques and strongly opposed them, but regards the consumption of animal products originating from humane farms as justified. When pressed to formulate this justification, the participant immediately referred to religious doctrine in noting that, “it doesn't say in the Bible that you can't [eat meat]”, but also recalling that “it was God's original intention that the world is vegan, and the Garden of Eden was vegan until humans sinned. After that, God killed the first animal to provide clothing to show that sin is so terrible that blood must be spilled to make up for it. After that, we were supposed to make sacrifices to atone for our sins... [ ] ... but ever since Jesus

came to us we don't have to do that anymore... [ ] ... I don't know how God feels about the killing of animals now because it doesn't say in the Bible". Asked specifically whether she believes that God is now entirely indifferent to the killing (or non-killing) of animals, even in light of His 'original intention', the interviewee deliberated carefully before determining that God "would probably prefer that it doesn't happen".

Although this individual's Q-sort differed from the typical factor 2 perspective in various ways, this account helps to capture the important role played by religious belief. Core tenets of this belief structure, which is evidently central to this respondent's identity, cannot be reconciled with ethical arguments founded on the recognition of human-animal similarity. Nevertheless, the interview also highlighted the feasibility of activists working within the confines of their audience's existing belief structure to achieve their goals. The considered response that God "would probably prefer that [killing animals] doesn't happen" is considered to be a major concession – even a revelation – and one that is potentially motivating for this devout individual. The exploration of the audience's beliefs in the Socratic style, as opposed to the imposition of one's own beliefs, can also aid in the identification of apparent inconsistencies and promote resolution in favourable ways. It was only after the interview that the researcher noticed the inconsistency between the participant's claim that "it is common knowledge that certain nutrients are missing [from the vegan diet]... but I don't know which ones" and her claim that a loving and infallible God intended us to be vegan. The question which should have emerged in the interview (but was instead sent later via email) is: "if God intended us to be vegan, would He not have also given us a physiology which enables us to be optimally healthy on that diet?" Although no response has been received, it is considered likely that this line of reasoning would mitigate the individual's concerns about nutrition.

#### **5.3.1.3 Factor 4**

The Q-sort of only one of the 23 Group A participants loaded primarily (and positively) onto the fourth factor, with the loadings of a further three participants revealing this factor as their second most endorsed viewpoint. Four participants recorded their second highest loading on this viewpoint in a negative fashion. The factor is able to explain a further 7% of the variance in the data, or around 1.6 Q-sorts. The items distinguishing this viewpoint from factor 1 – according to differences between factor scores significant at the .05 level – are presented in Table 25, below.

TABLE 25: ITEMS DISTINGUISHING FACTOR 4 FROM FACTOR 1

Item	Item wording	Factor 1 Q array	Factor 4 Q array
2 D	I am comfortable thinking about what goes on in slaughterhouses	-3	4
42 A	Humans need meat as part of a healthy diet	-1	2
26 E	If all of my family and friends gave up eating meat, so would I	-4	0
36 C	Whether or not to eat meat is a matter of personal choice	4	0
1 A	Meat consumption is linked to many health problems	1	-2

This viewpoint is best described as differing from factor 1 in as much as meat consumption is no longer seen as a choice (36 C), but rather as a requirement for human health (42 A), and certainly not problematic for human health (1 A). Perhaps due to this perceived necessity, the contemplation of slaughterhouse operations does not arouse discomfort (2 D), as it did for factor 1. However, if meat consumption is truly seen as imperative – unlike factor 1 – it is confusing that this perspective is more likely to conform to the (eventual) vegetarian diet of family and friends (26 E). Although no interviews from Group A were available to shed light on this perspective, the items with significant differences to factor 1 paint quite a consistent picture of belief in the necessity of meat consumption on health grounds and, consequently, relative ease regarding the taking of animal lives despite recognition of their similarities to humans. This finding suggests that efforts to educate individuals on the nutritional adequacy – and potential health benefits – of vegan diets represents an important ongoing project for vegan advocates. However, as revealed by an interviewee from another treatment group in commenting on their perception of the necessity of meat consumption for human health, (ethical) vegan advocates may not be the optimal spokespeople for such messages: “I’m not going to take health advice from someone like that [the video presenter]”. Despite the presenter providing citations for all of the health claims made in the video, this interviewee was critical of the presenter’s apparent lack of formal training on health issues, and wary that their “obviously biased” perspective resulted in a “one-sided argument”. The enlistment of health professionals to support the vegan message therefore appears to be a useful strategy for mitigating the concerns expressed by this viewpoint.

#### 5.3.1.4 Correlation between factor loadings and the activist viewpoint

Having established the existence of three important perspectives among Group A subjects, the question arises as to which viewpoint is best aligned with the activist viewpoint – which is assumed to be the objective of activist communications. Predictions based on the characterizations presented above are difficult, given that each of the factors shares some common ground with the activist perspective, but divergences are also evident. As such, two-tailed Spearman correlations were used to examine the relationship between loadings on each

of the factors and *correlation with activists* (according to the PQ-method between sorts correlation matrix).

TABLE 26: CORRELATIONS BETWEEN FACTOR LOADINGS AND 'CORRELATION WITH ACTIVISTS'

		Factor 1 loadings	Factor 2 loadings	Factor 4 loadings
Spearman's rho	Correlation with activists	-.273	.788**	-.154
	Correlation Coefficient			
	Sig. (2-tailed)	.208	.000	.484
N		23	23	23

Table 26 shows the only significant relationship ( $p < 0.001$ ) to be a strong positive correlation (.788) with loadings on factor 2. That is, greater endorsement of the religiously influenced perspective captured by factor 2 is closely associated with the consensus view of the 19 activists: only 3 of whom were religious.

This is a striking finding, not only in terms of the strength of the relationship, but also its direction. It seems that the conclusions drawn by both perspectives regarding the use of animals for food are closely aligned, despite that fact that the underlying premise of most arguments for ethical veganism – human-animal likeness – is resoundingly rejected by the religious perspective, which instead embraces a notion of human exceptionalism. Moreover, both show a willingness to project their own moral conclusions onto others, albeit for different reasons: the religious on the basis of moral absolutism, and the activists from a moral relativist position which sees all of the competing frameworks as coming to the same conclusion. This finding raises important questions for vegan activists addressing the religiously inclined: namely, in their quest for a vegan world, would they do better to promote their own ethical position and their perception of the moral facts on which it is based – thereby challenging the core beliefs of their audience – or to leave aside their personal views and work within their audience's existing belief structure?

No significant relationship could be detected between the loadings on factor 1 ( $p = .208$ ) or factor 4 ( $p = .484$ ) and similarity to the activist perspective, although it is worth noting that both coefficients are negative: thereby indicating that endorsement of these perspectives distances one from the activist perspective.

### 5.3.1.5 From shared perspectives to averages

As the remaining treatment groups completed their Q-sorts after exposure to various manipulations, it is not possible to isolate the effect of the manipulation beyond reference to group means. The assumption facilitated by random assignment (and supported by the homogeneous distribution of various demographic variables across the groups) is that mean

participant perspectives on the topic were also equivalent across the treatment groups at the outset of the experiment: differences between groups measured following the manipulations can therefore be attributed to those manipulations. The discussion must therefore move away from attitudinal differences between specific viewpoints within Group A and instead consider the average perspective of this group.

The first factor is the most influential in defining the Group A perspective, but as this viewpoint would likely not correspond to the personal perspective of even one individual within the group, and is likely to feature multiple logical inconsistencies as a result of aggregating divergent positions, it is not described here. Instead, in discussing the other treatment groups, the items found to differ markedly from Group A following the manipulation are considered in the context of that manipulation.

### **5.3.2 Treatment Group B**

Group B completed all of the questions answered by Group A, as well as watching the animal advocacy video prior to completing the Q-sort. This manipulation therefore recreates the experience of individuals confronted with animal rights messaging in the absence of concerted efforts to prepare them psychologically for the information they are about to receive. Based on previous studies (e.g. Loughnan et al. 2010; Bastian et al. 2012; Rothgerber 2014), it was expected that cognitive dissonance would be aroused in these subjects and motivate them to alleviate that tension through attitude change either consistent with, or contra to, the persuasive intention of the animal advocacy message.

The correlation between the holistic attitudes of Group B and the activists ( $\bar{x} = .2993$ ,  $\sigma_{\bar{x}} = .2393$ ) turned out to be higher than that for control Group A ( $\bar{x} = .2016$ ,  $\sigma_{\bar{x}} = .2831$ ), but the high degree of variation within each group precluded a significant result in the pairwise Scheffé comparisons ( $p = .828$ ), see Table 20. Nevertheless, the direction of the pro-attitudinal shift resulting from exposure to the activist messaging is promising for advocates as it indicates that educational campaigns may generate the intended effects under the right conditions. One tailed testing is not a possibility in the one-way ANOVA and post-hoc Scheffé tests performed due to the number of potential alternative hypotheses, but a two-tailed hypothesis would anyway have been postulated if a t-test had been used instead for a single comparison of these two treatment groups: in accordance with the cognitive dissonance literature, it was unclear whether exposure to the confronting animal advocacy message would have its intended persuasive effect, or whether it would invoke reactionary responses which further distance audience attitudes from the target.

Despite the fact that a holistic shift in the perspectives captured by the Q-sorts could not be verified at the .05 level, the differences in the means indicate value in examining differences in the placement of individual items between those who saw the video (Group B) and those who



did not (Group A). The non-parametric distribution of the item placements within each of these groups suggests Mann-Whitney comparisons. Given the overall tendency for Group B attitudes to be closer than Group A's to those of the activists, it would be feasible to assume that this pattern also applies to each of the item placements, and to formulate one-tailed hypotheses in that direction. However, given the ipsative nature of Q-sort data, it is also possible that items move in the counter direction merely to 'make space' for other items deemed more important by participants. Consequently, two-tailed hypotheses are applied to also capture such anomalies. Three items were discovered to vary significantly in position from the control group, as displayed in Table 27, with median values presented to capture the direction and magnitude of the shift, as they correspond to the numbering of the Q arrays (grid columns) and are therefore more informative than mean ranks.

TABLE 27: ITEMS DISTINGUISHING GROUP B FROM GROUP A

Item	Item wording	Group A median	Group B median	z-score	p value (2-tail)
16 E	If meat eating is part of a given culture, that practice should not be criticized	1	-1	-2.242	.025
44 D	When I look at meat, I often think about the living being it came from	-3	-2	-1.984	.048
47 E	Most people eat meat, so it must be OK to do so	0	-1	-1.960	.050

As a result of exposure to the activist communication, participants were significantly more accepting of criticism levelled at meat-eating cultures (16 E), and less inclined to endorse the statement that human dietary norms justify those behaviours (47 E). Each of these attitudinal shifts is in the direction of the prototypical activist perspective, and therefore conforms to the postulated hypotheses. The last item also shifts closer to the activist perspective, but this change is ambiguous as item 44 D refers to past cognitive patterns, which should not be amenable to change as a result of the manipulation. Only one interviewee from Group B commented on this item (due to its extremely low ranking in their q-sort) by saying, "When I see meat I just think food, but I guess that might be different now. Thanks for that!" Possible explanations for this unexpected shift are that other participants also responded to this item with a view to the present or the future, or that this shift represents a sub-conscious reaction to the fact that they have neglected in the past to associate their food with its once living source. The latter explanation suggests the generation of a motivated state – potentially arising through cognitive dissonance – but this suspicion cannot be confirmed. In fact, this selection of items and their respective movements provides no indication of the self-preserving defensive reactions recorded by other researchers who have invoked dissonance inducing conditions for their meat-eating experimental subjects. That does not mean, however, that cognitive dissonance has not played a role in shaping the attitudes expressed by participants in the current treatment group. It could well be that this phenomenon has a moderating effect on the persuasiveness of the

animal advocacy message: it is the function of the other manipulations to determine if this is the case.

### **5.3.3 Treatment Group C**

Treatment Group C experienced the same experimental procedure as Group B, with the addition of a further manipulation derived from the conventional cognitive dissonance model (Festinger 1957). After completing the demographic questions and some additional scales, and immediately before watching the video, Group C participants were summoned individually by the researcher to respond verbally to a written question asking whether they would prefer to live in a society with strict or loose animal welfare laws, and why. This manipulation can be conceptualized in various ways. Festinger (1957) would describe it as an induced compliance manipulation, which makes a modest request of an individual in order that they will later be more willing to make greater concessions. Such interventions are better recognised, at least within marketing disciplines, as applying the foot-in-the-door approach. The logic behind this mechanism is that individuals do not carry with them properly expounded attitudes towards most attitude objects, but rather form summary assessments when required to based on the information readily available to them (i.e. the “attitudes-as-temporary-constructs” rather than the “file-draw” approach: see, e.g., Böhner & Wänke 2002). In the present context, this implies that the study participants enter the experimental setting without well-articulated attitudes towards the consumption of animal products, which they therefore need to formulate when presented with the Q-sort. As latent cognitive discrepancies have been established to exist within meat-eaters, it is unclear how the resulting dissonance will be resolved when these inconsistencies are made simultaneous salient: either through attitude change consistent with, or contra to, the intention of the activist communications. The role of the induced compliance manipulation is to equip the individual with a pro-attitudinal cognition which is readily available to them in order to tip the balance in the desired direction. That is, in searching their cognitions for information pertaining to the use of animals, individuals reflect on their just completed behaviour in order to learn that they are the kind of person who acts that way – which causes future behaviours to follow suit. Importantly, the pro-attitudinal statement is chosen voluntarily by participants from the options presented and presumably reflects existing beliefs. As the induced behaviour in this manipulation is a statement broadcast to another individual – and one which may be seen as controverting existing behaviours according to the information presented in the video – this manipulation may also be considered to set up a hypocrisy condition (Stone et al. 1994).

The manipulation was considered successful for all participants who made a pro-animal welfare statement to the researcher in response to the prompt. All of the 19 Group C participants were judged to have complied with the manipulation: 18 by stating that they would prefer to live in a country with rather stricter animal welfare laws because, for example, “I don’t really see a

difference between people and animals, so I think they all deserve protection”; “animals have rights too”; “I wouldn’t want to live somewhere where animals are treated cruelly”. Of these 18, one participant was only narrowly considered to have complied, as their answer indicated a preference for stricter laws, but only on the grounds that “people who treat animals better are also likely to treat other humans better”: thus the expressed concern for animal welfare was actually rooted in anthropocentrism. The final participant stated that they would prefer to live in a country with rather looser laws regarding animal welfare because looser regulation implies that stricter laws are unnecessary due to the fact that “people are already behaving in that [animal friendly] way”. As a pro-animal sentiment was determined to underlie this convoluted answer, the manipulation was also deemed successful for this participant. The 100% compliance rate was no surprise as the vignette had been intentionally worded as a simple proposition which sought only a modest concession from respondents; these characteristics are essential for the successful application of this strategy in authentic animal advocacy scenarios. It should be highlighted that the vast majority of participants from the other treatment groups would also be expected to give similar answers, if asked, based on their existing beliefs – the essential difference in Group C is that this privately held and easily adaptable belief is converted into a publicly witnessed and therefore irrevocable behaviour.

In terms of the summary effect of this manipulation on the dependent variable, post-hoc Scheffé comparisons found the correlations between the q-sorts of this group and the activists ( $\bar{x} = .4636$ ,  $\sigma_{\bar{x}} = .2346$ ) to be significantly higher ( $p = .041$ ) than those for control Group A ( $\bar{x} = .2016$ ,  $\sigma_{\bar{x}} = .2831$ ), see Table 20. That is, the combined effect of the induced compliance manipulation and the video stimulus was shown to shift the holistic attitudes of participants towards those of the activists: this proved to be the only manipulation which achieved this outcome. The significant outcome appears attributable primarily to the large effect size (a mean increase in correlation by .2620), but is also assisted by a reduction in variance across the respondents. Despite correlations with activist Q-sorts being (narrowly) more homogeneous for this group than any other treatment group according to the standard deviation (see Table 18), Group C subjects nevertheless display considerable diversity in terms of their endorsement of the activist perspective, with correlation coefficients ranging from a minimum of  $-.2587$  to a maximum of  $.8088$  – not untypical of the other treatment groups.

These findings allow for some comment on the role played by various cognitive dissonance models: namely they provide empirical support for the conventional cognitive dissonance model (Festinger 1957), as well as the action-based model (Harmon-Jones et al. 2009), which can be considered an extension of the conventional model and which cannot be distinguished through this manipulation. According to these models, dissonance is assumed to arise from any cognitive discrepancy, or from cognitive discrepancies which may inhibit effective action, respectively. As the induced compliance manipulation does nothing to mitigate the latent cognitive discrepancies within meat-eaters, it cannot conceivably influence the degree of dissonance

aroused according to theory. Rather, the function of the intervention is to influence the way in which the individual seeks to resolve the dissonance they experience by bringing pro-attitudinal sentiments to top-of-mind, and fortifying these beliefs by translating them into behaviours. As all of the competing dissonance models considered in this research contend that individuals will seek to resolve dissonant states by adapting the cognition most amenable to change, the results associated with this manipulation do not exclude the applicability of some competing models. The more targeted manipulations in treatment Groups D and E are therefore required to further distinguish between the various models. However, the pro-animal attitude change measured rather contradicts the predictions made by many of these models.

The new-look model (Cooper & Fazio 1984), for example, which was not explicitly addressed by the experimental component of the present study for the reasons outlined in section 2.8.2, posits that dissonance is aroused by the perception of adverse consequences arising from one's actions. The effectiveness of the induced compliance manipulation and the fact that it does nothing to mitigate the adverse consequences of meat consumption, appears to contest the claims made by the new-look model, and to justify its exclusion from the present experimental design.

Analysis of the positional differences of individual Q-sort items between Group C and control Group A participants helps to clarify the nature of this attitudinal shift. Again, despite one-tailed hypotheses being justified by the general tendency revealed by ANOVA and Scheffé tests for Group C subjects to exhibit closer alignment with the activists, two-tailed hypotheses are conservatively applied in the Mann-Whitney U tests. The 11 items discovered to vary significantly in position between Groups A and C are displayed in Table 28.

All three of the items found to differ between treatment groups A and B were also found to be among the 11 items which differed between groups A and C. For all but two of these items (14 B; 19 B), the direction of the change was towards the activist perspective, as hypothesized. As discussed later, these two items also shifted in a pro-animal direction – just more pro-animal than the activists.

TABLE 28: ITEMS DISTINGUISHING GROUP C FROM GROUP A

Item	Item wording	Group A median	Group C median	z-score	p value (2-tail)
14 B	Animals welfare conditions on factory farms are satisfactory	-1	-2	-2.300	.021
16 E	If meat eating is part of a given culture, that practice should not be criticized	1	0	-2.205	.027
19 B	Current EU laws ensure the ethical treatment of all animals	0	-1	-3.390	.001
20 D	I am comfortable thinking that animal lives must be ended to provide meat	0	-2	-2.574	.010
22 B	Animals suffer when being raised and killed for meat	0	2	-2.343	.019
26 E	If all of my family and friends gave up eating meat I would not eat meat	-3	-1	-2.518	.012
32 C	Human superiority means a responsibility to protect other species, not a right to kill them	1	1	-2.052	.040
35 B	Like humans, other species can experience pleasure and pain	-1	2	-2.237	.025
44 D	When I look at meat, I often think about the living being it came from	-3	0	-2.894	.004
46 E	Diets including meat require much more land and water to produce than vegan diets	0	2	-2.027	.043
47 E	Most people eat meat, so it must be OK to do so	0	-1	-2.380	.017

As a result of the induced compliance manipulation and exposure to the video, participants attributed significantly more importance to the sentience of non-human animals (35 B) and the subsequent suffering of animals raised and killed for meat (22 B). In the words of one interviewee, “what [the video presenter] said about how those animals have social lives like ours made me realize what they go through – sort of like seeing it through their eyes – I guess I’ve never really seen it that way before”. This statement discloses a revelation for this participant – the recognition that animals raised for food are individual beings with individual desires – thereby suggesting an alternative interpretation for the elevated ranking of item 44 D in this group. Accordingly, participants indicated they were less comfortable contemplating the premature ending of animal lives (20 D): “when you think about it, of course they don’t want to die. I mean, I don’t know if they can really think about it, but if they had a choice I’m pretty sure they wouldn’t choose that. It’s just natural to choose life”. The specific responses to these items appear not to be based on the acquisition of new information through the video presentation, but rather from the direction of the participants’ attention to existing cognitions and the illumination of alternative perspectives. In contrast, the movement of other items appears best explained by the educational impact of the video. Animal welfare conditions on factory farms were seen as less satisfactory (14 B) and the EU laws governing them as less able to ensure the ethical treatment of animals (19 B). Referring to the images presented in the video, one interviewee declared that, “those conditions are barbaric, just horrific – I had no idea. I can’t believe that is allowed to happen in Europe – it’s wrong – it should be banned”. Consistent with

other changes, Group C recognised greater human responsibility to protect animals (32 C) and were more accepting of criticism levelled at meat-eating cultures (16 E). They reject dietary norms (47 E) as justifications for those behaviours, and would be more open to changing their diet in response to changes made by family and friends (26 E). In addition, these participants showed greater endorsement for an environmental statement relating to the enlarged ecological footprint of non-vegan diets (46 E), as raised in the activist communication. Several interviewees stated that this information was either entirely new to them, or that they had not previously appreciated the magnitude of the problem.

Despite generally attributing lesser importance to the social considerations which dominated the extremes of the control (Group A) Q-sorts, Group C nevertheless retained item 36 C – “whether or not to eat meat is a matter of personal choice” – as the most strongly endorsed statement ( $\bar{x} = 2.95$ ,  $\sigma_{\bar{x}} = 1.471$ ). Similar to the previously quoted Group A participants, some Group C participants seem to embrace this item as an expression of moral pluralism: “I think everyone should be able to decide for themselves (sic) what they think is the right or wrong thing to eat – I don’t think that there is just one right answer that applies to everyone”. This attitude is not necessarily inconsistent with the activist position, in as much as it implies that individual choices should be based on consideration of the pertinent moral facts as they are perceived. On the other hand, some participants offered an alternative explanation for the importance of this item: “I do think that vegan[ism] is better than eating meat – like, more ethical for the environment and animals – and I respect people who choose that, but I am still going to eat meat. That’s my choice and other people should respect that”. Here individual liberty is not presented as the ultimate expression of a considered ethical position, but rather as an unassailable imperative operating independently of an individual’s ethical deliberations. The right to choose apparently extends to the choice of whether to behave in accordance with one’s own ethical judgements, and therefore acts as a ‘trump card’ trouncing all other considerations. A challenge for activists is therefore promoting the reintegration of notions of individual liberty back into a consistent ethical framework. One avenue may be using human-human examples to highlight infringement of the rights of others as a natural and desirable limit to personal autonomy, and then extending this discussion to include non-human animals. Perhaps more concerning is the finding, at least for this particular participant, that acting ethically appears less important than other (undisclosed) considerations. This finding raises questions regarding the assumption that individuals possess an innate drive to perceive themselves as ethical agents, on which attempts to influence the behaviour of others through ethical reasoning are premised: ethical arguments, even if accepted by the audience, are unlikely to be effective in shifting the behaviours of individuals who do not care much for ethical behaviour. In terms of the cognitive dissonance literature, this disposition rather suggests support for Aronson’s (1969) self-consistency model in preference to Steele’s (1988) self-affirmation model. These models are examined in treatment Group D.

### 5.3.4 Treatment Group D

The induced compliance manipulation in Group C was replaced with a self-affirmation intervention in treatment Group D, while the rest of the experimental procedure remained the same. Subjects were presented with a written instruction to:

“Spend three minutes thinking about an occasion when you went out of your way to help another person. Who did you help, and how did you help them? How do you think it made the other person feel, and how did you feel about yourself?”

The intention behind this manipulation was to direct participants’ attention to positive aspects of their identity unrelated to the topic of the study. According to self-affirmation theory, such interventions broaden the individual’s perspective and avail them of the resources necessary to maintain a positive global self-image, even as they are later exposed to information constituting a potential threat to this global image. Unlike induced compliance manipulations, which seek to influence the direction of dissonance resolution but do not (and theoretically cannot) affect the magnitude of the dissonance experienced, self-affirmation interventions have the goal of minimizing dissonance in order to increase receptiveness to potentially valuable information by reducing the drive to react self-defensively.

The success of the intervention was examined with a manipulation check completed by all experimental subjects: Groups A and B immediately following the demographics; Groups C, D, and E immediately following their respective manipulations). Participants rated how they currently felt about themselves on a nine-point scale labelled “I feel very bad about myself” and “I feel very good about myself” at the two extremes. Given the non-parametric distribution of responses within several groups, a Kruskal Wallis test was used to establish the existence of differences in means between the treatment groups ( $\chi^2 15.872$ ;  $df 4$ ;  $p = .003$ ). Mann-Whitney U tests with Bonferroni correction were subsequently conducted for the pair-wise comparisons between the five groups. One-tailed hypotheses postulated the success of the manipulation in comparisons involving Group D, with two-tailed testing used for the other comparisons. Even after adjusting  $\alpha$  to accommodate all ten possible pairwise comparisons ( $.05/10$ ), rather than just the four involving the treatment group of interest, Group D was found to differ significantly from groups A, B, and E – as indicated by \* in Table 29 – and no other groups were found to differ significantly. The median values reveal that the manipulation was successful in boosting the holistic self-image of Group D participants, which, according to self-affirmation theory, should have reduced the degree to which the confronting information presented in the video was perceived as a threat. Median values obscure the (non-significant) difference in self-image between Group D and Group C, but the mean ranks revealed that this was also higher in Group D (22.76) than Group C (16.24). The somewhat elevated self-image ratings in Group C indicate that the induced compliance manipulation may also have positively affected the self-perception of those participants to some degree.

TABLE 29: MANN-WHITNEY TESTS OF MANIPULATION CHECK D ACROSS TREATMENT GROUPS

		Group A	Group B	Group C	Group E
<b>Group D</b> Median = 8	z-score	-3.328	-3.096	-1.905	-2.862
	P (1-tailed)	.001*	.002*	.057	.004*
<b>Group A</b> Median = 7	z-score		-.368	-1.597	-.215
	P (2-tailed)		.713	.110	.830
<b>Group B</b> Median = 7	z-score			-1.656	-.127
	P (2-tailed)			.098	.916
<b>Group C</b> Median = 8	z-score				-1.491
	P (2-tailed)				.136
<b>Group E</b> Median = 7	z-score				
	P (2-tailed)				

\* denotes significance difference at the .005 level

Despite the effect of the self-affirmation manipulation on participants' self-image, this intervention could not be shown to significantly increase their receptiveness to the vegan advocacy message. Post-hoc Scheffé comparisons could not establish that the correlations between the Q-sorts of this group and the activists ( $\bar{x} = .3982$ ,  $\sigma_{\bar{x}} = .2837$ ) were significantly higher ( $p = .220$ ) than those for control Group A ( $\bar{x} = .2016$ ,  $\sigma_{\bar{x}} = .2831$ ), see Table 20. That is, the combined effect of the self-affirmation manipulation and video stimulus could not be shown to shift the holistic attitudes of participants towards those of the activists.

Nevertheless, the mean correlation with the activists was higher for Group D than that for all other groups except for Group C. This outcome allows for some comment on the role played by various cognitive dissonance models: specifically the contradictory predictions made by the self-affirmation and self-consistency models. Whereas self-affirmation theory suggests that interventions of the sort used in this manipulation will reduce dissonance by bolstering the self-image (Steele 1988), self-consistency theory (Aronson 1969) suggests that dissonance should intensify due to the increased disparity between their (elevated) self-perception and the cognitions promoted by the video that their past behaviours have fallen short of this level. According to Cohen and Sherman's (2014) claim that elevated cognitive dissonance levels act as a barrier to effective learning, the higher mean correlation with the activist perspective in this group than the control group rather endorses the self-affirmation model in preference to the self-consistency model. However, as this difference was not statistically significant, neither of the mechanisms described by these models can be verified as playing a significant role in arousal of dissonance in meat eaters.

Analysis of the movement of individual Q-sort items compared with control Group A revealed significant differences in the placement of nine items, which are displayed in Table 30.



TABLE 30: ITEMS DISTINGUISHING GROUP D FROM GROUP A

Item	Item wording	Group A median	Group D median	z-score	p value (2-tail)
16 E	If meat eating is part of a given culture, that practice should not be criticized	1	-1	-2.761	.006
19 B	Current EU laws ensure the ethical treatment of all animals	0	-1	-2.195	.028
20 D	I am comfortable thinking that animal lives must be ended to provide meat	0	-1	-2.492	.013
22 B	Animals suffer when being raised and killed for meat	0	3	-2.503	.012
23 C	Whether or not to eat meat is an ethical question	-1	0	-2.030	.042
26 E	If all of my family and friends gave up eating meat I would not eat meat	-3	-1	-2.655	.008
30 E	Being vegan would damage my relationships with family or friends (or has done)	-3	-1	-2.231	.026
40 B	Killing animals for meat is fine as long as they have lived a good life	0	-1	-2.051	.040
44 D	When I look at meat, I often think about the living being it came from	-3	-1	-2.485	.013

A striking pattern is the correspondence to the results for Group C: six of these nine items being among those determined to shift significantly in position for that treatment group. Again, all of the shifts were in the hypothesized direction of closer proximity to the activist perspective, except for the pro-animal shift of 19 B. This pattern is further investigated in the forthcoming section on the impact of the animal advocacy communication (section 5.3.6). The discussion here is therefore limited to those three items which differed significantly to the control group for this treatment group, but not for Group C.

In line with the general pro-animal shift in attitudes detected in Group C, this group were also more likely to see the issue of whether or not to eat meat as an ethical question (23 C) than the control group, and less likely to see good lives for animals as legitimising their killing (40 B). While most interviewees placed the latter item towards the centre of the Q-sort, one participant who felt particularly strongly in opposing this proposition made the interesting point that, “if you think about people, you’d probably see it the other way around – of course they’re both terrible, but I would say that it is kind of worse to kill a happy person who has a good life than someone who is miserable anyway”. However, while many of the attitudes towards animals expressed by Group D were closer to the activist position than the control group, these participants were also more likely to indicate that becoming vegan would damage their relationships with family and friends (30 E). While several interviewees expressed this issue as a matter of (in)convenience – “I live at home with my parents and my mum would be so pissed if she had to make a different meal for me every night – I don’t think she would do it”; “it would just be so hard when you want to go out with friends – they would be annoyed if you always wanted to go to a vegan place, and after a while they would just go somewhere without you” – another indicated that deeper

interpersonal tensions could cause problems: “my grandmother would be so offended if I didn’t eat the food she cooks when we go around there – she’d probably think that I’m judging her and her cooking – actually, my whole family would probably think that”. Notably, this shift was in the direction of the activists – most of whom have firsthand experience of the social ramifications of turning vegan – who did not disagree with the statement, but who allocated it a lesser importance.

To summarise treatment Group D, despite the manipulation having the desired effect, no holistic change in participant attitudes could be detected from those of the control group. This finding speaks against the relevance of either the self-affirmation or self-consistency models as explanations for the arousal of cognitive dissonance in meat-eaters. In corroboration, a Spearman correlation between participant self-image ratings and *correlation with activists* across all subjects exposed to the video (Groups B, C, D, & E) was highly non-significant ( $p = .701$ ) and indicated a very low effect size ( $r_s = -.045$ ). Nevertheless, closer examination of the Q-sorts indicates a tendency for participants to respond to certain individual items in the pro-animal manner promoted by the activist communication.

### **5.3.5 Treatment Group E**

The final manipulation was designed to test the applicability of the self-standards model, which postulates that dissonance results from disparities revealed by the evaluation of one’s behaviours against a certain standard, and that the specific reference standard employed may therefore influence the degree of dissonance aroused (Stone & Cooper 2001). The manipulation utilized in treatment Group E had the intention of promoting participants’ use of personal standards in their evaluations, rather than the normative standards which tend to be employed by default (Cooper 2007). Given the pervasiveness of meat consumption, individuals’ comparisons of their own dietary behaviours with social norms would seem to reveal little inconsistency and, consequently, preclude the arousal of dissonance. The use of personal standards, on the other hand, may reveal to individuals a latent inconsistency between their behaviours and other beliefs they deem important: thereby generating a motivated dissonant state. Self-standards theory therefore suggests that promoting the use of personal standards within this treatment group should impact the degree of attitude change resulting from exposure to the activist communications.

In order to promote the application of personal standards, Group E participants were presented a written instruction to:

“Spend 3 minutes thinking about something which is commonly accepted by society, but which you personally think is wrong. Alternatively, consider something which society condemns, but which you personally find acceptable. Consider why you

consider it to be either wrong or OK, and how it could be that society considers this thing differently to you?"

The manipulation check asked all experimental subjects to complete a single nine-point scale labelled "My views NEVER match those of the general society" and "My views ALWAYS match those of the general society" at the left and right extremes, respectively. Lower scores on this scale therefore indicate a (current) disposition for applying personal standards. A Kruskal Wallis test established the existence of significant differences in means between the treatment groups (Chi<sup>2</sup> 24.668; df 4;  $p < .001$ ). Mann-Whitney U tests with Bonferroni correction were subsequently conducted for the pair-wise comparisons between the five groups, producing the results shown in Table 31. One-tailed hypotheses postulated the success of the manipulation in comparisons involving Group E, with two-tailed testing used for the other comparisons. Even after adjusting alpha to accommodate all ten possible pairwise comparisons ( $.05/10$ ), rather than just the four comparisons involving the treatment group of interest, Group E was found to differ significantly from groups A, B, and D – as indicated by \* in Table 31– in the intended direction. The narrowly non-significant ( $p = .011 > .005$ ) difference between Group E and Group C would also have been significant if only the four essential pairwise comparisons involving Group E had been conducted ( $p = .011 < .0125$ ). No other pairwise comparisons were found to reveal significant differences. The median values reveal that the manipulation was successful promoting the use of personal standards among Group E participants, which, according to self-standards theory, should influence the degree of dissonance experienced by participants.

TABLE 31: MANN-WHITNEY TESTS OF MANIPULATION CHECK E ACROSS TREATMENT GROUPS

		Group A	Group B	Group C	Group D
<b>Group E</b> Median = 4	z-score	-4.377	-3.508	-2.304	-3.963
	P (1-tailed)	.000*	.000*	.011	.000*
<b>Group A</b> Median = 6	z-score		-0.857	-1.995	-0.065
	P (2-tailed)		.391	.046	.948
<b>Group B</b> Median = 5	z-score			-0.253	-0.854
	P (2-tailed)			.270	.411
<b>Group C</b> Median = 5	z-score				-1.938
	P (2-tailed)				.061
<b>Group D</b> Median = 6	z-score				
	P (2-tailed)				

\* denotes significance difference at the .005 level

In spite of the effective manipulation, this intervention could not be shown to significantly increase the receptiveness of Group E participants to the vegan advocacy message. Post-hoc Scheffé comparisons could not establish that the correlations between the Q-sorts of this group and the activists ( $\bar{x} = .3391$ ,  $\sigma_{\bar{x}} = .2622$ ) were significantly different ( $p = .613$ ) than those for control Group A ( $\bar{x} = .2016$ ,  $\sigma_{\bar{x}} = .2831$ ), see Table 20. That is, the combined effect of the self-standards manipulation and the video stimulus could not be shown to shift the holistic attitudes

of participants towards those of the activists. Furthermore, a Spearman correlation between participant dispositions to employ self-standards and *correlation with activists* across all subjects exposed to the video (Groups B, C, D, & E) was non-significant ( $p = .417$ ) and indicated a very low effect size ( $r_s = -.095$ ). These findings refute the applicability of the self-standards model in explaining the arousal of cognitive dissonance in meat-eaters.

Two-tailed Mann-Whitney U tests were also unable to establish significant differences in the positions of any individual Q-sort items between Group E and control Group A. The self-standards model is therefore considered to poorly explain cognitive dissonance in meat-eaters.

### **5.3.6 Effect of exposure to animal advocacy communications**

Group A was not exposed to the animal advocacy message, but all other treatment groups were. Despite the differences in *correlation with activists* not proving statistically significant in most of the pairwise comparisons with Group A, it is striking that all four groups (B, C, D, E) that watched the video had mean correlations with the activists which were greater than Group A. This pattern warrants closer inspection of the movement of individual Q-sort items in order to detect any systematic changes which may be attributed to the video.

Table 32 contains all of the Q-sort items which were found to differ significantly in position between control Group A and at least one of the other treatment groups according to the Mann-Whitney U tests described above. The median values for these items are given for each of the treatment groups, as well as for the animal rights activists and for a composite group comprising participants from treatment groups {B, D, E}. The non-alphabetic ordering of the treatment groups (columns) and the non-sequential ordering of the q-sort items (rows) was done intentionally to reveal a consistent pattern across the responses. As the median values represent Q-grid column positions, one must focus exclusively on the magnitude and direction of the differences, but should not interpret a change of sign as meaningful. Items which differed significantly from control Group A for a given treatment group are presented in boldface and with \* or \*\*, indicating significance at .05 or .01, respectively.

TABLE 32: SUMMARY OF ITEM MOVEMENTS BY TREATMENT GROUP

Item	Item wording	Median score by treatment/participant group						
		A	B	D	E	B,C,D	C	Act.
14 B	Animals welfare conditions on factory farms are satisfactory	-1	-.5	-1	0	0	-2*	0
22 B	Animals suffer when being raised and killed for meat	0	0	3*	1	1	2*	4
23 C	Whether or not to eat meat is an ethical question	-1	-.5	0*	1	0	0	2
26 E	If all of my family and friends gave up eating meat I would not eat meat	-3	-1.5	-1**	-2	-1*	-1*	1
30 E	Being vegan would damage my relationships with family or friends	-3	-3	-1*	-2	-2	-2	0
35 B	Like humans, other species can experience pleasure and pain	-1	-1	1	0	0	2*	3
44 D	When I look at meat, I often think about the living being it came from	-3	-2*	-1*	-2	-1*	0**	1
46 E	Diets incl. meat require more land and water to produce than vegan diets	0	1.5	2	1	1	2*	3
16 E	If meat eating is part of a given culture, that practice should not be criticized	1	-1*	-1**	0	0**	0*	-1
20 D	I am comfortable thinking that animal lives must be ended to provide meat	0	-.5	-1*	-1	-1*	-2**	-3
40 B	Killing animals for meat is fine as long as they have lived a good life	0	0	-1*	0	0	0	-1
47 E	Most people eat meat, so it must be OK to do so	0	-1*	-1	-1	-1*	-1*	-4
19 B	Current EU laws ensure the ethical treatment of all animals	0	0	-1*	0	0	-1**	0
32 C	Human superiority means a responsibility to protect, not a right to kill	1	.5	1	0	1	1*	1

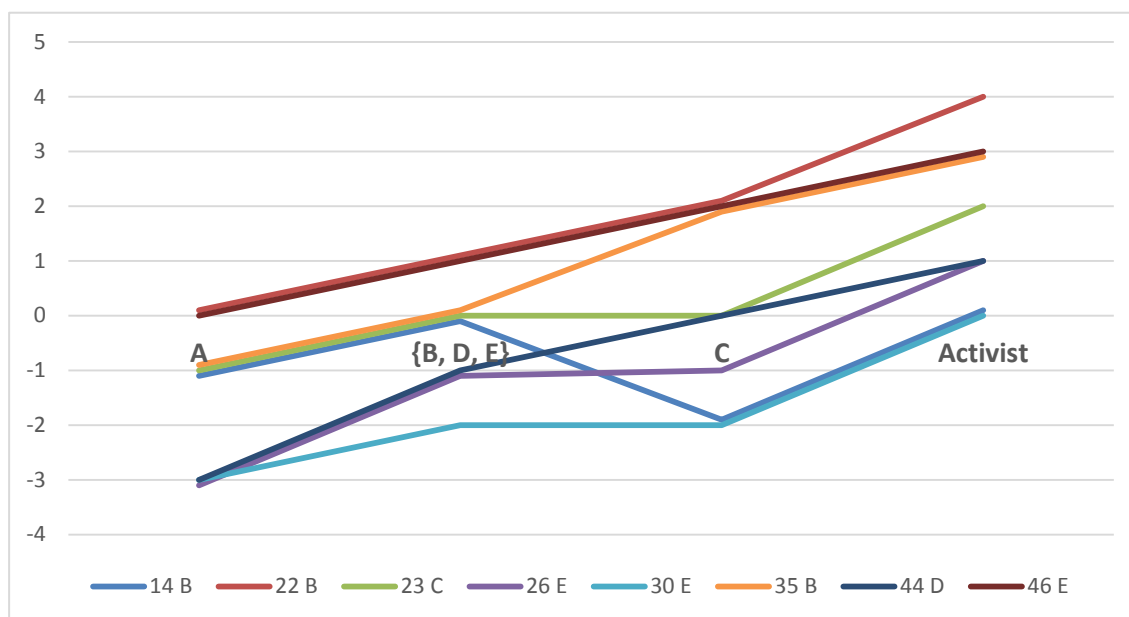
\*denotes significance difference to Group A at the (2-tailed) .05 level;

\*\* denotes significance at the .01 level

The first striking pattern is that almost all (11/14) items that differed in position for any group also differed in position for Group C. This corroborates the greater degree of attitude change in Group C than the other treatment groups, as revealed by the ANOVA which considered the holistic perspectives depicted by participants' Q-sorts. The goal here, however, is to consider both the magnitude and the direction of the changes resulting from exposure to the activist communication.

The first set of items (rows) in Table 32 are those which the activists scored higher than control Group A. That is, those items whose rankings should increase if the video had the intended persuasive impact. Figure 5 provides a graphical representation of the median placement of these items, from control Group A (leftmost) to the activists (rightmost), with the composite {B, D, E} group and Group C in between.

FIGURE 5: ITEMS PROMOTED FOR CLOSER PROXIMITY WITH THE ACTIVIST PERSPECTIVE, BY TREATMENT GROUP

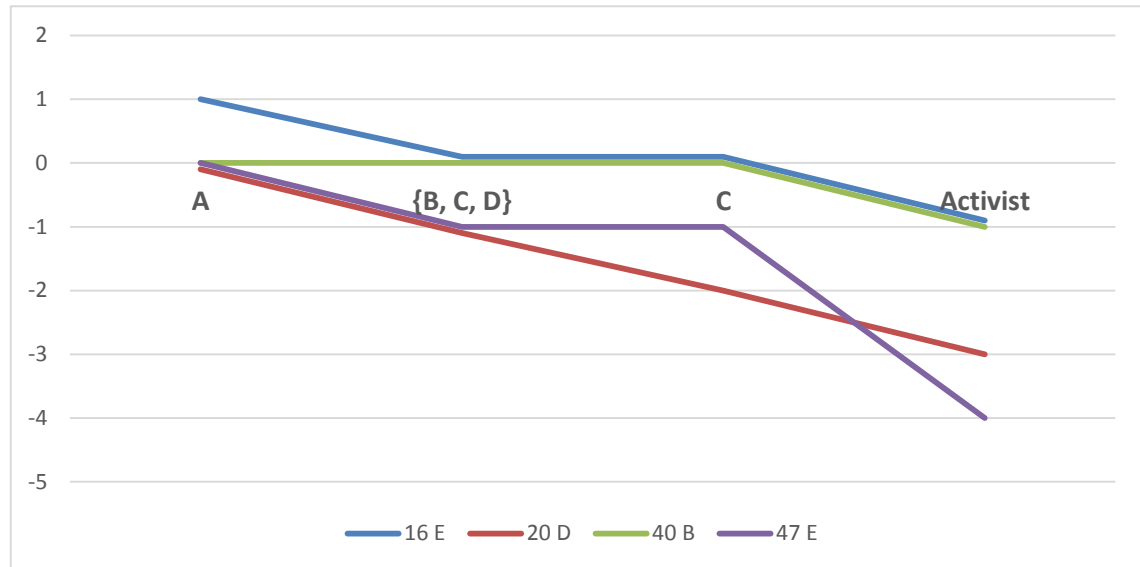


The general trend depicted in Figure 5 is for attitudes towards these items to shift closer to those of the activists as a result of exposure to the video (groups {B, D, E} and C), and for attitudes in Group C to be even closer to the activists than those in the other treatment groups. This pattern reveals that the activist message had the intended persuasive impact, but that the persuasive impact was somehow dampened across treatment groups B, D, and E. A parsimonious explanation for this finding is that cognitive dissonance (generally) acted on all experimental subjects exposed to the video, but that the manipulation employed in Group C promoted the resolution of this dissonant state in a pro-animal direction.

The only exception to this rule was item 14 B, which the activists ranked higher than the control group, but which Group C scored significantly lower. The wording of this item – “Animals welfare conditions on factory farms are satisfactory” – suggests that a pro-animal stance would be best expressed by disagreement with this item, as conveyed most strongly by Group C participants. The question is therefore not why Group C disagreed so strongly with this item, but why the activists did not. One explanation could be that animal rights proponents, having deemed any unnecessary taking of lives as unjustified, are somewhat indifferent to the exact nature of the production processes involved. In contrast, the general public tends to focus more on animal welfare (which they typically support) than on animals’ right to life (which they often don’t recognize). In this context, it is understandable that Group C participants reacted more negatively towards this item than did the activists. Other possible explanations notwithstanding, the greater importance attributed to this item by Group C participants is entirely consistent with the pro-animal attitudinal shift revealed by the other items.

The second set of items in Table 32 are those which the activists scored lower than control Group A. That is, those items whose rankings should decrease within the other treatment groups if the video had the intended persuasive impact. Figure 6 displays the trend for these item across the various treatment groups.

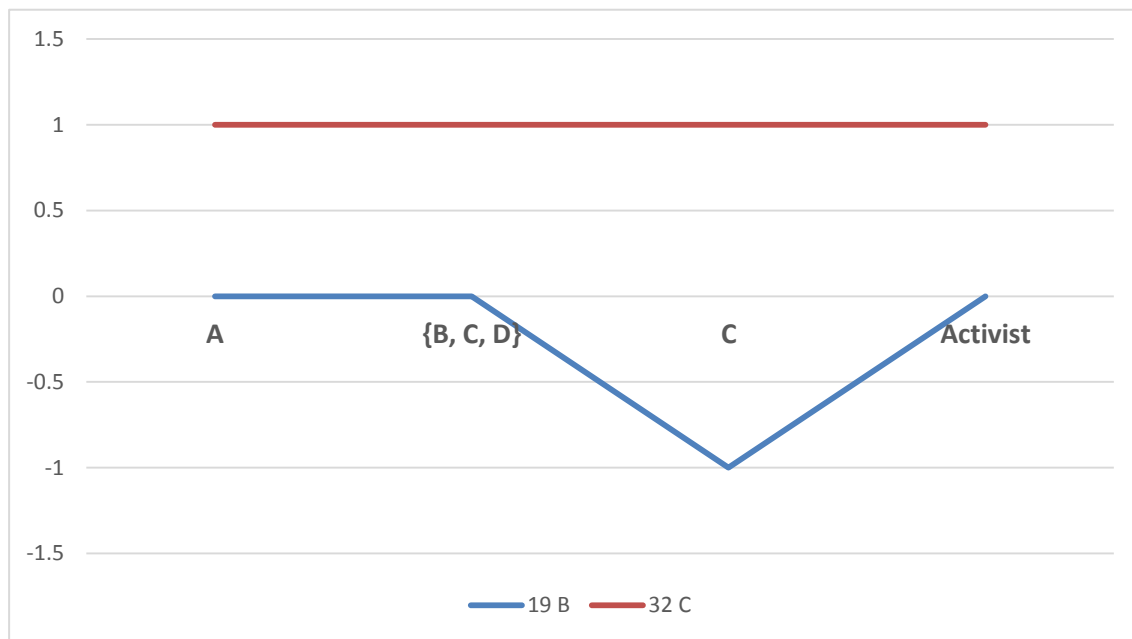
FIGURE 6: ITEMS DEMOTED FOR CLOSER PROXIMITY WITH THE ACTIVIST PERSPECTIVE, BY TREATMENT GROUP



The same pattern can be observed for this set of items: namely that exposure to the video shifted attitudes closer to activist position, with Group C attitudes moving to a greater extent than those of the other treatment groups. While the use of median values as a location parameter (due to the often non-parametric distributions of item placements within groups) in some cases conceals differences between Group C and the composite {B, D, E} group, it should be kept in mind that Group C typically differed significantly from the control group whereas the other treatment groups did not (see Table 32).

Finally, the two items at the bottom of Table 32 are those which were scored equally by the activists and control Group A, but which were found to vary significantly in position within at least one other treatment group. These are shown in Figure 7. Notably, the variation across the groups is only minimal, but in both cases the significant differences recorded for Group C represent a stronger pro-animal position than that of the control group: specifically, greater recognition of human responsibility to protect animals (32 C), and rejection of the notion that ethical treatment is ensured by current EU laws (19 B). Again, it would seem that these sentiments are entirely consistent with the activist stance and that it is only the ipsative nature of the forced-choice Q-sort exercise which precluded the activists from expressing a stronger position regarding these items.

FIGURE 7: ITEMS PLACED CONSISTENTLY FOR PROXIMITY WITH THE ACTIVIST PERSPECTIVE, BY TREATMENT GROUP



To summarize the above analyses, it can be stated that all of the positional changes in Q-sort items resulting from exposure to the video were consistent with the intended persuasive impact of the video. This finding is in harmony with the fact that the mean correlations with the activist sorts were higher for all treatment groups exposed to the animal advocacy stimulus than the control group: even though three out of four of these differences were non-significant. This finding was in no way guaranteed, as the cognitive dissonance literature suggests that a shift in attitudes towards coherence with (meat-eating) behaviours would be a likely outcome: that is, that exposure to the video would induce participants to endorse the various meat-eating justifications available to them to a greater extent. The present results should therefore be encouraging for animal rights activists seeking to influence public attitudes through animal advocacy messaging.

A further noteworthy observation is that only one of the 14 items which shifted due to exposure to the video pertained to a consideration unrelated to animals: item 46 E, “Diets including meat require much more land and water to produce than vegan diets”, which received an elevated ranking. Numerous factors may have contributed to this result, including the predominance of animal-related Q-sort items and the overall focus of the activist communication on animal-related issues. Nevertheless, the video presenter did spend around one third of the presentation addressing environmental and health problems associated with the consumption of animal products, and the Q-sample provided ample opportunity for subjects to respond to these issue using the four health-related and two environmental items (among other hedonic/utilitarian and social/interpersonal items). In this context, the strong tendency for the documented shifts in participant attitudes to focus on cognitions regarding animals suggests that the use of ethics-based messaging may be at least as effective as health and environment-based messaging. This



effect may be associated with differences in existing knowledge levels across the various topics, or it may reflect perceptions of source credibility on technical issues such as health, as revealed in one interview: “I’m not going to take health advice from someone like that [the video presenter]”. Activists may also be seen as having rather little credibility to talk on complex issues such as ecological systems. On the other hand, all individuals are legitimate spokespeople on matters of ethics. While no definitive conclusions can be drawn, concern among some activist groups and professional advocacy organizations that ethics-based communication is ineffective relative to other strategies cannot be supported by the current research.

Despite these promising signs for activists, a holistic shift in attitudes towards the activist position could not be detected for those subjects only exposed to the video (Group B), or for those additionally subjected to a self-affirmation (Group D) or self-standards (Group E) manipulation. Rather, the detected changes can be described as a systematic effect relating to a few specific items which was consistent in its pro-animal direction across the treatment groups. On the other hand, the induced compliance manipulation in Group C was able to both amplify the magnitude of these effects and to extend them to include other items consistent with the general pro-animal attitude change. As a result, a significant holistic shift in the viewpoint of these participants could be detected. The combined effect of this manipulation and exposure to the video stimulus was a dramatic increase in attitudinal congruence with the activist perspective: the correlation rising from .2016 in the control group (A) to .4636 in Group C. As the manipulation provided no information itself, and as the direction of the attitude change in this group was consistent with the other groups exposed to the video – both at the holistic level and at the level of individual items – it can be concluded that the induced compliance manipulation augmented the persuasive impact of the activist communication by surmounting the barriers to effective attitude change prevailing in the other treatment groups.

In line with the theoretical rationale for the induced compliance manipulation and consistent with previous research into the psychology of meat-eaters, cognitive dissonance is believed to play a pivotal role in restricting individuals’ receptiveness to the well-constructed ethical arguments put forth by vegan advocates. Furthermore, according to the characteristics of the manipulation which was found to be effective, and particularly of those that were not, this research provides empirical support for the conventional and action-based dissonance models, while refuting the applicability of the new-look, self-affirmation, self-consistency, and self-standards models.

These findings bring both bad news and good news for the activists’ advocacy toolkit. On the negative side, they do not have the ability to influence the degree of dissonance which is likely to be aroused by a given message, as this is a function of the cognitive discrepancy itself (conventional model) or the degree to which that discrepancy inhibits unconflicted action (action-based model), as well as innate individual characteristics such as one’s preference for consistency (Cialdini et al. 1995) and their individualistic/collectivistic orientation (Hoshino-

Browne et al. 2004). Despite impotence to regulate dissonance arousal, however, activists can employ strategies to promote the resolution of the dissonant state in their desired direction. The manipulation employed in Group C provides one example of how this might be done in authentic personal advocacy situations. Other possibilities are discussed in the conclusions. A significant challenge in this respect is how to scale up such inherently personal manipulations in the context of non-targeted mass communication platforms.

### **5.3.7 Interaction effects**

In order to examine the possibility of interaction effects between other relevant demographics and exposure to the stimulus video on participant attitudes, all participants exposed to the stimulus (treatment Groups B, C, D, and E) were aggregated into a single group for comparison with the control group which did not view the video. This aggregation is justified by the fact that an ANOVA of the dependent variable *correlation with activists* between the aggregated groups (B,C,D,E) was unable to detect significant differences between them ( $p = .219$ ).

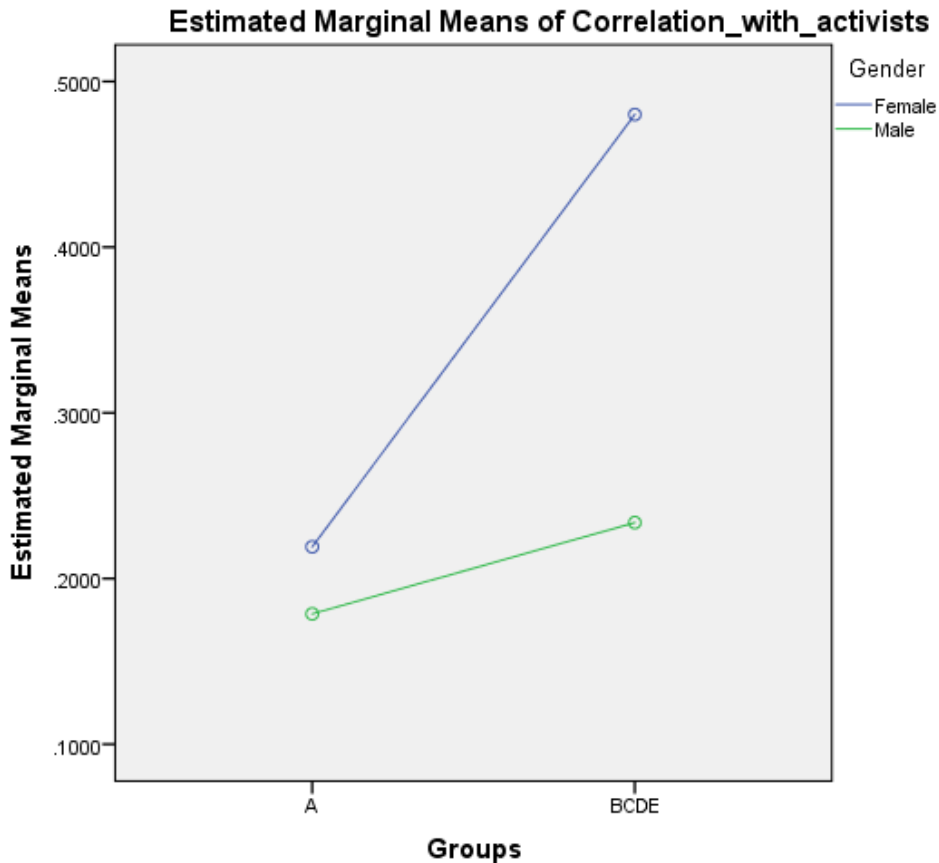
First examined was the role played by gender in determining attitudes towards the use of animals for food. A two factorial ANOVA incorporating gender (M; F) and group (A; BCDE) as factors proved highly significant ( $p < .001$ ) and provides a useful explanation of the variance in the dependent variable ( $R^2 = .204$ ): as shown in Table 33. Both gender ( $p = .016$ ) and exposure to the video stimulus ( $p = .008$ ) are shown to generate main effects on attitudes. As depicted in Figure 8, female participants hold attitudes closer to those of the activists than males do, regardless of exposure to the video. For both males and females, exposure to the video results in attitudes which are more closely aligned with those of the activists. The apparent divergence of attitudes between males and females following exposure to the video suggests the presence of an interaction effect, whereby the stimulus has a greater effect on females than males, however the ANOVA showed interaction effects to be, rather narrowly, non-significant ( $p = .082$ ). It is foreseeable that an increased sample size may be able to confirm the presence of an interaction effect, which would be consistent with a common activist sentiment that females are rather more receptive to their messages than males.

TABLE 33: INTERACTION EFFECTS BETWEEN GENDER AND VIDEO STIMULUS ON ATTITUDES (CORRELATION WITH ACTIVISTS)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.652 <sup>a</sup>	3	.551	9.301	.000
Intercept	5.340	1	5.340	90.209	.000
Gender	.355	1	.355	6.005	.016
Groups	.431	1	.431	7.288	.008
Gender * Groups	.183	1	.183	3.092	.082
Error	5.564	94	.059		
Total	18.167	98			
Corrected Total	7.216	97			

a. R Squared = .229 (Adjusted R Squared = .204)

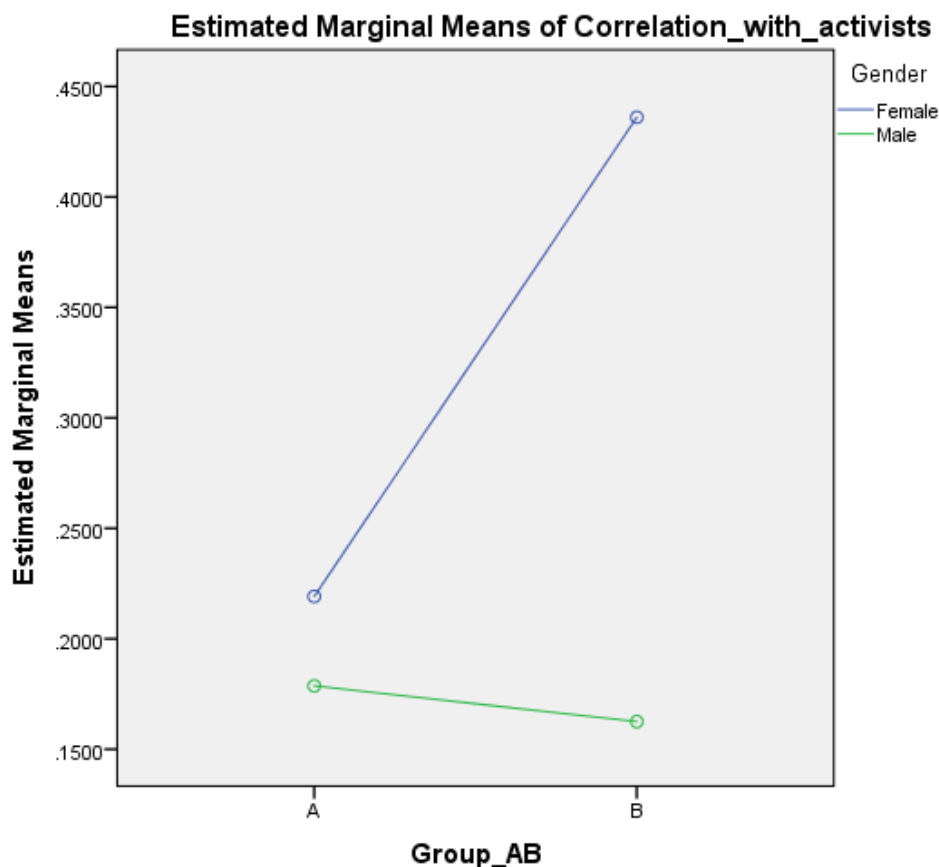
FIGURE 8: INTERACTION PLOT OF GENDER AND VIDEO STIMULUS ON ATTITUDES



Consistent with the previous discussion of the results for the individual treatment groups, analyses conducted to examine interaction effects between gender and the individual manipulations proved significant only for the comparison of Group C with control Group A (Corrected Model  $p = .006$ ). In this case, only assignment to Group C had a main effect on

attitudes ( $p = .007$ ), while gender did not ( $p = .100$ ). The corrected models for all other comparisons of treatment groups with the control proved non-significant, but in discussing the role played by gender it is nevertheless worth considering the results for treatment Group B, who watched the stimulus video absent additional manipulations (Corrected Model  $p = .069$ ). Assignment to this group rather than the control could not be shown to have an effect on attitudes ( $p = .201$ ), but gender did have an effect ( $p = .049$ ). The interaction plot in Figure 9 shows again that females consistently hold more pro-animal attitudes. Although non-significant for the current sample ( $p = .139$ ), the plot also suggests that a strong interaction effect may be detectable given a larger sample size: namely, that the exposure to the video stimulus has diametrically opposed effects depending on gender. Females, it appears, shift dramatically towards the activist viewpoint when exposed to the video, while males further distance themselves from the activist viewpoint in the same situation.

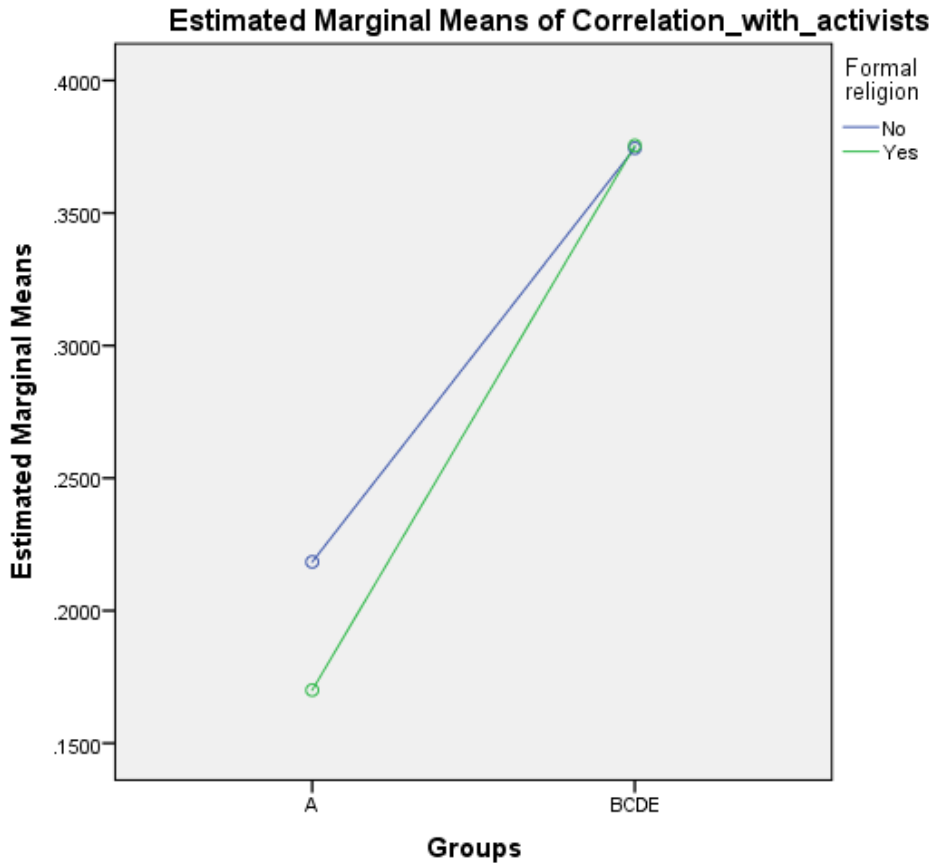
FIGURE 9: INTERACTION PLOT OF GENDER AND VIDEO STIMULUS ON ATTITUDES (GROUP B)



Analyses of interaction effects involving religious persuasion were unable to determine a significant role played by identification with a formal religion, but this was only narrowly the case (Corrected Model  $p = .069$ ). Exposure to the video stimulus was again shown to have a main effect on attitudes ( $p = .007$ ), while religious association did not ( $p = .720$ ). Nevertheless, the

interaction plot in Figure 10 suggests that exposure to the advocacy video narrows an initial distinction between the attitudes of religious and non-religious participants.

FIGURE 10: INTERACTION PLOT OF FORMAL RELIGION AND VIDEO STIMULUS ON ATTITUDES



#### 5.4 The Carnist Ideology

The theory of Carnism posits that it is not only vegetarianism and veganism that are ideological, but that the consumption of animal products also reflects an underlying ideology: Carnism is the name given by Joy (2010) to this dominant yet previously invisible worldview, which facilitates carnistic behaviours through the categorization of beings and the acceptance of dominance and hierarchy. The additional behavioural and psychographic scales measured in the current study can shed some further light of this issue.

In control Group A, consumption levels were found to be negatively correlated with participants' attitudes towards the use of animals for food; whereby attitudes closer to those of animal advocates were shown to be associated with lower consumption levels of dairy and meat ( $-.595$ ,  $p < .001$ ). This is not surprising given that the comprehensive Q sample also included items relating to the hedonic benefits of meat consumption. In order to better isolate the attitude

towards animals, consumption levels are also correlated with an alternative scale asking participants how many of the presented production techniques they consider to be ethical. This also revealed the predicted positive correlation (.373,  $p = .040$ ), according to which consumption behaviours are to some degree aligned with ethical judgements regarding animals. Table 34 shows this first evidence that meat-eating is indeed ideational.

TABLE 34: CORRELATIONS BETWEEN ATTITUDES, ETHICAL JUDGEMENTS, CONSUMPTION LEVELS, AND KNOWLEDGE LEVELS

Control Group A (N = 23)		Correlation with activists	Ethical judgement	Consumption levels	Knowledge levels
Correlation with activists	Correlation Coefficient	1.000	-.623**	-.595**	.078
	Sig. (1-tailed)	.	.001	.001	.362
Ethical judgement	Correlation Coefficient	-.623**	1.000	.373*	-.205
	Sig. (1-tailed)	.001	.	.040	.175
Consumption levels	Correlation Coefficient	-.595**	.373*	1.000	-.385*
	Sig. (1-tailed)	.001	.040	.	.035
Knowledge levels	Correlation Coefficient	.078	-.205	-.385*	1.000
	Sig. (1-tailed)	.362	.175	.035	.

The moral judgements we each reach regarding the eating of animals are reliant on our access to pertinent information. Several questions probed participants' knowledge of the legal standards applied to EU production techniques, and found knowledge levels to be significantly negatively correlated with consumption levels of meat and dairy ( $-.385$ ,  $p = .035$ ). In other words, individuals who know more about the industry tend to have less to do with it, and these individuals tend more towards a pro-animal ethical stance.

Investigating the broader dimensions of the carnist worldview relies on the additional psychographic scales. Table 35 shows a correlation matrix comprising the variables: ethical judgements towards animals as an attitudinal measure (lower scores are more pro-animal); consumption levels as a behavioural measure; socio-political views as an indicator of endorsement of existing social structures (5 point semantic differential: liberal-conservative); the NEP anti-anthropocentrism scale as a measure of human exceptionalism (lower scores representing greater acceptance of human dominance over the natural world); and the discrimination tolerance scale as a measure of the acceptance of differential treatment between human populations (lower scores represent a lower tolerance for discrimination).

TABLE 35: CORRELATION MATRIX OF VARIOUS PSYCHOGRAPHIC AND BEHAVIOURAL SCALES

Control Group A (N = 23)		Consumption levels	Socio-political view	NEP AA Sub-scale	Discrim. tolerance
Ethical judgement	Correlation Coefficient	.373*	.411*	-.482**	.602**
	Sig. (1-tailed)	.040	.026	.010	.001
Consumption levels	Correlation Coefficient	1.000	.413*	-.429*	.459*
	Sig. (1-tailed)	.	.025	.020	.014
Socio-political view (1 lib.; 5 conserv.)	Correlation Coefficient		1.000	-.412*	.480*
	Sig. (1-tailed)		.	.025	.010
NEP AA Sub-scale	Correlation Coefficient			1.000	-.566**
	Sig. (1-tailed)			.	.002
Discrimination tolerance	Correlation Coefficient				1.000
	Sig. (1-tailed)				.

Pro-animal ethical judgements, as predicted by Carnism theory, are associated with more liberal socio-political viewpoints (.411,  $p = .026$ ), rejection of anthropocentrism (-.482,  $p = .010$ ), and a lower tolerance for discrimination (.602,  $p < .001$ ). Correspondingly, higher consumption of animal products is associated with conservative socio-political views (.413,  $p = .025$ ), more anthropocentric views (-.429,  $p = .020$ ), and greater tolerance for discrimination between human populations (.459,  $p = .014$ ). These results provide empirical confirmation for each of the various hypotheses proposed:

**Hypothesis 1:** Anthropocentric perspectives are positively related to speciesist attitudes.

**Hypothesis 2:** Conservative political views are positively related to speciesist attitudes.

**Hypothesis 3:** Tolerance for discrimination is positively related to speciesist attitudes.

**Hypothesis 4:** Tendency to engage in ethical reasoning is inversely related to speciesist attitudes.

**Hypothesis 5:** Knowledge levels are inversely related to consumption levels.

**Hypothesis 6:** Consumption levels are positively related to speciesist attitudes.

The fact that all of the variables are significantly correlated suggests a factor analysis to determine the commonalities between them. Principal axis factoring was applied to the four attitudinal measures to explore the underlying factor structure. This procedure was repeated using alternatively control Group A ( $n = 23$ ), the aggregated BCDE groups ( $n = 75$ ), and the entire sample ( $N = 98$ ). In each case the outcome of the factor analysis was the same: the extraction of a single factor. As such, the data presented are those relating to control Group A – those participants whose ethical judgements towards animals could not have been influenced by the experimental stimulus – despite the lower sample size in this group. The KMO Measure of

Sampling Adequacy (.779) indicates that a high proportion of the variance may be explained by underlying factors, while Bartlett's test of sphericity ( $p < .001$ ) confirms the correlation matrix is appropriate for structure detection. The initial communalities reveal that considerable portions of the variance in each variable is accounted for by the others (.298, .429, .424, .394), while the extraction communalities show that the factor solution accounts for a useful proportion of the variance in each (.370, .567, .543, .521).

TABLE 36: FACTOR EXTRACTION FROM PSYCHOGRAPHIC VARIABLES

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.492	62.295	62.295	2.001	50.029	50.029
2	.619	15.486	77.781			
3	.489	12.214	89.995			
4	.400	10.005	100.000			

Extraction Method: Principal Axis Factoring.

TABLE 37: FACTOR MATRIX FOR PSYCHOGRAPHIC VARIABLES

	Factor 1
Socio-political views	.608
Discrimination tolerance	.753
NEP Anti-Anthropocentrism	-.737
Ethical judgement re. chickens	.722

Extraction Method: Principal Axis Factoring.

1 factors extracted. 6 iterations required.

The analysis resulted in the emergence of a single factor with an Eigenvalue greater the one, which, following extraction, was found to account for 50 percent of the variance in the four variables. The same structure emerged using either Group BCDE ( $n = 75$ ) or the total data set ( $n = 98$ ) as the sample, albeit with lower explained variance in each case of 31.2% and 30.7% respectively. No rotation of the solution was possible with only one emergent factor.

The commonality between the four variables is thought to represent a latent construct relating to the acceptance of hierarchical power structures. This finds expression in terms of conservative socio-political views, greater tolerance for discrimination between human populations, and an anthropocentric perspective which finds the systematic subjugation of animals to be ethical. Such attributes are consistent with the “carnist domination” dimension of the carnist worldview (Monteiro et al. 2017). As ethical judgements towards animals are also correlated with consumption levels, these findings support the thesis that carnism is just as ideational by nature as veganism.



## 6 CONCLUSIONS

The conclusions from the dissertation are structured into three sections – Theoretical, Methodological, and Applied – with the respective limitations and avenues for further research addressed in each.

### 6.1 Theoretical conclusions and outlook

#### 6.1.1 Cognitive Dissonance Theory

The phenomenon of cognitive dissonance was first articulated by Festinger (1957) around 60 years ago, and has since become a well-accepted concept within psychological and related disciplines. Research efforts since that time have not raised significant questions about the existence of the phenomenon, but have rather focussed on attempting to further elucidate the exact process by which cognitive discrepancies arouse dissonant states in individuals and motivate the resolution of these states: many researchers, it seems, being unsatisfied by Festinger's invocation of an innate preference for consistency. Consequently, numerous explanations have been posited over the intervening years, and the competing cognitive dissonance models have attracted varying levels of empirical support and disconfirmation. The present situation is one in which cognitive dissonance – in its broadest possible sense – is almost universally accepted, but the scientific community is divided as to recognition of the underlying mechanism. It may be, for instance, that each of the models provides some explanatory power, but that the relevance of each differs according to individual characteristics or the specific dissonance arousing conditions. In many research situations this state of extant knowledge may be unproblematic: particularly when the objective is merely to understand the experience of the individual. However, the subtle differences between the competing models become pertinent when one takes interest in how to influence the degree of dissonance experienced, as well as the direction of its resolution.

The empirical paradigm heretofore applied typically involves adapting the dissonance inducing scenario in order to specifically target the mechanism explained by a certain cognitive dissonance model. This approach has allowed for each model to be examined in isolation, with results either corroborating or refuting its applicability in the given scenario. Some models have fared better than others in such tests, but what is missing are comparative tests which enable the simultaneous examination of competing models in a unified setting. The novel approach pioneered in the current research permits such comparative analyses: to the best of the researcher's knowledge, this is done here for the first time.

Rather than adapting the dissonance inducing scenario to fit a particular model, the study employed a standard (hypothesized) dissonance inducing stimulus – the animal advocacy video

– which is consistent with stimuli shown to induce dissonance in the past (e.g. Bastian et al. 2012). In order to tease out divergences between the various models, additional manipulations derived from the literature were applied in the experimental treatment groups. If effective, these interventions should influence the degree of dissonance aroused, and/or its resolution, and thereby influence the persuasive impact of the video. The Q-sort data format for this dependent variable facilitates analyses both at the holistic attitude level and at the level of individual dissonance resolution strategies, as identified in previous studies (e.g. Rothgerber 2012).

Each of the manipulations was successful in, respectively: (C) inducing pro-animal statements; (D) improving self-image; and (E) priming self-standards. Despite this, only the induced compliance manipulation in Group C was able to augment the persuasive impact of the activist communication. This finding mirrors that of Prunty and Apple (2013), who find that first asking people to express their opinion regarding animal suffering in meat production increases the persuasive impact of an informational booklet pertaining to animal welfare issues. These results corroborate the conventional and action-based models, according to the premise that the addition and/or increased salience of a relevant cognition should influence the magnitude and direction of the dissonance resolution; this effect should be even greater if the cognition is fortified into a behaviour, as in the current hypocrisy-inducing manipulation.

This finding does not eliminate all other models, however, as the same outcome would be predicted by the self-standards model, and for the same reasons. The identity-focused self-affirmation and self-consistency models postulate that dissonance should be resolved such that we view our behaviours as a consistent with our positive/extant self-image. The measured attitude change was in a pro-animal direction and at odds with participants' dietary practices. As this change does not seem to achieve the express goal suggested by these models, the results rather speak against the applicability of these models. Similarly, the increased recognition of animal capacities speaks against the applicability of the New Look model, which suggests a counter-attitudinal change in order to mitigate the perception of adverse consequences stemming from one's behaviours.

Given the overlapping predictions made by the various models, the positive result in Group C is not sufficient to declare support for one particular model: the same observation can often be made of studies which examine a single dissonance model. Thus, additional manipulations were employed to further differentiate the remaining models. If either the self-affirmation or self-consistency models provided a parsimonious explanation, the improved self-image in Group D should have influenced the attitude change displayed by this group, relative to the control: this was not the case. Neither did the self-standards manipulation impact on the attitude change in Group E, as postulated by the self-standards model. By process of elimination, this leaves the complementary conventional- and action-based- dissonance models as primary contenders for explaining the cognitive dissonance experienced by meat-eaters.

The conventional model suggests that meat-eaters are motivated by an innate preference for consistency to resolve the dissonance they experience when some latent cognitive discrepancy is made salient. The action-based model suggests that the innate drive for consistency is activated when (and because) the holding of discrepant cognitions hazards an impediment to effective action: it is consistent with this evolutionary explanation that an organism's (individual's) indecisiveness regarding the central biological function of obtaining nourishment may trigger such a response. These two models do not directly suggest ways in which the degree of dissonance experienced by an individual may be influenced, but they do imply methods to influence the resolution of the dissonance: as demonstrated by the induced compliance manipulation in Group C. To conclude this analysis, the current experimental design corroborates the conventional and action-based dissonance models, and disconfirms the claims made by the new-look, self-affirmation, self-consistency, and self-standards models.

### **6.1.2 Limitations**

No definitive claims can be made about the *true* dissonance process, however, as this thorough experimental design is not without its limitations. One possibility which cannot be excluded is that one or more of the intended manipulation effects were inherent to the dissonance arousing stimulus. As all of the manipulated treatment groups were also exposed to the video communication, it is possible, for example, that the video alone was sufficient to promote the use of self-standards among research subjects: potentially to the extent that the self-standards manipulation successfully applied in treatment Group E, and measured prior to the video, had no additional effect on this group. If that were the case, the self-standards model would not be empirically supported, even though it would provide a useful description of the dissonance process in that situation. Similar cases can be made for the ongoing consideration of the other cognitive dissonance models which were not empirically supported by the current research. In retrospect, requiring participants to repeat the manipulation checks following the Q-sorting exercise would have enabled the researcher to comment concretely on this possibility: this is advised of future researchers seeking to compare the competing dissonance models using a similar approach in other settings.

A further possibility is that of an overlap in the effect of the manipulations: for example, that the induced compliance manipulation also had a self-affirming effect on those subjects, or that it promoted the use of self-standards in evaluation of their own behaviours. Although such effects can be neither confirmed nor disconfirmed according to the non-significant differences on the manipulation checks between these groups, it remains possible that the mechanisms explained by the rejected models may have contributed to the positive result in Group C. The manipulations used in the current study were intentionally simple and brief in duration, such that they may be feasibly employed in authentic advocacy scenarios. Future research

endeavours could seek to better distinguish the models using more elaborate experimental manipulations.

Furthermore, the breadth of the present design precluded the measurement of a number of individual characteristics which are considered by various models to be important moderators of the dissonance process. One example is self-esteem, which is considered by the self-affirmation model to reduce dissonance, and by the self-consistency model to increase it (when behaviours are determined to be sub-standard). It is possible that the measurement of, and controlling for, such factors at the individual level would have resulted in significant findings in corroboration of one or more additional models.

A final remark on the generalizability of the findings – even supposing that the experimental results are entirely valid – is that they have been found to apply for a specific set of respondents and in relation to a specific topic. Despite considerable diversity in terms of national origins, the experimental subjects are a homogenous group in terms of both ages and education levels and certainly not representative of the wider population. As this group also represents the core target group for animal advocacy, this may not be a significant concern for activists. However, in an academic discussion of the broader applicability of various dissonance models, this factor cannot be ignored. Much as Rothgerber (2012) reports that gender is associated with tendencies towards specific dissonance resolution strategies, it could well be that other demographic characteristics are also associated with the applicability of different dissonance models. As well as interpersonal differences, there remains the possibility that specific topics are associated with different dissonance models. Exploring these issues will require comparable studies to be completed on a diversity of topics and with variable samples.

### **6.1.3 Cognitive Dissonance in Meat-Eaters**

Those potential limitations notwithstanding, it is perhaps opportune to consider the topic at hand once more – this time from the frame of the supported dissonance models.

It appears that an innate drive for consistency underlies the attitude change measured in experimental subjects exposed to this particular dissonance inducing scenario. That is, that individuals are motivated to hold consistent cognitions, or at least to avoid awareness of inconsistencies. In contradiction to the predictions made by the non-supported dissonance models, the particular nature of the inconsistency (the existence of adverse consequences, or relevance to personal standards, etc.) appears to be relatively unimportant. It has been noted by various authors that the voluntary consumption of animal products may be viewed as inconsistent with other beliefs which individuals typically deem important (Adams 2001; Joy 2010; Rothgerber 2014), such as concern regarding the plight of non-human animals. This latent inconsistency establishes the prerequisite conditions for the arousal of dissonance, which eventuates only when the discrepant cognitions are made simultaneously salient. Awareness of

the cognitive inconsistency would be difficult to avoid if the 'food' animal were to be slaughtered directly before the prospective meat-eater, as it would be clear that they are about to consume "someone" rather than "something". Such cases prompt the use of "direct" strategies to mitigate the resulting psychological tension, including the true justifications of Rothgerber's (2012) Meat Eating Justifications, but also, potentially, behavioural change. Such cases are the exception rather than the rule, however, in developed market economies where the long supply chains (Foer 2009) and euphemistic language (Kunst & Hohle 2016) distance the eater from the eaten.

In the normal course of events it seems that dissonance is averted by the dissociation of the meal from its once living source. The control group in the present study placed item 44 E ("When I look at meat, I often think about the living being it came from") far to the right of the Q distribution (median = -3, IQR = 2), thereby indicating widespread disagreement with the statement. The culturally-entrenched process of dissociating meat from animals has been explained as "a powerful way to avoid cognitive dissonance resulting from this 'meat paradox'" (Kunst & Hohle 2016). In demonstration, these authors have shown that the beheading of animals, the processing of meat, and the use of terminology such as "harvesting" "beef" rather than "killing" "cow" all decrease the emotive responses of empathy and disgust, and, in turn, increase willingness to eat meat rather than vegetarian dishes (Kunst & Hohle 2016). It is no surprise that economically invested enterprises have developed sophisticated marketing approaches to exploit this tendency towards dissociation among their willingly complicit customers (Foer 2009).

The current age of ubiquitous information is making such compartmentalized thinking rather more difficult to maintain and may well be playing a significant role in the present day rise of veganism. This trend may therefore be understood as the alignment of individuals' behaviours with their extant values, rather than a shift in societal values. Dedicated vegan advocacy groups are key actors in generating relevant content and exposing to individuals the latent cognitive discrepancies which have long evaded scrutiny. When the indirect strategies of dissociation and avoidance are no longer available to individuals, efforts to mitigate the resulting dissonance must resort to the direct justification of meat-eating behaviours, as described by Rothgerber (2012), or behavioural change. Whereas the non-supported dissonance models suggest that a specific response would be needed to resolve the dissonance – namely attitude change to achieve consistency with self-image, or a positive self-image, or the prevailing evaluation standard – the conventional dissonance model postulates that the objective of consistency may be achieved by attitudinal shifts in any direction. Similarly, the action-based model views the pursuit of consistency as an adaptive response to facilitate effective action, but it does not indicate which specific actions should be facilitated; it seems plausible that holding a non-conflicted persuasion towards veganism would be equally psychologically acceptable as holding a non-conflicted pro-meat stance. But while consistency may be all that matters in the end, the

present research has confirmed the basic tenant supported by all of the dissonance models that some cognitions are more robust than others. The success of the induced compliance manipulation in augmenting the persuasive impact of the vegan advocacy message demonstrates the over-proportional influence exerted by cognitions regarding behaviours in determining the outcome of the dissonance resolution process. The implications of this finding for practitioners are discussed in the forthcoming applied conclusions.

#### **6.1.4 Cognitive Dissonance and Ethics**

As a rudimentary preference for consistency has been shown to explain the differences between the treatment groups in terms of their responses to the ethical questions posed to them in the current study, it is perhaps worth considering the broader relationship between the practical application of ethics and this innate drive. Could it be, for instance, that the motivation to engage in processes of ethical deliberation is rooted in this innate drive for consistency? The meta-ethical moral relativist, who views moral judgement as dependent on historical and cultural contexts, would argue that the prominence of moral precepts such as the Golden Rule across time and cultures is a reflection of commonalities between those cultures rather than the universal truth of the precept itself. As such, they hold that there is no objective standard by which to distinguish certain standpoints as right or wrong. On the other hand, it seems reasonable that the moral relativist would acknowledge the superiority of a moral framework that states only “do unto others as you would be done by”, over one which additionally states “treat others differently than you would desire to be treated”. The former may be regarded as superior to the latter not due to its specific content, but due to its internal consistency. Accordingly, Hare (1981) maintains that moral assertions are necessarily subject to human logical rules in order that productive moral discourse may transpire, and that logic therefore constitutes an objective standard of moral justification. In the end, it seems, the moral relativist can demand no more of a specific ethical framework or a given set of moral precepts than logical coherence.

If logic forms the foundation of ethical deliberation, what can be said of the role played by empathy, and intuition? Empathy may act as a sense, providing various inputs – moral facts – into the computation. Commonly held intuitions are often conceived of as impediments to the acceptance of certain ethical frameworks. Objections to classical utilitarianism, for instance, tend to focus on the apparently intuitive rejection of the *perhaps* “repugnant” conclusions which may logically follow from unqualified adherence to its primary tenets (Parfit 2016). To explore Parfit’s example, could it be that our universal and seemingly intuitive repulsion towards visions of overpopulated futures does not reflect the objective inferiority of such scenarios, but is rather the expression of a subjective evaluation functioning primarily to achieve consistency with extant cognitions? In demonstration, consider one has experienced the apparent hell of that overpopulated future and has somehow managed to develop many favourable cognitions

regarding that reality. If one then freely chooses that future for themselves, and doing so harms no others, it would be difficult to argue against the morality of that act; it would be even harder to argue if we had all had the same experience and universally chose that future. So apparently objective moral truths such as the undesirability of certain states may be nothing more than manifestations of common subjective experience.

If heaven is all it's cracked up to be, when we all get there we may universally change our ideas about morality on Earth as a result of that new experience. If we all wished we had gotten there sooner, we could come to view murdering others on Earth as the greatest gift one could give. Interestingly, we may then fall into the trap of declaring murder an objective moral good – again overlooking the possibility that further experiences may again alter our perspective. The serious point to be made is that our moral position will always be informed by our assembled experiences. The most devout moral absolutist must concede that they would alter their moral stance if they perceived an authentic religious experience in which their chosen prophet revealed to them the untruth of their chosen doctrine. And if absolutist morality is, in the end, relative to experience, so is all morality. It just so happens that much of human experience is common to all of us, given our biological heritage and the physical realities of our planet, and we therefore tend to reach similar moral judgements on many issues.

Moral relativity can be – or is already – incorporated into any ethical framework. Of virtue ethics can be asked to what extent our perception of virtue is dependent on our extant experience, and whether we may have arrived at different conclusions regarding what is virtuous given radically different experiences. In the case of the Rawlsian view it is clear that the assembled experiences of the being inhabiting the original position will influence the determinations they make. Likewise, our experience informs the question of what attribute to optimise in utilitarian calculus computations. It is implicit to preference utilitarianism that our perception of the interests of others, and the actual nature of those interests, will be dependent on the experience of the ethical agent and subject, respectively. The same applies to deontological positions demanding one's right to have one's interests taken into account. Such rights-based views have evolved over time and become ever more specific as humankind has come to recognize ever more factors of relevance to the human condition. In other words, the perception of absolute rights has evolved as human experience has assembled: one must acknowledge that fundamentally different experiences may have led to the identification of alternative sets of fundamental human rights. Such hypotheticals demonstrate that 'absolutist' positions may not be immutable in the face of overwhelming evidence to the contrary: while such evidence is, admittedly, unlikely to materialize on Earth, the very notion that a conceivable experience could alter one's moral position speaks to the inherently relative basis of such a view.

### **6.1.5 Carnism: the Psychology of Meat Consumption**

If logic founds our capacity for ethics and a drive for consistency provides the motivation, significant emphasis should be focussed on the formative developmental years. If the moral problems we face on a daily basis are resolved primarily for congruence with existing beliefs, it is of utmost importance to the outcome what those existing beliefs entail. According to Joy's (2010) theory of Carnism, the acculturation which generates the amoralization of meat eating begins from a young age. We have grown up in societies which systematically subjugate many other species – not to mention human populations – thereby entrenching notions of dominance and hierarchical structures into our worldview. Monteiro et al. (2017) recently developed the Carnism Inventory in order to empirically validate this theory, and determined a two dimensional structure to carnist perspectives: a carnistic defense which legitimates the consumption of animals, and a carnistic domination which supports their killing. These tendencies apparently extend beyond consideration of interspecies relations, with both scales proving significantly associated with "socio-political beliefs including right-wing authoritarianism and social dominance orientation", while carnistic domination is additionally related to symbolic racism and sexism (Monteiro et al. 2017).

The additional psychographic scales measured in the current study have shed some further light on this issue, by demonstrating the association between speciesist attitudes (low NEP Anti-Anthropocentrism scores; unfavourable ethical judgements towards chickens) and endorsement of hierarchical power structures within human populations (conservative socio-political views; higher tolerance for discrimination). These findings are consistent with those of Monteiro et al. (2017), and represent empirical support for the central thesis of carnism: that "eating animals is not only a gustatory behaviour, as widely believed, but also an ideological one".

## **6.2 Methodological conclusions and outlook**

This research pioneers the use of rich Q-methodological data in experimental designs. Experiments, of course, require the postulation of a specific effect: namely a change to the Q-sort distribution.

One way to measure this is using a classic experimental design with repeated testing, which would allow for fine grained investigation of any attitudinal changes at the individual level. An advantage of Q-sort data to this end is that the complexity of the perspectives they express makes them difficult to intentionally reconstruct and is therefore likely to minimize the impact of consistency (carry-over) biases in subsequent measurements. Social desirability biases are similarly mitigated by this complexity, as the perceived socially desirable distribution is generally not apparent. However, the Q-sorting procedure is a rather intense process for comprehensive



Q-samples covering complex issues, in which participants invest considerable time and often become deeply involved. Several interviewees who were asked about the process in the current study stated that they “really got into it”, “found it interesting thinking about those things”, and found it to be “a lot of fun, actually – I really enjoyed doing it, but it wasn’t easy”. The ability of this novel data collection format to thoroughly engage respondents is a significant strength of the Q-methodological approach, but may also be an impediment to the validity of repeated testing measurements – according to a learning effect.

The diversity of the sources consulted for inspiration and selection of the final items according to comprehensiveness means that a well-constructed Q-sample literally *puts the all of the cards on the table*. In the current study, the very premise of the experimental design is the existence of latent cognitive discrepancies within individuals. These become juxtaposed at two decisional stages in the forced-choice procedure of the central data collection instrument, creating the conditions for ‘Socratic learning’ to take place. The comparative nature of the sorting process may enable participants to contextualize the topic and draw associations between various disparate notions that they had not connected previously, whether this oversight was motivated or not. Reconciling any discrepancies or apparent logical inconsistencies inevitably demands considerable cognitive effort: reflected in the interview descriptions of the Q-sorting procedure as “challenging”, “hard work”, “tricky”, or “confronting”. If this cognitive effort does not explicitly change, create, or eliminate beliefs, it must at very least result in the emphasis of some cognitions over others. To the extent that the Q-instrument – together with the manipulations, video, and interviews – shifted participant attitudes, the current study can be considered as activist research (Hale 2001). Such learning effects, whether intended or not, are likely to carry-over to subsequent measurements: which raises questions about the ability of simple repeated testing protocols to distinguish test-retest effects from other effects. Although more elaborate experimental designs may enable detection of these effects, they cannot necessarily be adequately understood and controlled for.

Furthermore, even if the effect of the experimental treatment can be reliably isolated as attitudinal changes within-individuals, it is unclear how these changes can be used to derive a dependent variable. Unlike movement along semantic differential or Likert scales, where the direction and magnitude of the change is explicit, the detection of differences between two related Q-sort distributions does not necessarily indicate the qualitative nature of the attitude change for that individual across a one dimensional scale, or its extent: particularly not in a fashion that allows for the identification of systematic effects across participants.

The strategy pioneered in this study overcomes these various hurdles. The experimental design mitigates learning effects by collecting only single measurements from participants randomly allocated to either a treatment group or the control group. The differences between these various groups would be equally impossible to interpret as in the case of repeated testing – both in terms of direction and magnitude – without allusion to a reference distribution: that is, a

specific point of view which is of relevance to the hypothesized effect of the experimental manipulation. Such a reference distribution allows for the calculation of participants' attitudinal proximity to this point of view – their “similarity” or “distance” score (Block 1961) – which can then be used as the dependent variable in the experimental design. The animal activist perspective was used as the point of reference in the current study, according to the presumption that the intended effect of the activist communication was attitudinal shift in that direction. Appropriate reference distributions in other settings may include, for example, the perspective of the teacher in educational settings (a “criterion of ‘truth’”: Block 1961), the doctor in medical settings, or the retailer or existing customers in marketing settings. The Q-sort data collected from experimental subjects can be ‘spiked’ with this reference distribution in order to derive a correlation matrix (forming the dependent variable in the present study), or to define a specific factor – onto which the loadings of the experimental subjects can be examined.

Although foreshadowed by Block's (1961) description of contrasting “certain Q-sorts against a Q-standard separately and independently evolved”, examples of this approach are not evident in the literature. A search for the term “experiment” across almost forty years of *Operant Subjectivity*, the predominant Q-methodological journal (<http://www.operantsubjectivity.org>), found the term to arise in an appropriate context only three times (published articles by Root 1995, Knight & Rupp 1999, and Stephenson 2006), with each of the studies using repeated testing of the same individuals. The present study therefore opens the door for other researchers to make use of rich contextualised Q-methodological data in experimental settings. As with any experimental design, significant care is required to ensure its logical and theoretical consistency. On top of this, the use of Q-methodology demands additional attention to ensuring coherence between the experimental manipulation, the Q-sort items, and the reference distribution.

An important methodological weakness of the current design is the fact that only short-term attitudinal changes were measured. It remains unclear how participant attitudes will continue to evolve in the period following the interventions: whether they will remain constant, continue to shift in a pro-animal direction as a result of further deliberation on the internal consistency of extant beliefs, or revert to the pre-experimental state characterised by dissociation, dichotomization, and avoidance. It is also unclear whether the measured shifts in attitudes will translate into behavioural changes in either the short- or longer-term. These open questions point to important avenues for future research.

### **6.3 Applied conclusions and outlook**

This section is primarily devoted to analysing the implications of the assembled findings for the practical work of animal advocates, but may include important lessons which are applicable to practitioners concerned by the persuasion of audiences in other fields. At the outset, it should

be noted that participation in the experimental design, while voluntary, was chosen by participants without knowledge of the subject matter they would be addressing. This arrangement is a clear departure from authentic advocacy scenarios, where many potential audiences are likely to avoid consideration of animal rights themes and advocates altogether. Unfortunately, the present research cannot inform the question of how to reach those individuals.

The informative findings for animal advocates begin with the various demographic and psychographic scales. The university students sampled displayed broad acceptance of veganism as a genuine possibility. They are largely aware of the nutritional adequacy of vegan diets and also recognise their environmental benefits to some degree. They care about animals and acknowledge human animal similarity in terms of sentience, consciousness, and the presence – or absence – of a soul. However, these considerations are typically relegated subordinate to individualistic notions of personal (human) liberty with respect to food choice: in some cases this notion of liberty apparently extends to the question of whether to behave in accordance with one's own ethical judgement.

In making ethical judgements regarding the use of animals for food, the students were operating with very minimal levels of knowledge. Asked about the legality of various production methods in the EU and the permissibility of the methods according to free-range or organic certifications, the entire sample ( $n = 98$ ) registered a mean score of  $-0.47$  ( $\sigma_{\bar{x}} = 7.33$ ), out of a possible range from 32 (all correct) to  $-32$  (all incorrect). That is, the group was wrong more times than they were right, and therefore performed worse than if they had responded "I don't know" to every question (scored 0). With respect to the informational needs of this population, it seems that industry and legal knowledge represent the most significant deficits, with important health and environmental information already quite well accepted. Interestingly, the activists did not fare as well as anticipated with respect to their knowledge of the law and industry either ( $\bar{x} = 11.95$ ,  $\sigma_{\bar{x}} = 10.31$ ). It is understandable that animal rights activists who deem animal use indefensible in general may not care much for industry specificities, but the relevance of these issues to the welfare concerns of the broader public suggest that activists should be well prepared to discuss the appalling current state of affairs – despite the heartache implicit in learning these truths. Closing this knowledge gap by illuminating the invisible supply chain remains an important ongoing project for animal advocates, particularly in light of the findings that higher industry knowledge levels are associated with more favourable ethical judgements towards animals and lower consumption levels. Communications of this kind help individuals to reconnect the *something* on their plate with the *someone* it came from.

Consistent with Joy (2010) and Monteiro et al. (2017), meat consumption behaviours are shown in the present research to be ideational, incorporating a carnism dominance dimension which endorses the maintenance of hierarchical power structures within society. This worldview has implications not just for animals, but also for social-justice issues regarding marginalized human

populations. The existence of a common enemy – discrimination – suggests the applicability of intersectionality (Crenshaw 1989) and indicates that cooperation with actors working on behalf of other marginalized groups may be more effective in addressing such perspectives. The challenge for animal rights activists, of course, is in identifying non-speciesist collaboration partners.

With respect to the theoretical contributions of this study, the conservatism with which the findings were discussed in the sections above would be misplaced in addressing practitioners, whose concern is primarily the question of ‘what works?’, rather than a verifiable explanation of how it works – *within reason*. On this issue the results are far more conclusive. The animal advocacy message on its own appeared to systematically shift various cognitions in a pro-animal direction, at least in the short term. Notably, these items related almost exclusively to animals, despite the fact that the vegan advocacy message also addressed health and environmental issues. This may be interpreted as indicating that audiences may be just as open to ethical arguments for veganism as they are to the other concerns. Which motivation is associated with greater behavioural change is a discussion which has been addressed only in passing (e.g. Cooney 2013), and therefore requires further academic attention. Nevertheless, these changes in specific cognitions resulting from exposure to the video did not amount to a holistic modification of attitudes, except when accompanied by an induced compliance manipulation. That is, inducing individuals to make some small concession in the desired direction had the effect of increasing the degree of attitude change. The term ‘induced’ conceals the fact that voluntary compliance is prerequisite for the effective use of such manipulations (Burger 1999), which should therefore alleviate any concerns regarding their ethical usage.

In the current study, the induced compliance manipulation allowed participants to publically declare (to the researcher) their views on the regulation of animal welfare: with all Group C participants declaring their preference for rather stricter regulation. This same result would have been expected from all other participants, if they had been asked. The difference between the groups was therefore that this commonly shared belief was brought to top-of-mind and bolstered into a non-retractable behaviour in Group C: setting up a hypocrisy condition when prior discrepant behaviours (e.g. meat consumption) were made salient. This subtle intervention proved sufficient to significantly increase the persuasive impact of the activist communications. It appears important, therefore, that the declaration is made publicly rather than remaining private (Sakai 1981). This is consistent with the numerous studies listed by Cooper (2007) and leading to the conclusion that “inducing dissonance through hypocrisy is both interesting theoretically and seems to be an encouraging way to achieve behaviour change in valued, pro-social directions”.

The supported dissonance models suggest that the sheer weight of cognitions on each side of the cognitive discrepancy should determine the outcome of the dissonance resolution process. In other words, the number and scope of salient cognitions matters, as each will be incorporated

into the evaluation in accordance with their perceived relevance and importance. This amounts to an argument for the continued use of pluralistic messaging by animal advocates, including health-, environment-, and animal-based messages. Moreover, addressing each of these issues in a single cohesive communication (as does the presentation in the video stimulus) reduces the possibility for audiences to raise many of the defences to which they frequently refer. Any discussion of the ethics of meat consumption must first establish the behaviour as a choice in order to preclude the fall-back claim “but we need meat” from arising later in the discussion: making this case must necessarily draw on medical and dietary advice. As animal activists are not regarded as the most reliable spokespeople on such issues, they should ensure that they can support their various claims and would preferably enlist esteemed medical professionals to this end.

On the other hand, the present study has demonstrated that not all cognitions carry equal weight in determining summary attitudes: with cognitions regarding extant behaviours exerting a disproportional influence. This finding has implications for effective personal advocacy, but also raises questions about the overall strategy of animal advocates. In personal advocacy situations, the clear lesson is that audiences should be encouraged to verbalise pro-attitudinal sentiments – however minimal the concession – at an early stage in the discourse and before they have reason or opportunity to draw upon their arsenal of defensive strategies. Applying the foot-in-the-door marketing approach to animal advocacy clearly implies communication as a dialog, whereby the target individual contributes their perspective on the topic as well as receiving information from the advocate. The advocate can encourage and steer these contributions with timely questions directed to their audience. This advice is not limited to animal-based messaging (where the advocate might induce statements such as “I care about animals”), but also applies to health-based messaging (“my health is important to me”), and environment-based messaging (“I believe it important that we protect the environment”). It is desirable that these statements be made publically – at least to the activist if no one else – but private contemplation of the same sentiments is also likely to help to some degree. In this context, non-targeted mass communications may also be more persuasive if they begin by asking relevant questions of the audience.

In addition to attempts to influence behaviours by shifting attitudes, the study findings also suggests that the activist goal of ‘vegan for the animals’ may be productively pursued through alternative strategies. The important role played by cognitions regarding behaviours in determining the summary attitudes of individuals points to the utility of activist strategies aimed directly at changing behaviours – even when motivating attitudes are initially absent, or poorly defined. Consistent with the many studies showing that those practicing vegan lifestyles are likely to adopt additional motivations for maintaining the practice over time, it seems that pro-animal attitudes are likely to eventuate as a consequence of consuming a plant-based diet, and not merely the other way around. An innate drive for consistency and/or unconflicted action

tendencies appears to underlie this trend. In this context, vegan activist initiatives which encourage a shift to a plant-based diet for any reason (or no reason at all) may be just as effective in attaining the ultimate goal of 'vegan for the animals'. Examples of such initiatives include the internationally fostered 'Veganuary' initiative, which invites individuals to try a plant-based diet for the month of January and provides them with relevant support including recipes and nutritional advice. This campaign typically does not focus on the *why* of veganism in promoting participation, but instead issues an open invitation using a simple 'try it and see' approach. Participants should learn the *how* of veganism throughout the month, thereby addressing the widespread belief (also in the present sample) that veganism is possible, but too demanding. The results from the present study support the hypothesis that abstinence from animal products 'makes compassion easier' (Leenaert 2014) and may therefore lead to more pro-animal attitudes, but this topic demands further academic investigation.

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## 8 APPENDICES

### 8.1 Appendix 1: Q-sample

50 statements printed onto cards and grouped into 5 sets of 10 items according to thematic similarity.

#### **Set A: Covers the themes of nutrition, taste preferences, and concepts of ‘naturalness’.**

##### **42 A: Humans need meat as part of a healthy diet**

Source: Rothgerber (2012) HEALTH JUSTIFICATION subscale (original wording: “We need meat for a healthy diet”); Piazza et al. (2015) NECESSARY subscale (original wording: “It is necessary to eat meat in order to be healthy” & “A healthy diet requires at least some meat”).

##### **17 A: Vegan diets can be nutritionally adequate**

Source: Rothgerber (2012) HEALTH JUSTIFICATION subscale (original wording: “We need the protein we can only get in meat for healthy development”); Piazza et al. (2015) NECESSARY subscale (original wording: “You cannot get all the protein, vitamins and minerals you need on an all plant based diet”).

##### **13 A: Meat consumption is a choice, not a necessity**

Source: Rothgerber (2012) HEALTH JUSTIFICATION subscale (original wording: “Meat is essential for strong muscles”); Piazza et al. (2015) NECESSARY subscale (original wording: “A healthy diet requires at least some meat”).

##### **1 A: Meat consumption is linked to many health problems**

Source: Bite-sized Vegan’s Nutritional Series with Dr. Michael Greger of Nutritionfacts.org (original wording: “The consumption of animal products is a contributing factor in 14 of the 15 leading causes of death in the United States”).

##### **24 A: My taste preferences are more important than the lives of other animals**

Source: Rothgerber (2012) PRO-MEAT subscale (original wording: “I enjoy eating meat too much to ever give it up”); Piazza et al. (2015) NICE subscale (original wording: “Meat adds so much flavor to a meal it does not make sense to leave it out”).

##### **37 A: Humans evolved eating meat, so we should continue to do so**

Source: Rothgerber (2012) HUMAN DESTINY/FATE subscale (original wording: “It wouldn’t surprise me to learn that scientists believe the human body (e.g., our teeth) has evolved to eat meat”); Piazza et al. (2015) NATURAL subscale (original wording: “Human beings are natural meat-eaters - we naturally crave meat”).

##### **48 A: Healthy vegan diets cost substantially more than diets including meat**

Source: YouTube comments to Bite-sized Vegan’s Nutritional Series (original wording: “Not everyone can afford to eat good vegan food”).

**4 A: Well prepared vegan dishes can be delicious**

Source: Piazza et al. (2015) NICE subscale (original wording: “Meals without meat would just be bland and boring”).

**29 A: Meat tastes too good to worry about what all the critics say**

Source: Rothgerber (2012) PRO-MEAT subscale (original wording: “Meat tastes too good to worry about what all the critics say”); Piazza et al. (2015) NICE subscale (original wording: “Meat adds so much flavor to a meal it does not make sense to leave it out”).

**31 A: Our early ancestors ate meat: it violates human destiny to give it up**

Source: Rothgerber (2012) HUMAN DESTINY/FATE subscale (original wording: “Our early ancestors ate meat, and we are supposed to also” & “It violates human destiny and evolution to give up eating meat”); Piazza et al. (2015) NATURAL subscale (original wording: “Our human ancestors ate meat all the time”).

**Set B: Covers the themes of ethics, capacities of non-human animals, and dichotomization of humans and other species.**

**50 B: Only humans are conscious: other species are not**

Source: YouTube comments to Gary Yourofsky’s “Most Important Speech” (original wording: “Eating animals is fine because they are not conscious”); Cambridge Declaration on Consciousness (2012).

**19 B: Current EU laws ensure the ethical treatment of all animals**

Source: YouTube comments to Gary Yourofsky’s “Most Important Speech” (original wording: “Eating meat is legal so there’s nothing wrong with it”).

**3 B: The lives of other species matter to them**

Source: Reagan (1983), (original wording: “Many non-human animals are also the subjects of a life”).

**22 B: Animals suffer when being raised and killed for meat**

Source: Rothgerber (2012) DENY subscale (original wording: “Animals don’t really suffer when being raised and killed for meat”).

**40 B: Killing animals for meat is fine as long as they have lived a good life**

Source: YouTube comments to Gary Yourofsky’s “Most Important Speech” (original wording: “Of course animals have to die so we can eat meat, but what matters is how they live”).

**41 B: Like humans, other species can experience pleasure and pain**

Source: Rothgerber (2012) DENY subscale (original wording: “Animals do not feel pain the same way humans do”).

**27 B: It is ethically better to hunt animals than to farm them**

Source: Q sort pre-test participant (original wording: "I have less of a problem with hunting than with commercial production").

**7 B: Humans have souls, whereas other animals do not**

Source: YouTube comments to Bite-sized Vegan's "Vegan Extremism" speech (original wording: "She just ignores that animals don't have souls").

**14 B: Animals welfare conditions on factory farms are satisfactory**

Source: YouTube comments to Gary Yourofsky's "Most Important Speech" (original wording: "I don't see how anyone can accept the treatment on factory farms").

**35 B: Killing a healthy being is never 'humane' if it is against their will**

Source: Gary Yourofsky's "The Excuses Speech" (original wording: "There is no such thing as humane rape or humane murder").

**Set C: Covers the themes of religion and human exceptionalism.**

**43 C: God intends that humans kill and eat animals**

Source: Rothgerber (2012) RELIGIOUS JUSTIFICATION subscale (original wording: "God intended for us to eat animals").

**12 C: God intends that humans should protect and care for other species**

Source: Rothgerber (2012) RELIGIOUS JUSTIFICATION subscale (original wording: "It is God's will that humans eat animals.")

**10 C: Humans may eat meat because other species do**

Source: YouTube comments to Gary Yourofsky's "The Excuses Speech" (original wording: "Lions eat meat, so it's natural for us too").

**23 C: Whether or not to eat meat is an ethical question**

Source: YouTube comments to Bite-sized Vegan's "Vegan Extremism" speech (original wording: "Who are (vegans) to say what is right or wrong?").

**32 C: Human superiority means a responsibility to protect other species, not a right to kill them**

Source: YouTube comments to Gary Yourofsky's "Most Important Speech" (original wording: "Just because we have power over animals doesn't mean that we should abuse that power").

**49 C: It's acceptable to eat animals that are bred for that purpose**

Source: Rothgerber (2012) HIERARCHICAL JUSTIFICATION subscale (original wording: "It's acceptable to eat certain animals because they're bred for that purpose").

**15 C: Ultimately, animals are here to serve our needs**

Source: Rothgerber (2012) HIERARCHICAL JUSTIFICATION subscale (original wording: “Ultimately, animals are here to serve our needs”).

**8 C: Humans are at the top of the food chain and meant to eat animals**

Source: Rothgerber (2012) HIERARCHICAL JUSTIFICATION subscale (original wording: “Humans are at the top of the food chain and meant to eat animals”).

**28 C: I have spent time thinking about the ethical aspects of animal products**

Source: YouTube comments to Bite-sized Vegan’s “Vegan Extremism” speech (original wording: “Until I read Animal Liberation I had never thought about food as an ethical issue”).

**36 C: Whether or not to eat meat is a matter of personal choice**

Source: YouTube comments to Gary Yourofsky’s “Most Important Speech” (original wording: “What people eat is personal choice and not for other people to judge”).

**Set D: Covers the themes of psychological comfort, dichotomization of ‘food animals’ and other species.**

**44 D: When I look at meat, I often think about the living being it came from**

Source: Rothgerber (2012) DISSOCIATION subscale (original wording: “When I look at meat, I try hard not to connect it with an animal”; “When I eat meat, I try not to think about the life of the animal I am eating”).

**20 D: I am comfortable thinking that animal lives must be ended to provide meat**

Source: Rothgerber (2012) DISSOCIATION subscale (original wording: “I do not like to think about where the meat I eat comes from”).

**6 D: I have mixed feelings about the consumption of animal products**

Source: Loughnan et al. (2010), (original wording: “Amongst omnivores, evaluations of meat are ambivalent”).

**25 D: Humans need to kill animals to avoid the world being overrun by animals**

Source: YouTube comments to Gary Yourofsky’s “The Excuses Speech” (original wording: “If we all stopped eating meat the world would be overrun by animals”).

**33 D: It is unjust to treat highly similar animals like dogs and pigs so differently**

Source: Rothgerber (2012) DICHOTOMIZATION subscale (original wording: “I am more sensitive to the suffering of house pets like cats and dogs than other wild animals”; “It seems wrong that people in some cultures eat dogs and cats”).

**45 D: I have spent time thinking about the fact that animals must be killed to provide meat**



Source: YouTube comments to Gary Yourofsky's "Most Important Speech" (original wording: "This sounds silly, but I never really thought about meat coming from animals").

**11 D: I avoid people who talk to me about the suffering of animals we eat**

Source: Rothgerber (2012) AVOID subscale (original wording: "I try to stay away when people start talking to me in graphic terms about how the animals we eat suffer").

**2 D: I am comfortable thinking about what goes on in slaughterhouses**

Source: Rothgerber (2012) AVOID subscale (original wording: "I would have problems touring a slaughterhouse"; "I try not to think about what goes on in slaughterhouses").

**21 D: To me, there is a real difference between animals we keep as pets and animals we eat**

Source: Rothgerber (2012) DICHOTOMIZATION subscale (original wording: "To me, there is a real difference between animals we keep as pets and animals we eat as food").

**34 D: I would be prepared to kill any animals I eat myself, instead of paying someone to do it**

Source: Gary Yourofsky's "Most Important Speech" (original wording: "If you are not prepared to kill the animal yourself, why would you think that it's alright to pay someone else to do it for you?").

**Set E: Covers the themes of environmental impacts and social influences.**

**46 E: Diets including meat require much more land and water to produce than vegan diets**

Source: Bite-sized Vegan's "Vegan Extremism" speech (original wording: "Due to the inefficiency of converting plants calories into animal calories, vegan diets have a much smaller ecological footprint than omnivorous diets").

**16 E: If meat eating is part of a given culture, that practice should not be criticized**

Source: YouTube comments to Gary Yourofsky's "Most Important Speech" (original wording: "It's wrong for vegans to criticize other people's cultural practices").

**5 E: Diets including meat produce dramatically more greenhouse gasses than vegan diets**

Source: Bite-sized Vegan's "Vegan Extremism" speech (original wording: "Animal agriculture accounts for more greenhouse gases than all forms of transport put together").

**26 E: If all of my family and friends gave up eating meat I would not eat meat**

Source: YouTube comments to Bite-sized Vegan's "Dealing with Non-Vegan Friends and Family" (original wording: "Would you still eat meat if everyone you knew stopped eating it?").

**38 E: It is too much effort to seek out vegan alternatives**

Source: Gary Yourofsky's "Most Important Speech" (original wording: "Being vegan is easy and you don't have to sacrifice any of the tastes you like because there are a huge number of vegan alternatives available").

**47 E: Most people eat meat, so it must be OK to do so**

Source: Piazza et al. (2015) NORMAL subscale (original wording: “Most people eat meat, and most people can’t be wrong”).

**18 E: I regard myself as a person who cares about animals**

Source: Rothgerber (2014), (original wording: “I don’t like to hurt animals”; “compassionate people don’t hurt animals”).

**9 E: These days it is socially acceptable to be vegan**

Source: Piazza et al. (2015) NORMAL subscale (original wording: “It is common for people to eat meat in our society, so not eating meat is socially offensive”).

**30 E: Being vegan would damage my relationships with family or friends (or has done)**

Source: YouTube comments to Gary Yourofsky’s “Most Important Speech” (original wording: “My father would disown me if I told him I was vegan”).

**39 E: These days it is socially acceptable to be a meat eater**

Source: Piazza et al. (2015) NECESSARY subscale (original wording: “Most people eat meat, and most people can’t be wrong”).

## 8.2 Appendix 2: Participant Consent Form and Ethical disclosures

### Form presented to prospective research participants:

You are invited to participate in a Modul University Vienna research project being conducted by David Leonard, MSc, as part of his PhD research.

While the experience for various participants will differ slightly, the process will last around 2 hours and, at most, you will be asked to:

- Complete a range of demographic questions on paper
- Think about a range of questions and answer on paper using multiple-choice options
- Watch a video presentation which runs for around 40 minutes
- Complete a Q sort (arranging a set of printed statements in a grid)
- Verbally answer some questions about the procedure in an informal interview format

Participate is entirely voluntary. You may refuse to participate or stop at any time during the procedure and keep all of the materials you have completed up to that point.

If you choose to participate, all of the information you provide will be kept confidential by the researcher (David Leonard). When the data is communicated further (e.g. in the dissertation, through presentations, or as journal articles) it will always be presented in an aggregated and anonymized way so that you cannot be identified.

If you consent to participating, please sign below:

First and last name: \_\_\_\_\_

Student number: \_\_\_\_\_

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

### Additional disclosures read to study participants before commencing demographic questions:

Thank you for agreeing to participate in this research project. I want to make it clear that participation is entirely voluntary. You may stop at any time and may keep the materials in front of you. All of the information you provide will be kept confidential by the researcher (myself) and will only be communicated further in an aggregated and anonymized way so that you cannot be personally identified.

Just to clarify a term used in this exercise, whenever you see the word “ethical” it refers to your personal perception of right and wrong according to however you make such distinctions. It does not refer to what society thinks generally, or to what some particular group thinks – although these may coincide with, or inform your personal judgement.

### 8.3 Appendix 3: Q sort conditions of instruction

– read to study participants before commencing the Q sort:

You have in front of you a stack of 50 cards with statements on them. Each statement will form part of your answer to the question: “How do you feel about the use of animals for food in Europe?” which you see across the top of the grid in front of you. Please note that the question refers only to market economies in continental Europe, where a wide range of non-animal products are readily available.

Taking one card at a time, in order, consider whether you strongly agree, agree, disagree, strongly disagree, or have mixed or no feelings about the statement, and move the card to the corresponding box at the top of the paper. Deciding whether you agree or disagree generally, should be based on what you think about the factuality of the statement. Deciding whether you agree or agree strongly should be based on how important to you that statement is with respect to the use of animals for food in Europe.

You are entirely free to decide which box you place each card in. If you choose, they could all be placed in one box and none in the others, but it will make the next step easier if you are able to discriminate to some extent. Do not get too hung up on where to place an individual card – this is just the first step, and you have the chance to adjust your selection later. Once you have placed the first card, do the same with next card, and so on. Continue this process until all of the cards have been sorted into the five boxes.

Now it is time to transfer the cards to the grid. Take all of the cards from the ‘STRONGLY AGREE’ box, and spread them out in front of you so that you can see them all at once. From this group, you should choose the 4 cards with which you most strongly agree and transfer them to the far right column on the grid. If you find that you agree equally strongly with a number of cards, you can try to discriminate by considering which is most important to you. The next column should be filled with the cards you agree with a little less strongly, and so on. The order of the cards from top to bottom is irrelevant, it is only the left to right dimension which indicates your level of agreement. Again, do not get too hung up on where to place an individual card – you will have the chance to adjust your selection later. Continue this process until all of the cards from the ‘STRONGLY AGREE’ box have been moved to the grid. Then use a pen to mark the edge of the filled cells.

Next you will take the cards from the ‘AGREE’ box, spread them out, and continue to place them onto the grid working from right to left. Once the agree pile is finished, please use a pen to mark the edge of the filled cells. Then we switch to the other side of the grid. Next you will take the “STRONGLY DISAGREE” pile, spread them out in front of you, identify the cards with which you most strongly disagree, and transfer them to the leftmost column in the grid. Continue working from the left towards the centre, whereby each new column represents relatively lesser disagreement than the previous one. Once the “STRONGLY DISAGREE” pile is finished, again use a pen to mark the edge of the filled cells.

Follow the same procedure for the “DISAGREE” boxes, sorting from left to right. If, as in this case, one of your boxes has no cards in it after the initial sort, please just draw a second line and continue with the next box. Lastly, you should use the “MIXED OR NO FEELINGS” cards to fill the remaining gap in the grid, again placing the items you agree with more strongly towards the right, and those you disagree with more strongly towards the left.

Once the grid is complete, please spend some time to analyse the placement of the cards as a whole to ensure that it accurately represents your point of view on the topic. You are free to make any adjustments that you deem necessary. When you are satisfied, please write the number on the back of each card into the cell where the card is placed. Please notify the researcher when you have finished.

## 8.4 Appendix 4: Revised New Ecological Paradigm Scale (Dunlap et al. 2000)

Reality of Limits to Growth sub-scale (items: 1, 6, 11);

- 1. We are approaching the limit of the number of people the Earth can support.**
- 6. The Earth has plenty of natural resources if we just learn how to develop them.**
- 11. The Earth is like a spaceship with very limited room and resources.**

Anti-anthropocentrism sub-scale (items: 2, 7, 12);

- 2. Humans have the right to modify the natural environment to suit their needs.**
- 7. Plants and animals have as much right as humans to exist.**
- 12. Humans were meant to rule over the rest of nature.**

Fragility of Nature's Balance sub-scale (items: 3, 8, 13);

- 3. When humans interfere with nature it often produces disastrous consequences.**
- 8. Nature is strong enough to cope with the impacts of modern industrial nations.**
- 13. The balance of nature is very delicate and easily upset.**

Rejection of Exemptionalism sub-scale (items: 4, 9, 14);

- 4. Human ingenuity will insure that we do not make the Earth unlivable.**
- 9. Despite our special abilities, humans are still subject to the laws of nature.**
- 14. Humans will eventually learn enough about how nature works to be able to control it.**

Possibility of Ecocrisis sub-scale (items: 5, 10 15) .

- 5. Humans are seriously abusing the environment.**
- 10. The so-called "ecological crisis" facing humankind has been greatly exaggerated.**
- 15. If things continue as they are going, we will soon experience a major ecological catastrophe.**

Participants express their level of agreement with each statement on a five point scale extending from "strongly disagree" to "strongly agree". Agreement with the seven even numbered items signifies endorsement of the dominant social paradigm (DSP): as such, five points were allocated for responses of "strongly disagree", declining to one point for responses of "strongly agree". Agreement with the eight odd items reflects endorsement of the new environmental paradigm (NEP): as such, five points were allocated for responses of "strongly agree", declining to one point for responses of "strongly disagree". Scores across the fifteen items were then summed to provide a single score for each participant: high scores reflecting greater endorsement of the NEP and lower scores endorsement of the DSP.

## 8.5 Appendix 5: Discrimination Tolerance Scale

Participants are asked to rate how ethically problematic they find the following situations on a five point scale from “not ethically problematic” to “highly ethically problematic”.

**Despite many equally able and/or needing candidates from other groups...**

- ... an employer considers only homosexuals for an open position**
- ... an employer considers only older people for an open position**
- ... on public transport, certain seats are reserved for foreigners**
- ... on public transport, certain seats are reserved for white people**
- ... in an emergency situation, females are rescued first**
- ... in an emergency situation, national citizens are rescued first**
- ... atheists are not permitted to vote in the national election**
- ... 17 year olds are not permitted to vote in the national election**
- ... a man holds the door open for females, but not for other groups**
- ... a man holds the door open his religion, but not for other groups**
- ... a political party nominates only heterosexuals as candidates for an election**
- ... a political party nominates only Asian candidates for an election**

Given the instruction regarding other able/needing candidates, and given that the nature of each situation does not relate to specific characteristics of the discriminated groups in any meaningful way, each situation is considered to represent a case of unjustified discrimination. While several situations relate to “positive discrimination”, these are still regarded as unjustified because the preferential treatment of one group implicitly means the relative neglect of another group: that is, positive discrimination implies a corresponding negative discrimination.

Points are allocated according to the five point scale, with one point for answers of “highly ethically problematic”, rising to five points for responses of “not ethically problematic”. The scores across the twelve situations are summed to give a total score for the participant’s “tolerance for discrimination” – whereby lower scores (from highly problematic responses) represent a low tolerance for discriminatory behaviour, whereas high score indicate a high tolerance for discrimination.

## 8.6 Appendix 6: Moralization vs ethical decision making scale

Participants are asked to rank the options from 1 (least important) to 6 (most important)

**When deciding what I believe to be right or wrong, I rely on...**

- ... laws**
- ... religious scripture or guidance**
- ... my own feelings**
- ... my own reasoning**
- ... opinions of family and friends**
- ... general public attitudes**
- ... other, please specify: \_\_\_\_\_**

Ethical decision making is defined herein as the cognitive process of arriving at a judgement about the rightness or wrongness of a given action by considering, and seeking consistency with, one's personal standards. In contrast, moralization involves the application of normative standards and other external sources of guidance, regardless of any inconsistencies with other esteemed values. The former necessitates the use of "my own reasoning", which is inherently personal and cognitive, whereas all of the other options can inform the latter.

This scale measures the degree to which respondents tend towards ethical decision making by focusing exclusively on the ranking assigned to "my own reasoning": higher scores indicating a stronger tendency towards ethical reasoning, and lower scores indicating a stronger tendency towards moralization.

## 8.7 Appendix 7: Consumption level questions

On average, how many times per week do your meals include the following foods?

(please put a number in every box: write "0" for each food if you don't eat that meal)

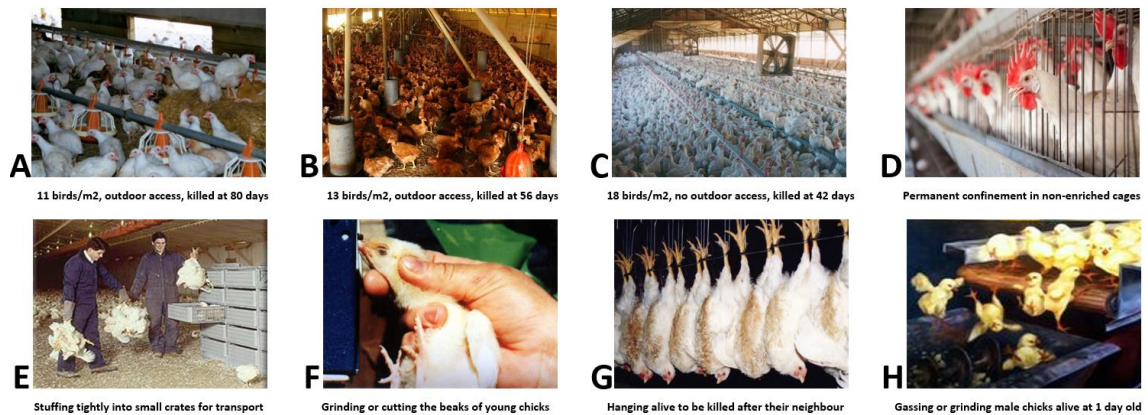
Food type	Number of BREAKFASTS per week	Number of LUNCHES per week	Number of DIN- NERS per week
Cereals and grains			
Dairy products			
Fruits			
Meat products			
Vegetables			



## 8.8 Appendix 8: Production knowledge questions

Participants are asked to refer to the eight pictures and descriptions below in order to answer the following questions:

1. Which practices are currently allowed under European law?
2. Which practices are used in the dominant mode of production in Europe?
3. Which practices can be used for products certified as “organic”?
4. Which practices can be used for products certified as “free range”?



Respondents can answer by either selecting all of the pictures which they believe apply to the given question, or by marking “I don’t know” for that question.

One point is allocated for every correct answer (i.e. one point for each applicable picture selected, plus one point for every non-applicable picture not selected) and one point is deducted for every incorrect answer (i.e. points are deducted for selecting non-applicable pictures, or failing to select applicable pictures). Alternatively, zero points were allocated for answers of “I don’t know”. The metric for production knowledge is calculated as the sum of these scores. Eight points (positive or negative) are available for each of the four questions, so the potential range of scores is from -32 to 32.

The correct answers, with sources, are:

Which practices are currently allowed under European law? A, B, C, E, F, G, H  
(EC 2007a)

Which practices are used in the dominant mode of production in Europe? C, E, F, G, H  
(de Castella 2014)

Which practices can be used for products certified as “organic”? A, E, F, G, H  
(EC 2007b)

Which practices can be used for products certified as “free range”? A, B, E, F, G, H  
(CIWF 2013)