

University of Vermont

UVM ScholarWorks

Environmental Studies Electronic Thesis
Collection

Undergraduate Theses

2012

The Meat of the Matter: Exploring the Relationship between Environmental Ethics and the Food Choices of Environmental Studies Majors at the University of Vermont

Samantha Morgan
Vermont

Follow this and additional works at: <https://scholarworks.uvm.edu/envstheses>

Recommended Citation

Morgan, Samantha, "The Meat of the Matter: Exploring the Relationship between Environmental Ethics and the Food Choices of Environmental Studies Majors at the University of Vermont" (2012). *Environmental Studies Electronic Thesis Collection*. 13.
<https://scholarworks.uvm.edu/envstheses/13>

This Undergraduate Thesis is brought to you for free and open access by the Undergraduate Theses at UVM ScholarWorks. It has been accepted for inclusion in Environmental Studies Electronic Thesis Collection by an authorized administrator of UVM ScholarWorks. For more information, please contact scholarworks@uvm.edu.

The Meat of the Matter

Exploring the Relationship between Environmental Ethics and the
Food Choices of Environmental Studies Majors at the
University of Vermont

Samantha Morgan

Submitted in partial fulfillment of the requirements of the Bachelor of Arts
degree in Environmental Studies at the University of Vermont

May 1, 2012

Advisors: Stephanie Kaza, Tyler Doggett

Abstract

The act of following a certain diet has enormous implications for the environment, with some diets causing significant harm and others causing considerably less. While this difference in environmental impact between diets may not be well known throughout the public, it can safely be assumed that Environmental Studies (ENVS) majors at the University of Vermont (UVM) are well versed in this topic, or at least have some awareness of it, through their course of study and general environmental interest. The fact that many ENVS students adhere to diets that cause more environmental harm than others represents an intriguing paradox that has yet to be closely studied. A survey investigating the extent to which environmental ethics influences students' food choice, as well as what other factors are present in their choice, was administered to all ENVS majors. The results of the survey indicate that environmental ethics does not influence students' food choice or, at least, it does not seem possible to conclude that a clear relationship exists between the two. An analysis of the open text responses, however, reveals that other values are common across diets, suggesting that, while environmental ethics does not seem to influence food choice, other values might. Another trend that emerged was that there seems to be a disconnect between the respondents' stated beliefs and their actual behavior. This conclusion was based on the fact that respondents ranked environmental degradation as either first or second most important in their choice across all diets, despite the fact that the environmental impact varies considerably between them. Potential explanations for this finding include the influence of situational factors in the respondents' lives, the existence of ambivalence, and a lack of cogent reasoning.

Keywords: food choice, environmental ethics, stated beliefs, human behavior, ENVS majors

Acknowledgements

I would like to thank everyone who has helped me in the process of writing my thesis. First and foremost, I owe a substantial amount of gratitude to Alan Howard, who not only taught me how to use the LimeSurvey software, but was instrumental in tabulating the results of my survey and explaining them in layman's terms. Without his thorough knowledge of the software and patient explanations, I would have had no meaningful information to speak of. I would also like to thank Rick Paradis for being accommodating and flexible in allowing me to test my survey on his students in ENVS 151. Likewise, Kit Anderson deserves enormous gratitude for coaching me through ENVS 201 and offering invaluable guidance throughout the thesis writing process. Adrian Ivakhiv was also integral to this process, and helped me a great deal by taking the time to send the survey out to the study population not once but twice. Last but certainly not least, I would like to thank my advisors, Stephanie Kaza and Tyler Doggett, for offering encouragement, revisions, and overall support throughout my project.

Table of Contents

	<i>Page Number</i>
Introduction	6
Personal Reflection Part I	8
Literature Review	11
Food Choices: A Broad Overview.....	11
Environmental Ethics: A Broad Overview.....	13
Reasons behind Food Choice.....	15
Personal Health.....	15
Animal Welfare.....	16
Environmental Degradation.....	18
The Relationship between Stated Beliefs and Actual Behavior.....	19
Conclusion.....	23
Methods	25
Goal and Overall Strategy.....	25
The Survey: A Broad Overview.....	26
Demographic Questions.....	26
Environmental Ethics Questions.....	27
Reasons Questions.....	27
Designing the Survey.....	29
Administering the Survey.....	31
Population of Study.....	31
Collecting the Data.....	33
Analyzing the Results.....	33
Results	35
Demographic Questions.....	35
Environmental Ethics Questions.....	39
Conclusions from Environmental Ethics Questions.....	47
Reasons Questions.....	48
Localvore.....	48
Vegetarian.....	53
Omnivore.....	56
No Red Meat.....	58
Vegan.....	60
Conclusions from Rankings.....	64
Discussion	65
Discrepancy between Stated Beliefs and Actual Behavior.....	65
Potential Explanation #1: Situational Factors.....	66
Potential Explanation #2: Ambivalence.....	70
Potential Explanation #3: Lack of Cogent Reasoning.....	71
Limitations.....	72
Conclusion	74
Personal Reflection Part II	78
Bibliography	80
Appendices	84
Appendix A: Initial List of Questions.....	84
Appendix B: Final List of Questions.....	86

Figures

Figure 1: Class Standing.....	35
Figure 2: Dietary Choice.....	37
Figure 3: Duration of Diet.....	38
Figure 4: Instrumental Value Statement One – General Responses.....	41
Figure 5: Intrinsic Value Statement Two – General Responses.....	43
Figure 6: Instrumental Value Statement Two – General Responses.....	45

Tables

Table 1: Class Standing.....	35
Table 2: Gender.....	36
Table 3: Dietary Choice.....	36
Table 4: Duration of Diet.....	38
Table 5: Intrinsic Value Statement One – General Responses.....	39
Table 6: Intrinsic Value Statement One – By Dietary Choice.....	40
Table 7: Instrumental Value Statement One – General Responses.....	41
Table 8: Instrumental Value Statement One – By Dietary Choice.....	42
Table 9: Intrinsic Value Statement Two – General Responses.....	43
Table 10: Intrinsic Value Statement Two – By Dietary Choice.....	44
Table 11: Instrumental Value Statement Two – General Responses.....	45
Table 12: Instrumental Value Statement Two – By Dietary Choice.....	46
Table 13: Rankings by Dietary Choice.....	62

Introduction

This project began as an attempt to gain insight into the reasons why Environmental Studies majors at the University of Vermont either do or do not eat meat. I was curious about this topic because, in my time at UVM, I have come to know many Environmental Studies students who consume meat despite being aware of the negative environmental impacts of mainstream meat production. These impacts have been well documented, and include contributions to climate change, land degradation, air and water pollution, and a loss of biodiversity. Specifically, the methane produced by cows is a potent greenhouse gas, the intensive agricultural practices used to grow grain degrades the land, the contamination of animal waste into nearby water sources and surrounding air leads to pollution, and the land that is cleared for the creation of factory farms results in deforestation.

Considering all of these negative effects, I secretly wondered why more Environmental Studies students were not vegetarian, since one of the most effective ways to reduce these impacts is to refrain from consuming meat. I decided to create a survey to see if I could explore this apparent discrepancy between a concern for the environment and actions that are known to degrade it. In my own experience, my beliefs about the environment, what one could broadly call my environmental ethic, has often influenced my food choices, and I was intrigued to see if this was the case for others as well. I was also curious about the reasons behind the students' choices, and hoped that they would shed light on what I had always seen as a disconnect between belief and behavior.

During the process of designing the survey, I realized I was thinking about the topic too narrowly. If I wanted to really explore the relationship between environmental ethics and food choice, I would have to include multiple diets, so I decided to broaden my survey to

include localvore, vegan, and those that exclude red meat. I also realized it would be more informative to include reasons for choosing a diet that went beyond environmental degradation, and expanded my survey to include the potential reasons of personal health, animal welfare, convenience, and cost.

The project had developed beyond my initial query, but still sought to answer the same general question: Why do people often say they should do one thing and then do another? Specifically in regards to food choice, why does it often seem that people are stating one belief and acting in ways that could be seen as undermining it? The answer is both one of personal interest and of larger societal importance. In a time when curtailing many environmental problems depends in part on individual actions in daily life, it behooves us to understand people's reasons behind their actions and the extent to which there even is a relationship between a person's beliefs and his or her actions in practice. The answer to this question is beyond the scope of my project, but by focusing my investigation on the more narrow topic of food choice among a specific population, I hope to contribute to this fascinating area.

Personal Reflection Part I

In working with this topic, it is both helpful and informative to synthesize my thoughts on the subject, specifically in terms of my own dietary choice and the environmental ethic behind it. It is helpful in that it allows me to record my thoughts before I begin working with the data in the hope that I may use this record to gauge the extent to which my position is influenced throughout the process, and it is informative in that it allows the reader to become familiar with my personal choices, in the interest of full disclosure.

I am a vegetarian, and have been ever since I became interested in the environment and ethical philosophy six years ago. My rationale is that it is immoral to inflict suffering on animals and damage to the environment solely for one's personal benefit, especially when multiple alternatives exist that provide similar, if not greater, benefits with much less harm to animals and the environment. The devastation to both parties is simply too great to be justified by something as trivial as human taste buds, and the ease with which one can fulfill these needs through means that greatly limit this destruction make it all the more immoral to continue such destructive practices. Yes, I feel limited in some ways by my diet, and feel this limitation acutely at times such as holiday meals and in many restaurants. However, at the same time that I feel tempted by meat-filled meals, I feel more strongly compelled to remain true to my conviction to alleviate suffering for animals and the environment in any small way that I can.

I have, at times, considered a meat-inclusive localvore diet, as many of its principles resonate with me. Many local meat products tout labels claiming the meat was “natural”, “humanely raised”, “pasture raised”, or “free range” and these sentiments would necessarily

have to be present before I would consider reintroducing meat into my diet. However, my issue with these labels is that they are often fairly meaningless, with no regulated standards to ensure the animals actually lived in the humane and healthy environment a term like “natural” suggests. There are, no doubt, local businesses that do raise animals in a way that is less harmful to both the animal and surrounding environment, and this type of situation represents one in which I would consider consuming meat again.

Contrary to what the label “vegetarian” might suggest, I have little issue with killing animals for human consumption on two conditions: the first being that they were treated to a life of dignity in the outdoors and killed humanely and the second being that I, or someone I know personally, has raised them and done the killing. While I believe strongly that animals have intrinsic value, I do not necessarily believe this precludes their eventual killing, as their value can be respected by providing them with a comfortable and fulfilling life. My other requirement, that I be at least peripherally involved in the killing, stems from my belief that everyone should own up to their actions, and that if someone wishes to benefit from the killing of an animal, that person should be prepared to engage in all the potential complexity and challenges that it entails. In other words, my objection is to the current practice, not to the principle, of meat consumption. Since I am not currently in the position to fulfill these requirements, I have chosen to abstain from meat consumption.

That being said, I recognize a way that I could further alleviate suffering, and it is one on which I have not yet acted. I believe that adhering to a vegan diet reduces harm to both animals and the environment by relying less on the animals as producers of human food, and less on the land to sustain animal agriculture. Therefore, in my effort to reduce harm, I feel I should be vegan, and it is in this way that I have not fully aligned my ethical

beliefs with my diet. I remain conflicted on this point, as I feel a sense of duty to live up to my values, while at the same time am aware that a vegan diet requires sacrifices I may not be able to commit to and sustain. In this way, I recognize the complexities of carrying out ethical beliefs in practice. Even those with strident convictions struggle with the daily realities they entail, and the struggle becomes all the more intense for those who have yet to define their beliefs, or who feel torn by the conflicting demands they place on those who hold them. The issue is not cut and dry, as few are, and this thesis does not purport to present it that way; rather, it is an attempt to delve deeper into the topic, to uncover some type of relationship in the chain from ethics and beliefs to action and behavior.

Literature Review

Food Choices: A Broad Overview

People choose to adhere to a great variety of different diets throughout the world, however, most can be grouped into five broad categories. While there exist endless variations on these categories, and they are by no means mutually exclusive, five groups encompass general diet choices fairly well: localvore, vegetarian, omnivore, no red meat, and vegan.

A localvore is a person who only consumes food that has been grown locally. Definitions of what it means for food to be grown locally vary, with some focusing on specific distances within which food must be grown and others focusing more on the idea of creating a relationship with both food and farmer that values a holistic understanding of the process and effects of agriculture (Rudy, 2012). Specifically, localvores try to develop this relationship by shopping at farmers' markets, growing their own food, and researching food miles, the distance their food has been transported to reach them (Stringer and Umberger, 2008). In general, localvores measure food by the amount of energy it provides versus the amount it squanders, and ultimately conclude that the non-local food system squanders more than it provides. Instead, their ideal would be a network of autonomous, local family farms. Due to these varied definitions, and the fact that it is a relatively recent trend, no reliable data exist on the amount of localvores in the population (Lavin, 2009). Motivations for becoming a localvore are equally varied, although most cite local foods' freshness, superior taste, and higher quality as the primary factors (Shea, 2008).

A vegetarian is a person who lives primarily on plant food and abstains from all meat (Lawrence, 1993). Within this broad category, several subsections exist that further

distinguish vegetarians' dietary preferences. Lacto-ovo vegetarians refer to those who consume both eggs and dairy products, lacto-vegetarians consume only dairy, and pescovegetarians consume fish (Fox and Ward, 2007). Currently about 3.2%, of the American adult population, or 7.3 million people, identify as vegetarian. Several reasons are cited for the choice to adopt this diet, with one study finding that 54% are motivated by animal welfare concerns, 53% by improvements to personal health, 47% by environmental concerns, and 31% by food-safety concerns (Harris et al, 2008).

An omnivore is a person who consumes plant products as well as meat and animal products. There is limited research on the reasons behind choosing this diet, perhaps because it is considered the mainstream diet, and only deviation from it warrants an explanation of motivating factors. However there is more reliable data on the proportion of omnivores in the general population: it is believed that as much as 88% of the U.S. population follows an omnivorous diet (McStay and Cunningham, 2009). In addition, meat consumption has been increasing 4% per year since 1999, with the increase concentrated in men's diets. Meat consumption within women's diets has decreased slightly, although the overall trend has continued to increase (Wang et al, 2010).

A person who does not consume red meat is someone who does not include red meat in his/her diet, but does include poultry, seafood, and all animal and plant products. In other words, the term "red meat" includes only beef, veal, pork, and lamb (Henry, 2007). It is estimated that around 8% of the U.S. population follows a diet that excludes red meat (McStay and Cunningham, 2009). Of those who do not eat red meat, the distribution is fairly equal among men and women. Reasons for choosing this diet appear varied, although many cite personal health as a motivating factor (Stahler, 2011).

A vegan is a person who excludes not only meat but all animal products from his/her diet, including eggs, milk, cheese, and often honey (Hood, 2008). In addition, strict vegans abstain from wearing clothing made from animal products, such as leather, wool, and silk (van der Kooi, 2010). Figures on the percentage of vegans in the general population vary due to numerous definitions of the term, however it is estimated that approximately 0.8% of the population adheres to a strictly vegan diet (McStay and Cunningham, 2009). It has been found that vegans are most drawn to the diet due to concerns about animal cruelty in the food industry, although others are drawn for personal health, environmental, or spiritual reasons. Still others are drawn to the vegan diet due to its low fat content, and are mainly motivated by a desire to lose weight. In some instances, the adoption of a vegan diet is a cover for an eating disorder such as anorexia (Hood, 2008). Others become vegan due to food allergies, such as lactose intolerance, which often requires a person to restrict the consumption of dairy products that contain lactase, such as milk (Shaukat, 2010).

Environmental Ethics: A Broad Overview

Environmental ethics explores the moral relationship between humans and the environment. The approach rests on the idea that moral principles can sometimes influence human behavior toward nature, and attempts to establish people's responsibilities to nature, as well as the reasoning behind these responsibilities (des Jardins, 2006). Along these lines, environmental ethics relies strongly on the concept of obligation, in other words, the requirement to follow through on these responsibilities (Booth, 2009).

In general, there are two perspectives within environmental ethics: instrumental value and intrinsic value. Roughly, instrumental value sees nature as a means to an end, as a resource for humans to use for their own benefit. For example, trees may be viewed as

valuable because they sequester carbon and provide oxygen but are generally not ascribed value based on their existence alone under this ethic. In contrast, an intrinsic value ethic sees nature as an end in itself; it has value simply because it exists, in the same way that a person is considered valuable simply because s/he exists. Nature possesses its own worth whether or not it provides services to humans. In other words, while instrumental value attributes value to nature based on its status as a means to human ends, intrinsic value allows that nature can have value regardless of its usefulness to humans (Svoboda, 2011).

This distinction is important because it may be that there is an association between the environmental ethic to which a person ascribes and his/her feelings toward the appropriate treatment of the environment. Generally speaking, people who hold an intrinsic value ethic believe that something's possession of intrinsic value creates a prima facie duty for humans to protect it. In other words, if nature possesses intrinsic value, it automatically deserves protection from humans, and does not require additional properties in order to deserve this protection. Therefore, people who believe nature has intrinsic value can sometimes feel a strong moral compulsion to protect it; if nature holds value in itself, it seems morally wrong to harm it (Brennan and Yeuk-Sze, 2011). An instrumental value ethic, however, sometimes permits more damage to the environment, since, according to this ethic, a thing must be important for human use in order to be valuable and warrant protection. Since not all parts of nature have aesthetic, economic, or medicinal use for humans, the instrumental value ethic sometimes grants protection to fewer aspects of nature than the instrumental value ethic generally does (Hourdequin and Wong, 2005).

It is also notable that ethical concerns, and specifically environmental ethics, have been identified as an influential factor in food choice in at least one previous study. Steptoe

et al (1995) conducted a survey on motives behind food choice of the general population in London. A wide range of factors emerged as important in the respondents' choice, including health, mood, convenience, sensory appeal, weight control, familiarity, and, most relevantly, ethical concerns. In this particular study, ethical concern encompassed both environmental and political issues. The results showed that ethical concerns were more influential for older people and women. This study therefore provides interesting insight into an emerging relationship between ethics and food choice.

Reasons behind Food Choice

Personal Health

One of the most often cited considerations behind choosing a certain diet is personal health (Fox and Ward, 2008). Milosevic et al (2012) corroborate this point, and argue that the extent to which a diet will contribute to one's health is a major factor in making a dietary choice, particularly when it comes to vegetarian diets. The belief that reducing meat consumption is beneficial for personal health is often cited as the strongest factor influencing one's diet (Tobler et al, 2011), with both male and female adults citing improved health as the main advantage of a plant-based diet (Mangels, 2011).

In fact, while some environmentalists think the trend toward plant-based diets is reflective of a desire to change larger issues, personal reasons such as health appear to drive most vegetarians (Walker, 1995). Specifically, a few of the main health motivations include persistent health issues, such as indigestion, obesity or a response to a single event such as a heart attack (Fox and Ward, 2008). Others seek to anticipate these potential health issues, and adopt a plant-based diet to avoid their development or curtail their effects. Some are concerned by disease trends in their family that they wish to avoid, especially breast and

ovarian cancer, stroke, and osteoporosis (Fox and Ward, 2007). The desire to limit exposure to many of the zoonotic diseases that intensive farming practices foster and disseminate to humans, such as H5N1 and E. coli, is also cited as a motivating factor (Deckers, 2009). In addition to these more serious considerations, some vegetarians cite aesthetic health concerns as their primary motivation. The desire for an overall fit or youthful appearance, such as the belief that a plant-based diet will contribute to a healthy skin tone, is sometimes attributed to the adoption of the diet (Wilson et al, 2004).

Interestingly, many people also cite personal health as a reason for eating meat. Red meat is credited with providing the body with high levels of iron, Vitamins B and D, Omega 3, and all essential amino acids (Stanner, 2007). Some who choose to eat meat have studied the recent Paleolithic diet trend and cite its findings as at least partial motivation for following the diet. Followers of this trend have studied what our Paleolithic ancestors ate, a diet heavy in lean meats, fish, and fruits and vegetables and light on dairy, and have concluded that, since this diet sustained our ancestors, it must be healthy for modern people as well (Mueden, 2010).

Animal Welfare

Concern for animal welfare is also a consideration for many when choosing a diet, although primarily for vegetarians and vegans. Many vegetarians avoid meat produced by factory farms due to a desire not to inflict unnecessary pain and suffering on other beings, in the way that these methods of animal husbandry inevitably do (Deckers, 2009). This desire appears to be present across age groups. In a 2010 study on motivations for adopting vegetarianism in children who were raised in meat eating families, every child cited animal suffering as the primary inspiration for his or her choice (Husar and Harris, 2010). Other

arguments do not specifically address suffering but agree that killing animals for the pleasure or benefit of humans is innately immoral (Deckers, 2009).

Some also cite a feeling of disgust toward meat that is fueled by poor animal treatment as a motivating factor for adopting a vegetarian or vegan diet. A study by Fessler et al (2003) concludes that the disgust reaction that many moral vegetarians experience toward meat is caused by, and not causal of, their beliefs. Moral vegetarians are also more likely to experience a reaction of disgust toward meat than are health vegetarians, as a way of supporting and internalizing a rejection of something that conflicts with their ideology (Rozin et al, 1997). Specifically, blood is a well-known elicitor of disgust, and the association between blood, animals, and meat is most likely a factor in moral vegetarians' disgust toward meat (Olatunji and Sawchuk, 2005).

There is far less literature on the motivations behind choosing a vegan diet, however the few sources that do exist tend to agree that people are motivated to become vegan mainly out of concern for animal welfare, and are especially influenced by childhood experiences with animals (Pallotta, 2008). This focus on animal welfare is often so strong that it drives the somewhat common belief among vegans that vegetarian ideology and practice are inconsistent. In other words, if vegetarians are motivated to abstain from meat, their failure to abstain from all animal products results in inconsistency, so important is animal welfare to the vegan perspective (van der Kooi, 2010; Zamir, 2004). This point is corroborated by Brooks (2009), who challenges moral vegetarians to move further toward a cruelty-free lifestyle by becoming vegan.

Environmental Degradation

Concerns over the environmental impact of each diet can also be a motivating factor in food choice, although primarily for vegetarians and localvores. While the most common reasons cited for adhering to a vegetarian diet are personal health and animal welfare, some vegetarians credit awareness of the negative environmental effects of a meat-based diet as one of their motivators, although rarely as the sole or primary reason (Gaard, 2002). The environmental effects of a meat-based diet are well documented, and include carbon dioxide and methane production as a contributor to climate change, the contaminating waste of factory farms, deforestation to create room for cattle as well as the grain they consume, soil erosion, and a high incidence of pesticide use among others (Holmes, 2010). In another study, Adams (2000) found that ethical concerns about the welfare of animals and the environment are sometimes cited as reasons to adopt a vegetarian diet, although almost always after personal health. The desire to contribute to “ecosystem health” by reducing his or her impact on the environment is also a contributing factor in choosing vegetarianism (Hoek et al, 2004).

However other studies have shown that the belief that vegetarianism is beneficial to the environment is the single strongest predictor of vegetarianism as a dietary choice (Kalof et al, 1999). In the same vein, the adoption of a vegetarian diet has sometimes been shown to occur simultaneously with the presence of other environmentally friendly practices, such as walking and biking, which suggests a common motivation of environmental concern (Fox and Ward, 2008), as well as the fact that environmentalism might be a stronger indicator than the general literature implies.

Environmental degradation is also a significant factor in localvores' food choices. In one study, 24% of all localvores cited "environmental concerns" as the most important reason for choosing their diet, with freshness ranking first (60%) and support for local producers (29%) and taste (19%) also popular choices (IGD, 2006). Of those who are concerned with the environmental impact of food, localvores tend to worry most about the effect of pesticides on the environment and the greenhouse gas emissions associated with transporting food to consumers (Rudy, 2012). Others focus their concerns on climate change, with many localvores advocating the consumption of local food as both a way to reduce greenhouse gas emissions and also to provide food security in the face of likely impacts of climate change on the industrial food system (Bess and Freedman, 2011).

The Relationship between Stated Beliefs and Actual Behavior

The fact that the beliefs people state and the behavior they exhibit often contain discrepancies is evident throughout everyday life, as well as in several notable psychological studies (Maio et al, 2001). One reason that people often fail to act in accordance with their beliefs is because the beliefs lack cognitive support. In other words, people often attach strong feelings to their values but rarely attach strong, rational arguments to them. Specifically, the researchers found that, when asked for reasons behind their values, people who had not previously formed cogent arguments gave a random collection of simple thoughts, whereas those who had previously formed logical arguments were able to give clear, complex explanations. This finding is meaningful in understanding behavior in that the researchers also found that people with clearly formed cognitive support, or reasons, for their values were more likely to behave in accordance with them (Maio et al, 2001).

There may also be discrepancies between beliefs themselves, which in turn can cause discrepancies between beliefs and behavior. Some studies have shown that when people detect an inconsistency in a set of circumstances or beliefs, they will most likely change their mind regarding at least one belief in order to resolve the inconsistency (Walsh and Johnson-Laird, 2009). However, people are not always aware of internal, attitudinal discrepancies (Petty and Briñol, 2009). In one study by Karpen (2012) participants were asked to complete questionnaires regarding their beliefs toward one topic at two different sittings, separated in time by two weeks. The discrepancies in responses between the two sittings were calculated, and a larger degree of discrepancy was taken as evidence that internal ambivalence or conflict over beliefs on the topic was present. Overall, Karpen found that participants with lower levels of internal discrepancies changed their attitudes less frequently. Moreover, the statements of these participants regarding their attitudes were more predictive of their actual behavior (Karpen, 2012).

This dovetails with another reason that has been given for apparent discrepancies between beliefs and behavior in relation to food choice specifically: ambivalence. Numerous definitions for ambivalence exist, but most refer at least generally to the simultaneous existence of both positive and negative feelings toward an object, idea, or topic (Sparks et al, 2001). While it is commonly believed that positive and negative attitudes about an object are usually diametrically opposed to each other, research has shown that holding both positive and negative attitudes toward an object is actually quite common. Perhaps the most relevant aspect of ambivalence to this study is the fact that people who hold less ambivalent attitudes are more likely to behave in accordance with them (Armitage and Conner, 2000; Povey et al, 2001).

While mixed feelings sometimes play a role in terms of food choice, ambivalence in these cases is primarily caused by a conflict between dominant motives as a result of variations in the strength of each (Sparks et al, 2001). For example, when making a decision about whether to consume meat, some people experience a conflict of motives and find themselves torn between moral concerns for animal welfare and the appealing taste of meat. When such a conflict exists, it may be that there is also a decrease in intention-behavior consistency, meaning there is a discrepancy between what people intend or believe and what they do in practice (Olsen, 1999). This conflict often results in negotiations, since it is rare for all of a person's values or motives to be fulfilled by one food choice, and the negotiations are often undertaken by prioritizing values in order to simplify the decision. These negotiations often include creating certain rules, such as the elimination, limitation, substitution, or addition of certain foods, and often result in tradeoffs between values (Sobal and Bisogni, 2009).

In yet another study, researchers found that, after educating people on the environmental benefits of reducing meat consumption and eating seasonal produce, even those who were convinced by the arguments and stated that they were considering following their recommendations did not follow through in practice. For those who considered eating seasonal produce, the results were not terribly striking: those who considered it were overall not likely to make the change in practice. However, in the meat consumption portion of the study, the results were quite striking: those who believed reducing their meat consumption would have positive environmental effects were less likely to actually reduce their consumption than those who did not believe the argument (Tobler, 2011). This shows that,

although people may believe something to be true, this belief may not always cause them to act in accordance with it.

Another study corroborates this discrepancy between beliefs and behavior and offers yet another potential explanation: situational factors, or circumstances that are present in an individual's life that makes them feel limited in their ability to carry out their values in their behavior. Barton et al (2011) found that, despite rather extensive knowledge of different types of food and clearly stated preferences for one type, people will often eat other types in practice. Specifically, participants in the study, adults from a variety of underprivileged areas throughout the United Kingdom, clearly stated that they preferred to eat fresh, unprocessed food but, in practice, reported eating primarily processed food. Their responses to this discrepancy seemed to indicate one of two things. One possibility is that the preferences people state are not always what they actually prefer. Another possibility, which the authors offer as their conclusion, is that the respondents felt in a position in which they were forced to make tradeoffs between the quality of food and the price and convenience of such food, suggesting that situational factors in a person's life can strongly influence their ability to follow through on their stated attitudes in practice.

The research of Sobal and Bisogni (2009) expands on the idea of situational factors in food choice. They first introduce the influence of contexts, or an individual's environment, on food choice, and distinguish between macro level contexts, such as societal and economic forces, and micro level contexts, such as family pressure and workplace structures, but contend that all contexts influence an individual's food choices. Resources in a person's life, including financial, material, human, social and cultural capital, are another important feature in their research. Moreover, the research stresses that these aspects change

throughout a person's life, especially during significant life events, such as a change in residence.

Further evidence for the influence of situational factors is found in the research of Hauser et al (2011). A survey examining the relationship between values and food choice among consumers in Switzerland showed that respondents value authenticity, conviviality and quality when purchasing and eating food. Although the vast majority felt that their current food products do not fulfill these values, they felt restricted by situational constraints, specifically time and the availability of a range of food choices. The authors conclude that situational factors offer a potential explanation for what they call the intention-behavior gap when it comes to food choice. Despite the strong influence of these psychological phenomena, Koster (2006) contends that not nearly enough psychological research has been applied to the topic of food choice, and that this needs to occur in order to achieve the fully interdisciplinary approach that is necessary to understand the issue.

Conclusion

People adhere to a variety of different diets, however, for simplicity, they can be grouped into five broad categories: localvore, vegetarian, omnivore, no red meat, and vegan. Figures vary due to the relatively recent development and diverse definitions of several of the diets, however it can be estimated that, in the general population, approximately 3.2% are vegetarians (Harris et al, 2008), 88% are omnivores, 8% do not eat red meat, and 0.8% are vegans (McStay and Cunningham, 2009). As of this writing, no studies had been conducted to determine the proportion of localvores in the population (Lavin, 2009). When viewing this distribution through an environmental lens, it is interesting to consider the potential effect that adherence to a certain environmental ethic might have on dietary choice.

Overall, there are two broad perspectives within environmental ethics: instrumental value, which focuses on the environment's usefulness to humans, and intrinsic value, which assigns value to nature for its own sake, as an end in itself (Brennan and Yeuk-Sze, 2011).

Reasons for adherence to the diets are as varied as the diets themselves, although the most commonly cited factors are personal health, animal welfare, and environmental degradation, with some factors cited in different formulations for all five diets, and others predominantly used for vegetarian, vegan, and localvore diets. A curious aspect of human behavior has been noted in regard to food choice specifically: people will often state a belief and then not act in accordance with the belief (Sparks et al, 2001). Researchers have approached this phenomenon in different ways, with some focusing on the existence (or lack of) rational arguments (Maio et al, 2001), others on ambivalence (Sparks et al, 2001), and still others on the situational factors, such as poverty, that can affect the ability to live out beliefs in practice (Barton et al, 2011).

All three of these topics: diet choice, environmental ethics, and the relationship between belief and behavior are complex and warrant further investigation. Moreover, it seems that there may be a relationship between the three, since at least two out of the three topics overlapped in multiple articles throughout my research. In order to understand the extent to which there is a relationship, it makes sense to investigate the reasons behind environmentally minded people's food choices through a survey.

Methods

Goal and Overall Strategy

My main research question was originally, “To what extent is there a relationship between environmental ethics and the food choices of Environmental Studies majors at the University of Vermont?”. I was curious about this question because, through conversations with other majors, it had become apparent that a sizeable portion consumed meat, which is a diet that can be more harmful to the environment than others. I had also always been interested in the role that ethics, and environmental ethics specifically, plays in the everyday decisions of environmentally-minded people, so I decided to merge these two interests into one research topic. In order to investigate if there was a relationship between the two, I carried out a survey of Environmental Studies majors, consisting of questions aimed at establishing whether an environmental ethic was present in the population, as well as questions that investigated respondents’ reasons for choosing their diet.

My original goal was to use this information to try to sway people toward a plant-based diet through a series of essays that drew on the environmental ethic and reasons given by the respondents. However, I decided this goal was too narrow, so I reformulated my research question to be, “What are the reasons behind Environmental Studies majors’ food choices, and does environmental ethics play a role in this choice?”. My goal was now to investigate why Environmental Studies majors choose to eat what they do for my own personal interest, and in the hope that the information the survey yielded would be of interest to others as well.

The Survey: A Broad Overview

The general idea behind the survey was to first broadly identify the respondent's environmental ethic and reasons for choosing his/her diet, and then see if there was a correlation between the two. The survey consisted of three categories of questions: those aimed at identifying basic demographics and the respondent's diet, those aimed at identifying his/her environmental ethic, and those aimed at identifying reasons behind his/her diet. The following is my rationale behind including each type of question.

Demographic Questions

I included a short series of demographic questions for two reasons. The most obvious was to gather information about the respondents that, although may not be directly related to my primary research question, would give me a better sense of the population I was studying. Additionally, in analyzing the data, interesting patterns regarding the respondents' gender or class standing might come to light, and I wanted to leave this possibility open by gathering as much information as possible. Questions asking the respondent to identify his/her diet and its duration were included in the demographics section, for lack of a better placement. The second, perhaps less obvious, reason for including preliminary demographic questions was to ease the respondent into taking the survey, and make it more likely that s/he would finish it. While researching how to design an effective survey, I learned that beginning it with easy questions encourages the respondent to start the survey and often causes them to become invested in it and continue until the end, even if more challenging, open text responses are involved later.

Environmental Ethics Questions

The next section consisted of questions aimed at broadly identifying the respondent's environmental ethic. I included the environmental ethics questions because I was curious to see if adhering to one of these ethics influenced the respondent's dietary choice, since dietary choices can have enormous impact on the health of the environment and Environmental Studies students are often literate in this topic.

The questions themselves asked students to choose the degree to which they agreed or disagreed with statements that I felt summarized the sentiments of each ethic. I chose to include four statements, with two exemplifying instrumental value ideals and two exemplifying intrinsic value ideals. The statements, "The environment exists primarily to benefit and serve humans" and "People have a right to do what they want and this generally outweighs any negative environmental impact their actions might have" are indicative of common beliefs within the instrumental value ethic, described above. Similarly, the two statements, "The environment should be protected and respected because it holds intrinsic value" and "People have a moral responsibility to cause as little damage to the environment as possible" represent the main ideas of the intrinsic value ethic, also described above. While four statements cannot possibly pinpoint a student's full belief system, the degree to which they agree or disagree with the statements is informative in getting a sense of a broad ethic toward the environment.

Reasons Questions

The next portion consisted of a ranking section in which the respondent was to rank five potential factors in the order of influence each had on his/her dietary choice. The choices were "personal health", "animal welfare", "environmental degradation",

“convenience”, and “cost”, and were included in the survey because they were either the reasons most commonly cited in my research or they were suggested during the pilot survey. The purpose of this section was to get a sense of the reasoning behind the respondent’s dietary choice in order to better understand the relationship between ethics and diet. If the survey had merely asked which diet the respondent followed, there would not be nearly enough information to draw any valuable conclusions about any relationship. Additionally, I wanted to include this section so that, in the event that no relationship was discovered, I might still be able to notice patterns and draw conclusions from this information. A third motivation for including this section was to get a better sense of the main reasons behind respondents’ adherence to certain diets so I could know specifically which topics to pinpoint in my persuasive essays, although I later discarded this idea in favor of studying and writing about what the results ended up showing.

Following the ranking section, I included a series of open text boxes and asked the respondents to briefly elaborate on each factor they had ranked. My reasoning behind this section was similar to above: I wanted to delve as much as possible into the respondent’s reasons for choosing his/her diet in order to have a lot of information to work with when analyzing the results. I feared that simple rankings, while easily analyzable, would give me only superficial information and would likely make the results somewhat boring.

The final question in the survey asked respondents to describe in a single sentence the reasons behind his/her dietary choice. While this may initially seem repetitive, I felt that it would be beneficial to pose my question in several different ways in order to identify exactly what was going on behind the respondent’s decision. Just as people learn in many ways, I anticipated that respondents might interpret the sections in different ways, and I

hoped that, by including a variety, at least one would portray the respondent's answers accurately. My other motivation for asking respondents to provide a single sentence was to summarize their thoughts and make the analysis process somewhat easier. The survey aimed to acquire a lot of different information, and a single sentence works to synthesize responses more succinctly.

Designing the Survey

The first step in designing the survey was to create a draft. I began by outlining a list of initial questions, beginning with demographic questions and a few questions to get a sense of the respondent's environmental ethics, and ending with questions to determine the reasons (if any) that existed behind their dietary choices. This initial list of questions can be found in Appendix A. I then used this list of questions in a pilot test to assess the effectiveness and clarity of the survey questions. In the beginning of the Fall 2011 semester, Rick Paradis allowed me to conduct a paper pilot test during one of the ENVS 151 sessions, which consisted of 75 students. While I had originally considered conducting the test in one of the ENVS 001 lectures, I ultimately determined it would be more helpful to receive feedback from ENVS 151 students, since they are all ENVS majors, which is my focus population, and may have had more opportunity to develop their thoughts on environmental ethics through other classes or simply their longer experience at UVM.

As a result of the pilot test, I received beneficial feedback and made substantial changes to my survey. These changes are highlighted in red in Appendix B. The feedback consisted both of suggestions to improve or supplement the content of the survey, as well as ways to address issues that came to light with the format or wording of the questions in the process of completing the survey. For example, the decision to include "no red meat" and

“hunted meat” as dietary options came as a result of students penciling in these terms next to the original question, in order to include an option that better reflected their own diet.

Additionally, I edited the question about the duration of the diet to include “less than two years” etc. after I noticed several students circling the total duration, plus all of the previous options.

One of the most significant changes was the addition of questions aimed at broadly identifying the respondent’s environmental ethic. Although my initial list of questions included only one statement with this aim, I had always intended to include more in the final survey in order to get a somewhat clearer idea of the student’s ethic. I decided to add three more statements to the initial list of questions because I felt that one was not nearly exhaustive enough, but decided to limit it to four statements so as not to make the survey too lengthy and laborious for the respondent.

Another significant change was the addition of “cost” in place of “other” as a factor influencing the respondent’s dietary choice. I decided to specify cost as an option after a significant number of students in the pilot test indicated this as a factor under “other”. On the topic of the ranking section, there was an issue of several students assigning each factor a value of “3” if they felt each was equally and moderately influential, instead of ranking each factor in order of importance. However, since the LimeSurvey program makes it impossible to rank each factor equally, there was no need to clarify the question to avoid this issue.

The only other change was the omission of the question concerning factors that might influence the respondent to change his/her mind from the final list of questions. While I was researching this topic, I found a lot of interesting literature on the phenomenon behind

changing one's mind, and wanted to see if the opinions of others played a crucial role in a person's dietary choices. However, I ultimately decided that this would cause the survey to go in too many directions at once, and decided to omit it in order to focus my investigation as much as possible.

Once I had determined the final list of questions, I met with Alan Howard to begin developing the survey online. He helped me to locate the LimeSurvey software on the UVM Libraries website, and then guided me in choosing the format that would be most appropriate for each question, from multiple choice to open text box to ranking, and finally to activate the survey so the responses could be saved on the program. We then went through the survey ourselves, pretending to complete it, in order to ensure that all the questions were formatted correctly and that the survey flowed smoothly.

Administering the Survey

The next step was to actually send the survey out to the population of study and begin collecting data.

Population of Study

I chose to use ENV5 majors as my population of study because I was interested in seeing if there was a relationship between environmental ethics and food choice, as well as what other reasons existed behind food choice, among people who are interested in the environment. Previous research has already been done on people's reasons behind choosing different diets, but far less is known about the specific subset of the population that is interested in the environment. Since Environmental Studies majors clearly have some interest in the environment, I chose them as my population of study out of relevance to the

topic. The fact that this population was also readily accessible to me was another factor in choosing it as my sample.

Environmental Studies majors are all involved in the Environmental Studies Program at the University of Vermont, which is an interdisciplinary major that serves to provide students with knowledge of environmental issues by drawing on the arts, humanities, social, basic, and applied sciences through traditional classes as well as practical experience. Specifically, the Environmental Program cites its mission as alerting its students to the state of the environment, nurturing and encouraging a respect for the earth, demonstrating a commitment to social justice, and providing students with the knowledge and skills to be active citizens who are effective at advocating for change on environmental issues (Environmental Program Mission Statement, 2004).

Toward this goal, the Environmental Studies Program requires that all of its more than 500 majors complete two introductory courses that survey a variety of environmental issues and touch upon all aspects of the mission statement. Of these two, Environmental Studies 001 focuses more on the environmental impact of industrial meat production, and informs students of these issues through lectures titled “Areas of Environmental Concern: Animal Agriculture” and “Environmental Ethics”. Other courses that touch on these issues include the ENVS courses “Topics in Climate Change” and “Environmental Impacts of Consumerism”, as well as courses in other departments that are popular among ENVS majors, such as the philosophy course “Ethics of Eating”. While it is unnecessary to know exactly which courses each ENVS student has been exposed to, it is safe to assume that all are aware of the environmental impacts of industrial meat production through ENVS 001, as

well as through knowledge that most environmentalists would gain through reading and discussions for his or her own interest.

Collecting the Data

My initial plan was to request permission from Sue Bean, the ENVS office manager, to gain access to ENV-talk, a listserv that is sent to almost all ENVS majors. However, after Sue expressed concern that this would violate students' privacy, I consulted Adrian Ivakhiv, acting director at the time, who agreed with Sue and offered instead to email the survey himself, so as to keep the students' email addresses confidential. Originally, I had planned to have it sent to one quarter of the ENVS population. With approximately 500 majors, I figured that 125 responses would suffice and that sending it to all majors would be unnecessarily laborious. However, when the survey was sent to only one quarter in October 2011, I received a meager 30 responses, far too few on which to base my thesis. I consulted with Adrian again, who agreed to send it to the remaining 375 majors in November 2011. This, fortunately, yielded 133 responses, a little more than my original goal, and I was able to move on to the next step of analyzing the results.

Analyzing the Results

Once I had collected all of the responses, it was time to analyze them to see what conclusions could be drawn and, especially, to see if they indicated a relationship between an environmental ethic and dietary choice. I began by reviewing the responses myself, and getting a general sense of the demographics of the respondents, which dietary options were most represented, and the popularity of the different environmental ethics statements.

I soon realized, however, that the results from LimeSurvey alone would not be able to answer my question of whether a relationship existed between the environmental ethics statements and the dietary choices. While LimeSurvey is very adept at generating percentages of responses for each question, it is not sophisticated enough to calculate relationships between responses, a process known as cross-tabulating. For example, while LimeSurvey could tell me the percentage of all respondents who ranked personal health as their most influential factor, I needed to know the percentage of omnivores, for example, who ranked this as number one.

I arranged to meet with Alan Howard again, and he was kind enough to offer to do these calculations with the help of a separate computer program, IBM SPSS Statistics 20. With this program, he was able to cross-tabulate responses from one question with responses to another question. For example, the program was able to calculate an answer to the question, “Of those who chose omnivore as their diet, how many ranked personal health as the most influential factor in doing so?”. The results of these cross-tabulations can be found in the two-dimensional frequency table in *Table 13: Rankings by Dietary Choice*. Once I had all of this information, I simply exported the pie charts from LimeSurvey, and organized the findings into the following Results section.

Results

Demographic Questions

1. Please indicate your class standing.

	Count	Percentage
First year	27	20.30%
Sophomore	21	15.79%
Junior	33	24.81%
Senior	52	39.10%

Table 1: Class Standing

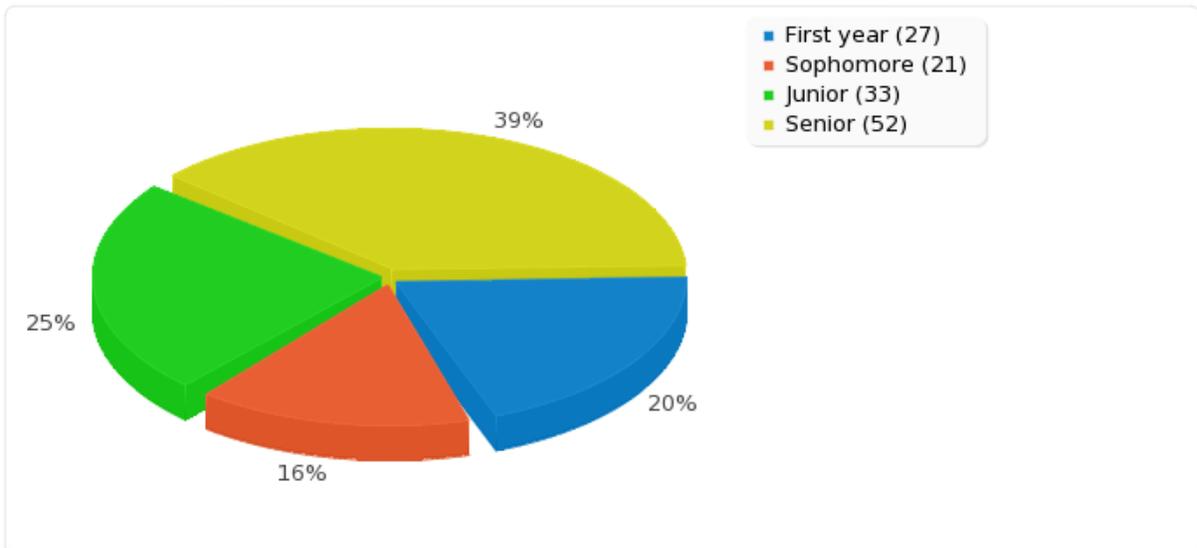


Figure 1: Class Standing

By far, the class that was most strongly represented was the senior class, with 39.10% of all respondents identifying as seniors. Juniors were the second-most represented, with 24.81% of all respondents, first years were in third with 20.30%, and sophomores were the least represented, with 15.79% of all respondents. The effect of this distribution may be equally varied, although it may be the case that the strong influence of seniors provided more “accurate” results in terms of the goals of my survey. In other words, since one of the underlying premises of the survey was that knowledge of the environmental effect of

mainstream meat production might influence a student’s environmental ethic and diet choice, it seems useful to have results from people who have been exposed to Environmental Studies classes for the longest period of time, although younger students may, of course, be equally if not more informed on these topics.

2. Please indicate your gender.

	Count	Percentage
Male	25	18.80%
Female	108	81.20%

Table 2: Gender

Far more females than males responded to the survey, with 81% of all respondents being female and around 19% being male. Although, as with all of the questions, the influence of the distribution on the results of the survey is largely speculative, it may be true that the predominance of females skewed the data away from omnivore and toward all other options because, at least in Western societies, women are more likely to adhere to a diet that involves less meat than are their male counterparts.

3. Please choose the dietary option with which you most closely identify.

	Count	Percentage
Omnivore	37	27.82%
Vegan	4	3.01%
Vegetarian	33	24.81%
Localvore	38	28.57%
No red meat	21	15.79%
Hunted meat	0	0.00%

Table 3: Dietary Choice

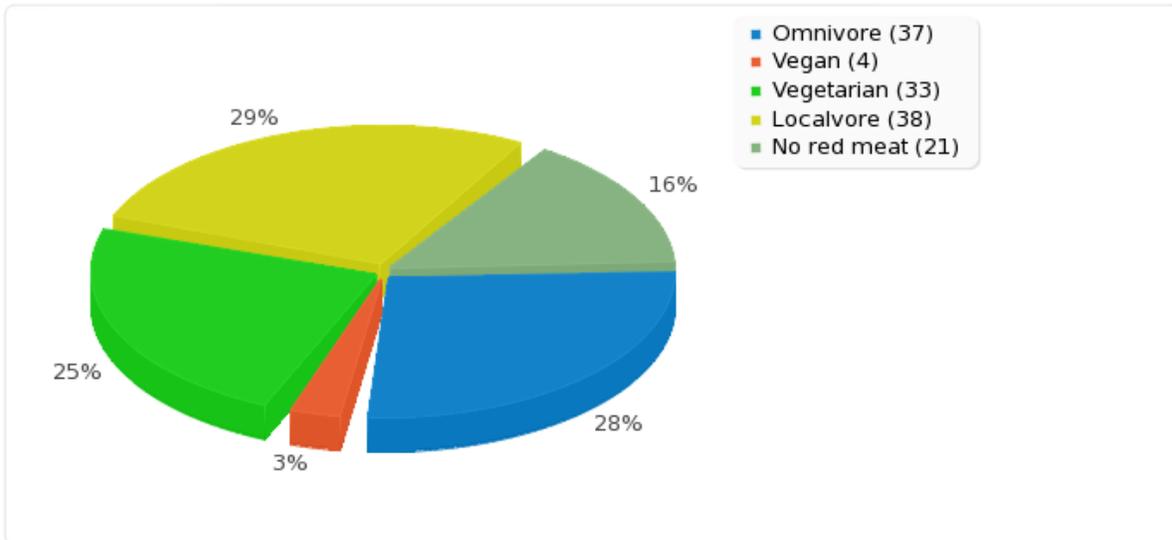


Figure 2: Dietary Choice

In terms of dietary choice, localvore came in first, with 28.57%, omnivore second with 27.82%, vegetarian third, with 24.81%, no red meat second to last with 15.79%, and vegan last, with 3.01%. These results are generally unrepresentative of the dietary choices of society as a whole. As stated in the literature review, omnivores far surpass all other categories, with 88% following some type of omnivorous diet. The percentage of vegetarians was also disproportionate to the general population, with only 3.2% of American adults adhering to a vegetarian diet. Similarly, the amount of vegan respondents in the survey, although small, was still larger than that of the public, since only 0.8% of the general population follows a strict vegan diet. In keeping with this trend, the percentage of respondents to this survey who do not eat red meat was not representative of the public, since only 8% of the general population does not eat red meat. Definitive statistics on localvores are less readily available, although it can be assumed that less than 28.57% of the general population is a localvore. Overall, then, there were far more localvores, vegetarians, people who do not eat red meat, and vegans in the survey results than in the general population, and far fewer omnivores.

4. For how long have you followed this diet?

	Count	Percentage
Less than six months	14	10.53%
More than six months but less than two years	30	22.56%
More than two years but less than five years	29	21.80%
More than five years but less than ten years	18	13.53%
More than ten years but less than your entire life	4	3.01%
Entire life	38	28.57%

Table 4: Duration of Diet

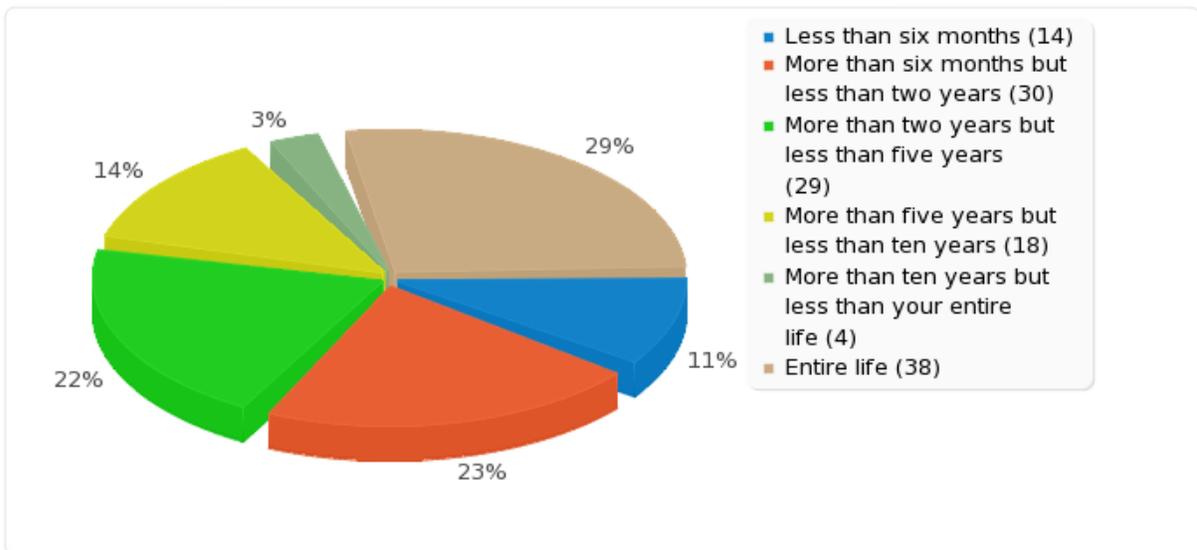


Figure 3: Duration of Diet

The results of this question showed that a majority of the respondents, a combined total of 68.42%, had changed their diet at some point in their life. Broken down by category, 28.57% claimed adherence for their entire lives, 22.56% for more than six months but less

than two years, 21.80% for more than two years but less than five years, and then 13.53% for more than five years but less than ten years, and 10.53% for less than six months. This may suggest that, if there is a relationship between environmental ethics and dietary choice, it is fluid, with aspects of the ethic changing over time and causing subsequent changes in diet, or it may suggest that there is no relationship, and that the diets have changed for reasons unrelated to ethics, such as changing nutritional needs or food availability.

Environmental Ethics Questions

5-8. Please indicate how strongly you agree with the following statements:

5. The environment should be respected and protected because it holds intrinsic value.

General Responses

	Count	Percentage
Strongly Agree	115	87.12%
Somewhat Agree	17	12.88%
Neutral	0	0.00%
Somewhat Disagree	0	0.00%
Strongly Disagree	0	0.00%

Table 5: Intrinsic Value Statement One – General Responses

The entire population agreed either strongly or somewhat to this statement, with no respondents indicating a neutral or disagreeing opinion. Specifically, 87.12% strongly agreed, and 12.88% somewhat agreed. Since the population surveyed was Environmental Studies majors, it makes sense that they feel the environment should be protected. However, this statement, along with the third statement, was specifically intended to gauge the degree to which the population agreed with an intrinsic value ethic. Therefore, these results could mean that the majority of the survey population holds an intrinsic value ethic, which, when analyzed against dietary choices, could reveal an interesting relationship.

By Dietary Choice

	The environment should be respected and protected because it holds intrinsic value.				
	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
Omnivore	26.3%	29.4%	0.0%	0.0%	0.0%
Vegan	2.6%	5.9%	0.0%	0.0%	0.0%
Vegetarian	27.2%	11.8%	0.0%	0.0%	0.0%
Localvore	27.2%	41.2%	0.0%	0.0%	0.0%
No red meat	16.7%	11.8%	0.0%	0.0%	0.0%

Table 6: Intrinsic Value Statement One – By Dietary Choice

Of those who strongly agreed with this statement, the results were roughly split between omnivore, vegetarian, and localvore, with 26.3%, 27.2%, and 27.2% respectively. Of those who somewhat agree, the results were less evenly distributed, with 41.2% identifying as localvore, 29.4% identifying as omnivore, 11.8% as vegetarian, 11.8% as no red meat, and 5.9% as vegan. Since the results were spread across dietary choices and did not seem to cluster in any perceivable pattern, this suggests that there may not be a relationship between dietary choice and this intrinsic value statement, but an analysis of more statements is necessary before drawing any larger conclusions.

6. The environment exists primarily to benefit and serve humans.

General Responses

	Count	Percentage
Strongly Agree	3	2.27%
Somewhat Agree	6	4.55%
Neutral	13	9.85%
Somewhat Disagree	36	27.27%
Strongly Disagree	74	56.06%

Table 7: Instrumental Value Statement One – General Responses

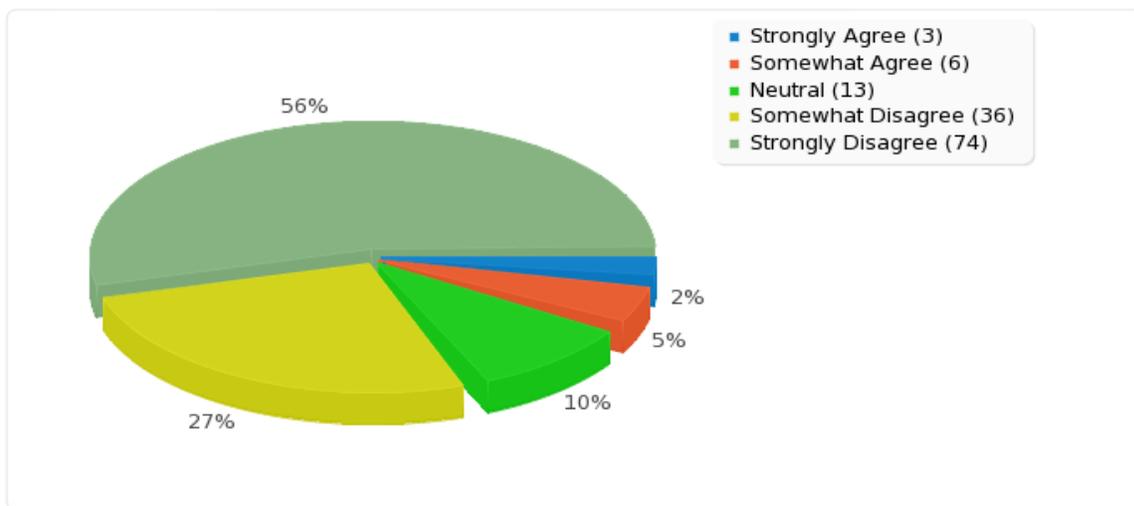


Figure 4: Instrumental Value Statement One – General Responses

The majority of respondents disagreed with this statement to some degree, although the results were more widespread than those of the previous statement. Broken down by category, 56.06% strongly disagreed, 27.27% somewhat disagreed, 9.85% were neutral, 4.55% somewhat agreed, and 2.27% strongly agreed. As described above, this statement was intended to identify an instrumental value ethic, and while the majority seem to disagree with this value, a significant portion either identify with it or are neutral toward it. Interestingly, this means that at least a few respondents who had strongly or somewhat agreed with the first statement also strongly or somewhat agreed with this statement. Since

these statements seem in conflict, this finding suggests either that some ENVS majors hold contradictory ethical stances, or that the stances are more complex than I had anticipated.

By Dietary Choice

	The environment exists primarily to benefit and serve humans.				
	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
Omnivore	0.0%	20.0%	30.8%	25.0%	28.4%
Vegan	33.3%	20.0%	0.0%	0.0%	2.7%
Vegetarian	33.3%	0.0%	0.0%	19.4%	33.8%
Localvore	33.3%	20.0%	38.5%	27.8%	28.4%
No red meat	0.0%	40.0%	30.8%	27.8%	6.8%

Table 8: Instrumental Value Statement One – By Dietary Choice

Of those who strongly agree, the distribution is exactly equal among vegans, vegetarians, and localvores, with each representing 33.3%, and omnivores and no red meat not represented. While no red meat represented a sizable portion, 40%, of those who somewhat agreed, the rest was split evenly between omnivore, vegan, and localvore, all with 20%, and vegetarian was not represented. Of those who were neutral, localvore represented the most, with 38.5%. No red meat and omnivore were represented equally, each with 30.8%, and vegan and vegetarian were not represented. Of those who somewhat disagreed, the distribution was spread fairly equally among no red meat, localvore, each with 27.8%, and omnivore, with 25%. Vegetarian was somewhat less represented, with 19.4%, and vegan was not represented. Of those who strongly disagreed, the figures were again spread somewhat evenly across three dietary categories, with 33.8% identifying as vegetarian,

28.4% identifying as localvore, and 28.4% as omnivore. No red meat and vegan had much smaller representations, with 6.8% and 2.7% respectively. As with the above statement, there does not seem to be a discernible pattern between dietary choice and level of agreement with this instrumental value statement.

7. People have a moral responsibility to cause as little damage to the environment as possible.

General Responses

	Count	Percentage
Strongly Agree	90	68.18%
Somewhat Agree	37	28.02%
Neutral	3	2.27%
Somewhat Disagree	0	0.00%
Strongly Disagree	2	1.52%

Table 9: Intrinsic Value Statement Two – General Responses

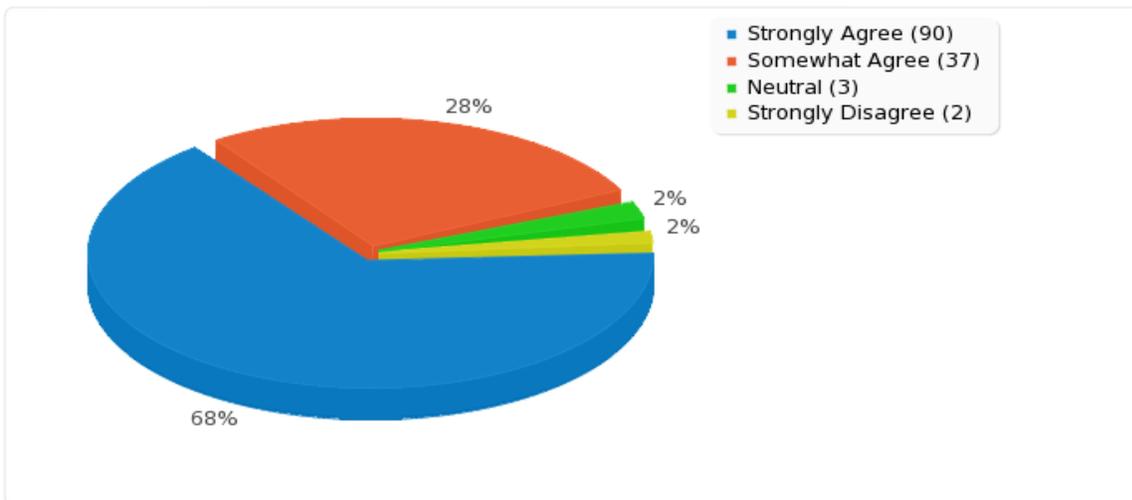


Figure 5: Intrinsic Value Statement Two – General Responses

The responses to this question were more similar to the first statement, with the vast majority agreeing to some extent, and only a few remaining neutral or disagreeing.

Specifically, 68.18% strongly agreed, 28.03% somewhat agreed, 2.27% were neutral, and

1.52% strongly disagreed. As with the first statement, this statement was intended to represent an intrinsic value ethic, and the fact that only a few respondents did not agree with it suggests that the majority of the population may hold at least a version of this ethic.

By Dietary Choice

	People have a moral responsibility to cause as little damage to the environment as possible.				
	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
Omnivore	28.1%	18.9%	33.3%	0.0%	100.0%
Vegan	2.2%	5.4%	0.0%	0.0%	0.0%
Vegetarian	25.8%	27.0%	0.0%	0.0%	0.0%
Localvore	30.3%	27.0%	33.3%	0.0%	0.0%
No red meat	13.5%	21.6%	33.3%	0.0%	0.0%

Table 10: Intrinsic Value Statement Two – By Dietary Choice

Of those who strongly agreed, the representation was fairly evenly distributed between localvore, with 30.3%, omnivore, with 28.1%, and vegetarian, with 25.8%. No red meat had a somewhat significant representation, with 13.5% identifying with this dietary choice, and vegan had only 2.2%. Of those who somewhat agreed, vegetarian, localvore, and no red meat were fairly even, with 27% for the first two and 21.6% for no red meat. Omnivore was somewhat close behind, with 18.9%, and vegan was the least represented, with 5.4%. For those who were neutral, the distribution was split evenly among omnivore, localvore, and no red meat, each with 33.3%, and, therefore, 0% for vegan and vegetarian. No respondents in any dietary category chose “somewhat disagree”. For those who strongly disagreed, 100% identified as an omnivore. As with the previous two statements, the

distribution of level of agreement was again scattered among dietary choice, with no clear relationship emerging in this instrumental value statement.

8. People have a right to do what they want, and this generally outweighs any negative environmental impact their actions might have.

General Responses

	Count	Percentage
Strongly Agree	4	3.03%
Somewhat Agree	5	3.79%
Neutral	8	6.06%
Somewhat Disagree	39	29.55%
Strongly Disagree	76	57.58%

Table 11: Instrumental Value Statement Two – General Responses

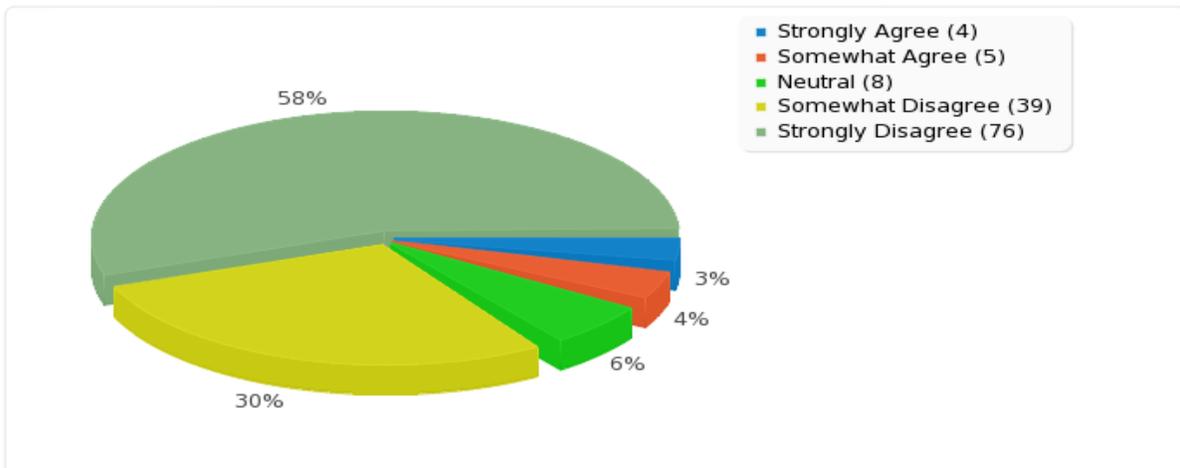


Figure 6: Instrumental Value Statement Two – General Responses

The distribution of these responses was similar to that of the second statement, with a majority disagreeing to some extent, but a significant portion of respondents spread across the board. In particular, 57.58% strongly disagreed, 29.55% somewhat disagreed, 6.06% remained neutral, 3.79% somewhat agreed, and 3.03% strongly agreed. As described above, this question was designed to try to gauge the number of students who identified or were

sympathetic to an instrumental value ethic, and it seems a majority do not, although a significant amount do or are neutral.

By Dietary Choice

	People have a right to do what they want, and this generally outweighs any negative environmental impact their actions might have.				
	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
Omnivore	0.0%	60.0%	25.0%	20.5%	28.9%
Vegan	33.3%	20.0%	0.0%	0.0%	2.6%
Vegetarian	0.0%	0.0%	25.0%	33.3%	23.7%
Localvore	66.7%	0.0%	25.0%	17.9%	35.5%
No red meat	0.0%	20.0%	25.0%	28.2%	9.2%

Table 12: Instrumental Value Statement Two – By Dietary Choice

The distribution of those who strongly agreed was limited to two dietary choices: localvore, with 66.7% and vegan, with 33.3%. Of those who somewhat agreed, there was a clear majority of omnivores, with 60%, and a clear split for second place, with 20% for both vegan and no red meat. Of those who were neutral, the distribution is again evenly split, with 25% of the respondents identifying as omnivore, vegetarian, localvore, and no red meat equally. The results of those who somewhat disagreed were more scattered, with 33% identifying as vegetarian, 28.2% as no red meat, 20.5% as omnivore, and 17.9% as localvore. Similarly, the distribution of those who strongly disagree was spread among the dietary choices, with localvore representing 35.5%, omnivore 28.9%, vegetarian 23.7%, no red meat 9.2%, and vegan 2.6%. Although there were stark differences between dietary choices in the first three levels of agreement, the pattern does not hold with the last two

levels of agreement and does not seem to be definitive enough to draw any conclusions about a relationship between dietary choice and this instrumental value statement.

Conclusions from Environmental Ethics Questions

General Responses

It seems that a majority of the respondents either identify with or are sympathetic to an intrinsic value ethic, since the bulk of the responses switches from agreeing with the intrinsic value questions to disagreeing with the instrumental value questions. However, it is important to note that a portion of the respondents agreed with the instrumental value questions and disagreed or were neutral toward the intrinsic value questions, suggesting that a noteworthy portion of respondents hold or are sympathetic to an instrumental value ethic. In addition, a combined total of 22 respondents who had either strongly or somewhat agreed to the first intrinsic value question were neutral toward, somewhat agreed, or strongly agreed with the first instrumental value question, reminding the reader that four short statements cannot clearly identify all respondents' beliefs with a specific ethic.

By Dietary Choice

Overall, it does not seem that there is any clear relationship between the respondents' dietary choice and their environmental ethic. If there were a relationship, we would expect to see distinct clusters of respondents by dietary choice in multiple categories of agreement. For example, we might see that a significant proportion of those strongly or somewhat agreeing to the instrumental value statements are omnivores, or that a significant portion of those strongly or somewhat disagreeing with the intrinsic value statements are localvores. If these patterns were apparent, we would be able to make general conclusions about potential

relationships between the two, such as, “It seems that people who are omnivorous tend to agree with an instrumental value ethic”. However, these patterns did not emerge. In response to each of the statements, the distribution of agreement among dietary choice was either fairly even, or was too scattered to discern any pattern. Due to these varied results, it is not possible to conclude that there is any clear relationship between dietary choice and environmental ethics.

Reasons Questions

9. For all that you ranked above, please briefly describe which specific aspects have influenced your choice.

The following is a sample of responses from the open text portion of the survey, presented in no particular order. Many of the ideas and sentiments below were expressed with only slight variation in numerous responses, so many were eliminated and the remaining responses may be representative of the ideas of multiple respondents.

LOCALVORE

The statements indicate that the following values are most important to localvores:

<p>Local economy and sense of community</p>	<p><i>1. It supports local farmers, the local economy, a sense of community, and sustainable farming practices.</i></p> <p><i>2. It supports the local economy. In Vermont I can usually trust small scale meat production to do the right thing.</i></p> <p><i>3. I like developing a relationship to the place and people behind the food that I eat, since I hope to be a food producer in the near future.</i></p> <p><i>4. I believe that it does make sense that humans consume meat, but that it is most important that we maintain an understanding of where the meat comes from, and that it was raised ethically and responsibly.</i></p> <p><i>5. I want to support positive farming practices.</i></p> <p><i>6. It supports local farms, encourages more healthy/sustainable farm practices, requires fewer food miles, and it’s nice to know where my food (especially meat) is coming from.</i></p>
--	---

One of the main values that emerged was the importance of supporting the local economy and getting a sense of community from doing so. It became apparent that many people equated these values with ethical food production and “doing the right thing”. Others talked about developing a sense of place, as well as a relationship with the farmers themselves. Overall, it seems apparent that many localvores see local food as a way to develop social capital and values that are important to them.

<p>Quality of food</p>	<p><i>1. It is higher quality and has less environmental impact. Grass fed local beef doesn't contain the chemicals/fat content that industrially produced meat does.</i></p> <p><i>2. Low quality meat/produce doesn't provide me with proper nutrition. Higher quality products get higher quality results.</i></p> <p><i>3. Not wanting to ingest toxic chemicals and/or hormones</i></p> <p><i>4. Don't eat meat with any bad stuff in it...go local!</i></p> <p><i>5. Healthy, organic meat in moderate amounts (just 2 to 3 meals a week) is an important part of my diet.</i></p>
-------------------------------	--

Another value that was important to localvores was the quality of the food. Interestingly, the perceived higher quality of local food emerged as one of the main reasons for choosing a localvore diet in my research. Concerns about quality in the above responses addressed the relationship between higher quality food and lower environmental impact, as well as the relationship between higher quality and better personal health. Overall, it was apparent that localvores believe local food is of higher quality than food in other diet categories, and that this translated into environmental and health benefits.

<p>Quality of food as more important than cost</p>	<p><i>1. I would happily pay more for a better quality product, especially concerning food that goes into my body.</i></p> <p><i>2. Local/organic/high quality food costs more but I am willing to pay the price if it supports someone I can actually meet and shake hands with as opposed to some corporation that is inhumanely raising thousands and thousands of cattle.</i></p> <p><i>3. It can get expensive buying all fruits and vegetables one week. Though local meat can be expensive, you can freeze it and have it available to you for awhile.</i></p>
---	---

This value is directly related to the above value, but distinct in that these respondents specifically expressed that quality of food was more important to them than its price. Therefore, these statements mainly reiterate that quality is an important value, but also make clear that even the higher cost of local food does not generally override this value, suggesting that it is indeed very important to them.

<p>Obligation to reduce personal environmental impact</p>	<p><i>1. I drastically reduced my meat consumption to lower my carbon footprint.</i></p> <p><i>2. Producing meat, especially beef, is much more energy intensive and far less efficient calorically than eating a plant based diet.</i></p> <p><i>3. Red meat has huge costs for the environment, so does non-local meat. Since my huge passion is oceans, I rarely eat fish even when they are certified as sustainable.</i></p> <p><i>4. Transportation of meat contributes to climate change and I would rather buy local products of any kind. There is also a higher chance that it will not be CAFO meat.</i></p> <p><i>5. I was vegetarian for about five years, but my anemia prevented this from being a long-term sustainable life choice for me.</i></p>
--	---

Localvores also expressed an obligation to reduce personal environmental impact. In other words, these statements show that localvores are generally aware of the environmental impact of food production, and have modified their diet in order to take this issue into

consideration. While respondents in other diets sometimes acknowledged the environmental impact of their diet but cited other factors that override this, at least a portion of localvores felt compelled by environmental impact considerations to reduce their personal impact.

<p>Knowing the conditions of the farm</p>	<p><i>1. I can know the conditions under which it was raised and be aware of any risks I am taking. It is also a more environmentally responsible and ethical choice.</i></p> <p><i>2. I like being able to drive to where the chicken or beef in my freezer came from and feel like the animals had a good life.</i></p> <p><i>3. I am able to visit the source and come to my own conclusion about the safety and quality of the meat and the treatment of animals.</i></p> <p><i>4. I'm more likely to know it's humanely, safely, justly, and cleanly produced, and didn't come from way too far away. With that said, my choices aren't always perfect, and just because meat's local that doesn't mean I'll choose to eat it.</i></p>
--	---

It seemed important to many localvores to be able to know the conditions of the farm on which their food was raised, either by visiting it or knowing the farmers personally.

While this could suggest any number of things, it seems that localvores value being informed consumers and being engaged, at least peripherally, in the process of creating their food. It could also suggest that localvores value personal responsibility, such as taking on the responsibility of researching their food and thinking through any findings they might come across, before making the active decision to consume something.

Humane animal treatment	<p><i>1. It's morally wrong to cause animals suffering so I'm a freerangetarian.</i></p> <p><i>2. I enjoy eating meat but much more so when I know it has been humanely treated and not bovine growth hormones or fed on a feedlot in the Midwest.</i></p> <p><i>3. Treatment of animals is likely more humane at a farm in Vermont.</i></p> <p><i>4. Animals should be able to roam, and not scared standing in their own feces.</i></p> <p><i>5. I only eat meat from farms that treat their animals well. Organic and local are best.</i></p> <p><i>6. Animals should be humanely treated but I don't eat a lot of meat because of its environmental impact.</i></p> <p><i>7. It is important to me that the animals were treated in a humane way and were fed only grass and grains that are good for them.</i></p> <p><i>8. Local farms in VT are pioneers in ethical animal treatment and I want to support them.</i></p>
--------------------------------	---

Humane animal treatment was another value that was mentioned repeatedly in the localvore responses. Localvores seemed to equate local meat with humane treatment of animals, and seemed to consider Vermont farmers to be particularly responsible in their meat production.

Values Analysis for Localvores

The main values that were important to localvores included supporting the local economy and a sense of community, the quality of food, even as more important than its price, an obligation to reduce personal environmental impact, knowing the conditions of the farm, and humane treatment of animals. When considered together, it seems we can conclude that, in general, localvores value developing social capital, getting a high quality product, adhering to personal responsibility, and ensuring that animals are treated humanely.

VEGETARIAN

The statements indicate that the following values are most important to vegetarians:

<p>Willingness to undertake personal sacrifice for the environment</p>	<ol style="list-style-type: none"> <i>1. Livestock is a huge contributor to climate change, and as an environmentalist, I feel like I have an obligation to be vegetarian.</i> <i>2. Livestock is the second largest contributor to climate change, and it is a simple sacrifice I can make to do my part in creating a sustainable environment.</i> <i>3. Of the demand it has on environmental resources, even if the meat is local it is still using water, land (to graze, grow wheat, corn etc., to feed the animal)</i>
---	--

Many vegetarians explained that they would be willing to undertake personal sacrifice if it benefited the environment. Several mentioned specifically that, since they considered themselves environmentalists, they felt this obligated them to make the sacrifice. Others seemed to reference simply having knowledge of food production’s environmental impact as motivation for them to make this sacrifice. In general, this might suggest that vegetarians value the betterment of the whole, namely the environment, over personal needs. It might also suggest that vegetarians value personal responsibility: if they are aware of the consequences of food production, they have a responsibility to address the issue through their behavior.

<p>Just food production</p>	<ol style="list-style-type: none"> <i>1. I do not support the meat industry in America; it is corrupt, inhumane, environmentally detrimental, and gross.</i> <i>2. I have other nutritionally equal choices that are more just and less degrading to the environment.</i> <i>3. Why take up extra land to feed animals to kill when you can produce more food by simply eating what you plant on the same plot of land?</i> <i>4. It is more difficult to find responsibly raised meat outside Burlington.</i>
------------------------------------	--

Another value that emerged was the importance of a just food system, and many explained that this value conflicted with the realities of mainstream food production. Some explained that they do not support the meat industry specifically because it is “corrupt” and “inhumane” suggesting that they instead value qualities such as justice. Others explicitly stated that they value just food choices, and implied that mainstream food choices do not fulfill these values. Overall, these statements emphasize the importance of ethical qualities, such as justice, in vegetarians’ food choices.

<p>Human animal treatment</p>	<ol style="list-style-type: none"> 1. <i>I do not agree with the way they are treated and bred just for humans to eat.</i> 2. <i>If they had a good life, I have no problem killing them for food.</i> 3. <i>This corresponds with environmental degradation. There is clearly going to be consequences for species (as well as humans). I also have heard the sad stories of mistreatment of animals, but that didn't really influence my decision.</i> 4. <i>I previously ate only “happy meat” before I became vegetarian.</i>
--------------------------------------	---

Vegetarians also expressed the importance of humane animal treatment in their decision. While many cited the lack of humane treatment in mainstream meat production as a reason for abstaining from it, others made a point to say that they would support it if they felt the animals had been treated properly. Despite this distinction, it was clear that animal welfare was very important in many respondents’ decision to be vegetarian.

Equal consideration for animals' right to live	<p><i>1. I do not support the non-need-based killing of animals for consumption on the grounds that their right to life supersedes our desire to eat a tasty meal.</i></p> <p><i>2. It seems animals should be treated similar to humans.</i></p> <p><i>3. I don't want the animals to be killed to feed me.</i></p> <p><i>4. I cannot justify killing and eating animals or people.</i></p> <p><i>5. I see no need in eating animals if I can live without eating them. I wouldn't want someone to kill an eat me or my family so I give animals the same consideration.</i></p>
---	---

Related to humane treatment, many respondents took their concern a step further and questioned whether animals should be killed for human benefit. This suggests that vegetarians value the importance of even deeper ethical considerations than whether animals should be subjected to cruelty. It seems clear in these statements that many vegetarians struggle with complex ethical issues such as whether animals deserve the same consideration as humans, which interests supersede which, and whether killing other beings is justified. This suggests that many vegetarians have thought critically about their decision to abstain from meat, and that ethical concerns weigh on their decision.

Values Analysis for Vegetarians

Overall, vegetarians seem to value a willingness to undertake personal sacrifice for the environment, just food production, humane treatment of animals, and considering animals' right to live equally to our own. These concerns suggest that vegetarians value the betterment of the whole over personal needs, as well as the humane treatment of animals. It also seems that ethical issues, such as whether a food choice represents justice, and whether animals have a right to life similar to that of humans, weigh on their decision.

OMNIVORE

The statements indicate that the following values are most important to omnivores:

Nutritional fulfillment	<ol style="list-style-type: none"> 1. <i>I get a serious vitamin B12 deficiency when I am a vegetarian.</i> 2. <i>I am allergic to nuts and cannot eat soy products, so it is difficult for me to find protein options that are substantial enough for me.</i>
--------------------------------	--

A value that emerged among omnivores, although not one that was particularly pervasive, was the importance of nutritional fulfillment. Many were concerned with nutritional deficiencies they felt were entailed by other diets, suggesting that fulfilling one's nutritional needs is an important consideration among omnivore's dietary choice.

Pragmatism: environmental degradation	<ol style="list-style-type: none"> 1. <i>The impact of our food on the environment is really important to me and I would rather spend more to buy a product that has had less impact on the environment than one that is cheaper that has more impact on the environment.</i> 2. <i>I try to be aware of where my food is coming from, and I would prefer to buy local and organic, but it's very hard to do on a limited budget. I know that some of the food I buy comes from massive agribusinesses, but it's hard to always control what I buy.</i>
--	---

Pragmatism: cost	<ol style="list-style-type: none"> 1. <i>College aged student, small budget. Living with family, we tend to buy local and organic veggies, but meat is very expensive.</i> 2. <i>It's cheap. It sucks but it's all I can afford. When there is cheaper local or organic meat I always get it, but otherwise I either eat less meat or eat industrially produced meat.</i> 3. <i>I am poor and sometimes have to buy cheap food over good food.</i> 4. <i>I am struggling to survive. I don't have money to spend it on a \$6 gallon of milk.</i>
-------------------------	--

Pragmatism: convenience	<p><i>1. It's convenient and cheap to eat. I try to [eat local meat] because it's more friendly to both the environment and the animals.</i></p> <p><i>2. It is sometimes the only option but I would much rather eat local meat.</i></p> <p><i>3. Whenever possible, I eat local or responsibly produced meat.</i></p> <p><i>4. As a busy college student, I don't have enough time to eat as conscientiously as I would like.</i></p> <p><i>5. Without a car and very little time, convenience is key to getting groceries.</i></p>
------------------------------------	---

Pragmatism: animal welfare	<p><i>1. I eat red meats, poultry, and seafood about once a week and have eggs more often. Because I care about animal welfare, and don't want to support unhealthy practices for animals I try to buy organic, local, and grassfed/cage free meats when I can afford it.</i></p> <p><i>2. I care deeply for animals, and try to get local and organic meat whenever I can, but it is impossible to always be responsible when you don't have a lot of money. I still eat meat, although I do feel bad about it sometimes.</i></p> <p><i>3. The treatment of animals in industrial food production is inhumane. The vast majority of the meat I eat is locally raised and slaughtered.</i></p> <p><i>4. I am not opposed to eating animals and I enjoy the taste, but I try to limit my intake because of the environmental problems and animal cruelty involved.</i></p>
---	---

By far the most important value to emerge among omnivores was the idea of pragmatism. By this I mean that the responses of many omnivores reflected a type of practical cost-benefit analysis reasoning in deciding whether or not to consume meat. Of course, in all of the cases, omnivores decided that the benefit of eating meat won out over other considerations. This type of response was present throughout many categories, including environmental degradation, cost, convenience, and animal welfare. It seems that, from these responses it is possible to conclude that omnivores value a reasonable approach to the complexities of food choice.

Values Analysis for Omnivores

The two main values that emerged for omnivores were the importance of nutritional fulfillment and the value of pragmatism. Of the two, pragmatism seemed to weigh far more heavily on omnivores' decision, as it was apparent in many different topics. As mentioned above, this seems to suggest that omnivores value a practical approach reached through a reasonable decision making process that weighs a variety of factors.

NO RED MEAT

The statements indicate that the following values are most important to people who do not eat red meat:

Pragmatism and efficiency: environmental degradation	<ol style="list-style-type: none"><i>1. This is the big one for me. Agricultural emissions are the biggest contributor to GHGs and while we are cutting down forests to make way for new cropland we could be feeding dozens of people with the grain it takes to raise one cow.</i><i>2. Food production is one of the largest components of the degradation of the environment, and the systems that are currently in place in the US do not support our functioning alternatives to the pesticide/chemical fertilizer-dependent producers.</i><i>3. All the waste from the meat industry is insane, plus it takes a huge amount of crop land to feed the animals.</i><i>4. Meat production is not efficient land and water use or in terms of protecting the commons or clean air.</i>
---	--

The theme of pragmatism is also readily apparent in the responses of many people who do not eat red meat, especially when it comes to concerns over environmental degradation. However, it is especially interesting to note that the related theme of efficiency is also reflected in the responses. While many responses stress practical concerns such as waste in the meat industry, many also introduce concerns about a lack of efficiency in meat production as a primary reason for abstaining from the red meat it produces. This provides

an interesting comparison of the ways omnivore and no red meat responses are similar but also a slight way in which they differ.

<p>Pragmatism: personal health</p>	<p><i>1. I was a pescetarian for 8 years and didn't want to dive right into eating meat again, so I slowly reintroduced animal products (except red meat) because I was anticipating eating meat on my study abroad program.</i></p>
---	--

<p>Pragmatism: convenience</p>	<p><i>1. On the menus of most restaurants, there are only 2-3 vegetarian choices so I don't have to make a hard decision. If I ate meat I would never be able to decide what to get.</i></p> <p><i>2. It doesn't tend to be more convenient to not eat meat, but it's not that difficult, and it will only get more manageable once I cook for myself more often.</i></p> <p><i>3. I do eat meat when it is put in front of me, prepared by someone else, or humanely raised or local.</i></p>
---	--

These statements reflect the idea of pragmatism described in the omnivore section, without the added idea of efficiency. Just as in the omnivores' responses, these make it clear that people who do not eat red meat seem to be thinking about their decision primarily in practical terms of the benefits of eating certain foods versus the cost, before arriving at what they feel is a reasonable conclusion based on these factors.

Values Analysis for People Who Do Not Eat Red Meat

For the most part, it is interesting to note how similar the values of people who do not eat red meat are to omnivores. Specifically, the value of pragmatism is apparent throughout many of the responses in relation to many different considerations, such as environmental degradation, cost, and convenience. One added feature that is apparent in the responses of people who do not eat red meat is the importance of efficiency in considering

environmental concerns. This is a value that seems to have considerable overlap with pragmatism, mostly in the emphasis on practicality in both, so it seems possible to conclude that the values for people of both diets are notably similar.

VEGAN

The statements indicate that the following values are most important to vegans:

Animal welfare	<ol style="list-style-type: none"> 1. <i>Doesn't harm animals</i> 2. <i>I can't eat another living being.</i>
Environmental degradation	<ol style="list-style-type: none"> 1. <i>Saves natural resources</i>

While it is difficult to draw too many conclusions from the vegan responses due to the limited number of statements, it is possible to say that vegans seem to value animal welfare and environmental degradation over personal health, cost, and convenience, since these last three were not mentioned in the responses.

Values Analysis for Vegans

Vegans mentioned only concerns that do not affect them directly, such as animal welfare and environmental degradation, instead of focusing on concerns that have a greater personal effect on them, such as health, cost and convenience. From this, it may be possible to conclude that vegans value the betterment of the whole over personal needs and may be more willing to make personal sacrifices in order to achieve this goal. Since both of these concerns were prevalent in vegetarian responses, it may be that vegans and vegetarians share similar values, and that these influence their food choice.

Conclusions from Values Analyses

After analyzing the values that emerged as important for respondents in each diet, it is apparent that some values were present in multiple diets. For example, the theme of the betterment of the whole as more important than personal needs overlapped between vegetarians and vegans. In both cases, these values were compelling enough to create a sense of obligation to undertake personal sacrifice in dietary choices to reach the goal of bettering the whole, namely the environment. Localvores overlapped with vegetarians in the value of personal responsibility, seen in localvores' emphasis on knowing the conditions of the farm, and in vegetarians' willingness to undertake personal sacrifice. Likewise, the theme of pragmatism, or placing value on the practical considerations of each diet, was quite apparent in the responses of both omnivores and people who do not eat red meat. In both diets, this value emerged in relation to many considerations, including environmental degradation, cost, and convenience.

This suggests that, even though there was no clear relationship between diet and environmental ethics, there may be a commonality in value reasoning across diets. By this I mean that it seems other values people hold do play a role in their choices, and that some of these values are present in the responses of people who follow different diets. If there were no discernable patterns in values and reasoning, it would seem more likely that people's statements were somewhat random and perhaps were not very influential on their food choices. However, since there are several discernable patterns both within diets and across them, it seems that people's values, although not specifically environmental ethics, do influence their choices.

10-14. Please rank, with 1 being the strongest, which of the following factors have influenced your dietary choice, leaving blank any that have not.

		Personal health	Animal welfare	Environmental degradation	Convenience	Cost
Omnivore	First	45.8%	12.5%	20.8%	8.3%	12.5%
	Second	21.7%	8.7%	26.1%	17.4%	26.1%
	Third	13.6%	13.6%	22.7%	13.6%	36.4%
	Fourth	14.3%	28.6%	23.8%	33.3%	0.0%
	Fifth	0.0%	40.0%	10.0%	30.0%	20.0%
Vegan	First	0.0%	100.0%	0.0%	0.0%	0.0%
	Second	0.0%	0.0%	100.0%	0.0%	0.0%
	Third	100.0%	0.0%	0.0%	0.0%	0.0%
	Fourth	0.0%	0.0%	0.0%	100.0%	0.0%
	Fifth	0.0%	0.0%	0.0%	0.0%	100.0%
Vegetarian	First	9.1%	36.4%	54.5%	0.0%	0.0%
	Second	33.3%	33.3%	30.3%	3.0%	0.0%
	Third	48.3%	27.6%	17.2%	3.4%	3.4%
	Fourth	4.2%	4.2%	0.0%	25.0%	66.7%
	Fifth	4.3%	0.0%	0.0%	65.2%	30.4%
Localvore	First	64.9%	0.0%	27.0%	2.7%	5.4%
	Second	10.8%	27.0%	45.9%	8.1%	8.1%
	Third	18.9%	43.2%	16.2%	5.4%	16.2%
	Fourth	2.9%	17.6%	5.9%	38.2%	35.3%
	Fifth	3.0%	12.1%	3.0%	45.5%	36.4%
No red meat	First	29.4%	17.6%	47.1%	0.0%	5.9%
	Second	41.2%	23.5%	29.4%	5.9%	0.0%
	Third	20.0%	20.0%	26.7%	20.0%	13.3%
	Fourth	13.3%	6.7%	0.0%	33.3%	46.7%
	Fifth	0.0%	28.6%	0.0%	42.9%	28.6%

Table 13: Rankings by Dietary Choice

This table shows the distribution of the importance of each factor by rank for each dietary choice. For example, of omnivores who chose a first rank, 45.8% chose personal health, 12.5% chose animal welfare, 20.8% chose environmental degradation, 8.3% chose convenience, and 12.5% chose cost. In other words, the purpose of the table is to show which factors were most important to the respondents in each diet. For clarity, the following is a list of the rankings by dietary choice:

Localvore

1. Personal health
2. Environmental degradation
3. Animal welfare
4. Cost
5. Convenience

Vegetarian

1. Environmental degradation
2. Animal welfare
3. Personal health
4. Cost
5. Convenience

Omnivore

1. Personal health
2. Environmental degradation
3. Cost
4. Convenience
5. Animal Welfare

No red meat

1. Environmental degradation
2. Personal health
3. Animal welfare
4. Cost
5. Convenience

Vegan

1. Animal welfare
2. Environmental degradation
3. Personal health
4. Convenience
5. Cost

Note: In some cases, there is a discrepancy between the figures in Table 13 and the discussion and list of rankings above. For example, based on Table 13, it would seem that environmental degradation was the third place ranking under no red meat, since it garnered the highest percentage (26.7%) in the third ranking category. However, the percentages can be misleading because not all respondents ranked all five factors, potentially skewing the data in the lower rankings. Therefore, the percentages in Table 13 should be viewed as an approximation of popularity for each factor's ranking, and, in some cases, I had to use my best judgment as to the appropriate rankings based on the rankings of other factors within the same dietary choice and the percentages of other factors within the same ranking category.

Conclusions from Rankings

From these rankings, it is possible to make a few conclusions based on noticeable patterns. The main pattern is that many factors were given similar rankings in all dietary categories, despite the fact that the characteristics of each diet in relation to each factor vary markedly. For example, personal health was ranked within the top three for all diets, despite the fact that each diet's effect on personal health can be quite different. In the same pattern, cost and convenience were consistently ranked in the last three rankings, despite variation in the cost and convenience of the different diets. The only factor that truly varies between the diets is animal welfare. The fact that it varies somewhat in relation to the amount of use of animals in each diet makes the ranking of this factor differ from the above pattern.

The most relevant feature of this pattern is that respondents ranked environmental degradation within the top two for each diet. While it makes sense that Environmental Studies majors would rank environmental concerns as important in their dietary choice, it is interesting to note that the environmental degradation caused by each dietary choice can vary greatly, so the high ranking in each dietary category is intriguing and will be explored further in the following section.

Discussion

Although the quantitative data did not reveal any numerical relationship between environmental ethics and food choice, the open text responses suggest that people's values in general may influence their food choices. This was evident in the fact that several of the same values were expressed by multiple people within the same diet, as well as across diets. Another interesting finding emerged from the reasons portion of the results: respondents in all diet categories ranked environmental degradation as either the first or second most important factor in choosing their diets. Since the environmental impact varies considerably between diets, this fact seems to demonstrate a discrepancy between stated beliefs and actual behavior.

Discrepancy between Rankings and Reality of Diets

As stated above, environmental degradation appears in the top two for all diets, despite the fact that the environmental impact varies markedly from diet to diet. One of two things could be going on here: either ENVS majors believe that the diet they follow is the most beneficial for the environment, or they are aware that their diet is harmful to the environment and are still ranking it as an important factor in choosing their diet. Since ENVS majors at UVM study, at least broadly, the environmental impacts of industrial agriculture, it seems unlikely that they could believe that following an omnivorous diet is beneficial for the environment. Therefore, something else must account for the fact that the respondents ranked environmental degradation as important in their decision, even for diets that are not as environmentally friendly. While any number of factors could be behind this phenomenon I propose three possible explanations for this discrepancy. The first explanation is that situational factors, meaning circumstances that are present in a person's

life that limit their ability to carry out beliefs in practice, play a strong role in the respondents' lives. The second is that ambivalence, or the existence of conflicting motives, is at least partially responsible for the discrepancy. The third is that there is a lack of cogent reasoning behind respondents' beliefs that would keep them committed to behaving in accordance with them. These potential explanations are by no means mutually exclusive; in fact, it is likely that a combination is at play within any given respondent, and it is also important to note that an overlap of reasons was common in my research. However, by grouping the findings into these themes we can more readily analyze the responses and attempt to reach a conclusion.

Potential Explanation #1: Situational Factors

Situational factors are factors in the respondents' lives that limit them from behaving exactly as they would like, perhaps exactly as their beliefs would entail. This could explain the discrepancy because it might be that people are stating what is important to them, but then not behaving in accordance with them in part due to these restrictive factors. The main themes that emerged in the responses were cost, convenience, and personal health.

One of the most common themes was concern over the cost of some environmentally friendly diets. One omnivore expressed cost as a dominant situational factor by explaining, "I try to be aware of where my food is coming from, and I would prefer to buy local and organic, but it's very hard to do on a limited budget. I know that some of the food I buy comes from massive agribusinesses, but it's hard to always control what I buy". Another omnivore expressed a similar sentiment by stating, "I eat red meats, poultry, and seafood about once a week and have eggs more often. Because I care about animal welfare, and don't want to support unhealthy practices for animals I try to buy organic, local, and

grassfed/cage free meats when I can afford it”. Other omnivores were even more direct about the position their financial realities can put them in, saying “I am poor and sometimes have to buy cheap food over good food” and, in the words of another respondent, “I am struggling to survive. I don’t have money to spend it on a \$6 gallon of milk”. It is apparent in these statements that the most common theme was the respondents’ concern for the cost of local or vegetarian food.

In other words, while many people expressed concern for the animal welfare and environmental degradation issues of eating conventional meat, the most common reason given for continuing to eat this diet was the financial reality of being a college student. While the existence of this issue was often confusing, since a plant-based diet is usually cheaper than a diet that includes even conventional meat, the frequency of this sentiment in the responses is worth noting, as its prevalence likely means that this issue plays a large role in the discrepancy between belief and action.

Another place that the idea of cost as a situational factor was present was in the rankings themselves. It is interesting to note that omnivores ranked cost as third most important, whereas members of all other diets ranked it as either fourth or fifth. It may be that people who are most concerned about money see it as a restrictive factor in their diet choice. In other words, the high ranking is further evidence that omnivores see cost as an important factor in their decision, and combined with the open text responses, it becomes clear that it is a factor that omnivores perceive as restricting them from carrying out the diet they may wish to.

Another prevalent theme within situational factors was the issue of convenience in acquiring food that is less harmful to the environment. This idea is reflected most succinctly

in the words of one omnivore: “As a busy college student, I don’t have enough time to eat as conscientiously as I would like”. Others were more specific about the factors that limited their ability to eat the way they would like, with one omnivore explaining, “Without a car and very little time, convenience is key to getting groceries”. One vegetarian pointed to location as a factor in convenience, stating, “It is more difficult to find responsibly raised meat outside Burlington”. These statements make it clear that convenience in attaining the food that people wish to eat was a common issue, although not as prevalent as cost. While people mentioned different factors, the overall message was that respondents’ felt restricted in terms of time or the availability of food that might be more in line with their beliefs.

Concern over personal health as a situational factor was another theme, although one that was less prevalent than cost and convenience. Some people were concerned about the issue that allergies posed in their flexibility to eat the diet they wished, with one localvore saying, “I am allergic to nuts and cannot eat soy products, so it is difficult for me to find protein options that are substantial enough for me”. Others mentioned health issues that they felt restricted their diets. One localvore explains, “I was vegetarian for about five years, but my anemia prevented this from being a long-term, sustainable life choice for me”. An omnivore echoes this point by saying, “I get a serious vitamin B12 deficiency when I am a vegetarian”. Overall, these responses show that at least a portion of the respondents is concerned with the health effects of cutting meat out of their diets. While it is generally thought that a plant-based diet can be healthier than one that contains meat, there are certain health concerns that are specific to individuals, such as allergies, anemia, and vitamin deficiencies, that can limit a person’s ability to be vegetarian even if one intends to.

Overall, my results provide the most evidence for situational factors in explaining the discrepancy between belief and behavior, a finding that is supported by my research. For example, a study by Barton et al (2011) found that many people in underprivileged areas of the United Kingdom indicated that situational factors, such as a lack of money, left them in a position in which they were forced to make tradeoffs between the quality of food and its price and convenience. These findings are almost exactly replicated in my results. Many students explained that they felt a lack of money and mobility, two factors that are common among college students, limited their ability to eat food that would better fit their beliefs. Others commented on personal health constraints that they felt limited them from pursuing the diet they wanted. Another interesting thing to note is that the changes entailed by the transition to college may be playing a role as well, a finding that would also be supported by my research. Sobal and Bisogni (2009) found that significant life events such as a change in residence can affect people's food choices. Therefore, the transition to a college lifestyle may be limiting respondents' ability to afford or access the food they wish to eat.

Perhaps most important is that many people expressed the fact that these situational factors were specifically restricting them to a diet that was in conflict with the one they wished to follow, instead of simply dictating a certain diet to which the respondents felt indifferent. This is exemplified in phrases such as "...but I would much rather eat local meat" and "I don't have enough time to eat as conscientiously as I would like". Just as in my research, people seem to feel the presence of situational factors in their dietary decisions, and they also seem to feel these put them in a position where they are forced to make tradeoffs they otherwise might not.

Potential Explanation #2: Ambivalence

Situational factors alone can surely not account for the discrepancy, and the themes in the open text responses indicate that there are other factors at play. Another theme they indicate is the existence of ambivalence in the respondents' reasoning. As described above, ambivalence occurs when people experience a conflict in motives. For example, people may feel compelled to adhere to a diet that inflicts less harm on the environment, while also feeling compelled to eat conventional meat due to its taste and cheap price. One omnivore expressed a conflict in motives between concern for animals and eating meat by saying, "I care deeply for animals, and try to get local and organic meat whenever I can. I still eat meat, although I do feel bad about it sometimes". Another omnivore expressed ambivalence about eating meat by saying, "It's cheap. It sucks but it's all I can afford. When there is cheaper local or organic meat I always get it, but otherwise I either eat less meat or eat industrially produced meat". Overall, these statements express some degree of ambivalence about the respondents' diet choice.

Whether it is expressed by explicitly saying they feel bad about their diet or it is more implicitly expressed by explaining they try to eat types of food they feel better about, each statement embodies some aspect of ambivalence. According to Sparks et al (2001), ambivalence is a primary reason for discrepancies between beliefs and behavior. Specifically, the ambivalence is caused by a conflict between dominant motives as a result of variations in the strength of each. The statements from my results seem to support this in that they demonstrate, on the one hand, a desire to eat meat and, on the other, mixed feelings about the effects of massive agribusiness, as one respondent puts it. In all of the statements,

two motives are being expressed, and a conflict due to variations in the strength of each seems apparent.

Potential Explanation #3: Lack of Cogent Reasoning

It seems unlikely that even the effects of situational factors and ambivalence combined can account for the discrepancy, and that at least one more factor is involved. Another possibility is that the respondents may not have thought about their decisions with the amount of time or depth necessary to realize this discrepancy and reconcile it. Previous research has shown that people who have not formed a cogent rationale behind their beliefs often express them in broad, simple statements. If these types of statements are apparent, there is a lower likelihood that people will actually follow through on their beliefs in practice. In other words, if people are expressing their beliefs in broad, simple statements, it could mean that they have not yet formed cogent reasoning behind their beliefs, which might cause them to behave in ways that are not in line with them and partially explain the discrepancy.

This broad nature of statements is reflected in one localvore's statement, "I want to support positive farming practices". One omnivore's statement is equally broad: "I eat local or responsibly produced meat". One vegetarian also gave a fairly simple, broad statement, saying "I previously ate "happy meat" only before I became a vegetarian". These statements all exhibit fairly simple, broad sentiments. While the short nature of a survey does not lend itself well to writing in depth responses, it is still possible to summarize one's reasoning in a small paragraph that clearly explains one's rationale. However, these responses are composed of broader, simple sentiments.

A study by Maio et al (2001) found that people who had not previously formed cogent arguments gave a collection of simple thoughts, while those who had formed cogent arguments were able to give complex explanations behind their reasons. Moreover, the relationship between cogent arguments and the likelihood of following through on them in practice is informative. Those who offered simple thoughts were less likely to behave in accordance with them, while those who explained their beliefs in greater depth were more likely to follow through with them in their behavior. The findings of my survey seem to support this, in that a significant portion gave broad, simple reasons for their diet, and many who stated that environmental degradation was one of the most important factors to them were not necessarily following through in practice, depending on the level of environmental degradation entailed by their diet.

Limitations

It is important to realize that, while it is possible to make inferences and draw conclusions from the survey results, there are certain features of the survey that limit the scope and accuracy of its results. In surveys generally, it is important to note that respondents sometimes try to guess the answer they think the researcher wants to hear, and so may not answer entirely truthfully. Therefore, the results of surveys in general should always be viewed critically.

In my survey in particular, the number and depth of the quantitative questions limits the amount of data they can collect, and therefore restricts the conclusions that can be drawn from them. For example, when designing the survey, I was intent on keeping the number of questions to a minimum in order to make the survey more appealing to potential respondents, and the responses more easily analyzable. Perhaps the most significant

consequence of this was that it meant I was only able to include four environmental ethics questions, and that these four were crafted out of generic and prescribed statements. The effect of this might have been that the statements themselves were too broad to have been successful in identifying a relationship between environmental ethics and food choice, and this lack of specificity could have generated a false ambivalence in the responses.

Aside from issues with the quantitative questions, there are also limitations with the open text portion. As mentioned earlier, the space in the open text boxes was limited, so respondents might not have felt they had sufficient space to explain their views. This likely means that the respondents' answers do not represent the complexity or depth of their reasoning. The brevity of the responses could also have caused me to misinterpret the respondents' meaning. It is also likely that respondents filled out the survey quickly and did not include all of their thoughts, limiting the amount of accurate analysis that can come from them. It is therefore important to recognize these limitations in order to remember to view the conclusions from this survey, and surveys generally, with a critical eye.

Conclusion

Perhaps the most salient conclusion from my survey is that the reasons people act in the ways they do is a complex and multi-faceted topic, and the specific area of dietary choice certainly does not represent a deviation from this rule. Intrigued by what I had always seen as a paradox between Environmental Studies majors' concern for the environment and the diets they choose to follow, I sought to more fully understand what motivated ENVIS students to eat what they did. As is often the case, I started from the perspective of personal experience. In my own life, I know that environmental ethics has often played a role in making diet choices, although of course there are times when I make choices that go against this ethic. Although the relationship between ethics and diet is never absolute, I was interested in seeing whether environmental ethics was present in others' food choices.

From the results of the quantitative responses, it is hard to draw any clear conclusions about the relationship between respondents' environmental ethics and food choice due to the fact that the degree to which respondents agreed and disagreed with the environmental ethics statements did not strongly correlate with the diets they chose. Of course, these conclusions are based on a mere four questions in my survey, but it at least does not seem possible to conclude that a clear relationship exists between environmental ethics and dietary choice for the majority of ENVIS students.

The results of the open text portion, however, did provide interesting insight into the presence of other types of values in the respondents' reasoning. From the specific values that respondents provided, it was possible to infer which general values were important to them in each diet. Based on the localvore responses, it seems localvores value developing social capital, getting a high quality product, adhering to personal responsibility, and ensuring that

animals are treated humanely. It seems that vegetarians value the betterment of the whole over personal needs, and that ethical issues, such as whether a food choice represents justice, and whether animals have a right to life similar to that of humans, weigh on their decision. Omnivores seem to value the importance of nutritional fulfillment and especially the importance of pragmatism, or a practical approach reached through a reasonable decision making process that weighs a variety of factors. People who do not eat red meat also valued pragmatism, although their form of pragmatism included the added feature of efficiency. Vegans mentioned only concerns that do not affect them directly, such as animal welfare and environmental degradation, suggesting that they also value the betterment of the whole over personal needs and may place a lot of value on making personal sacrifices.

What is most notable in these values is the degree to which they overlap across diets. For example, the theme of betterment of the whole as more important than personal needs overlapped between vegetarians and vegans. Localvores overlapped with vegetarians in the value of personal responsibility, and omnivores and people who do not eat red meat overlapped in the value of pragmatism. This suggests that, even though there was no clear relationship between diet and environmental ethics, there may be a commonality in value reasoning across diets. In other words, it seems that similar values play a role in people's food choices in many different diets.

As I went back and studied other portions of the results, I noticed another remarkable finding, this time in the reasons section. When asked to rank the importance of different factors in their diet choice, the respondents had ranked environmental degradation as either first or second in all diets. This struck me because the difference in environmental impact between diets is considerable. Since I had found a substantial amount of research on the

discrepancy between stated beliefs and actual behavior, I began to think that there seemed to be a difference between what ENVS majors state as important to them and what they do in practice. I decided to focus my attention then on finding potential explanations for this discrepancy.

After studying the open text responses with this in mind, I noticed three main themes emerge. The first, and most prevalent, of these themes concerned situational factors. It seems that ENVS majors want to follow diets that are environmentally friendly, but they feel that circumstances in their lives, such as a lack of money, time, or food availability restrict them from following these diets in reality. The second theme was ambivalence, or the existence of conflicting motives, within the respondents. ENVS majors seemed to exhibit both a desire to adhere to environmentally friendly diets and a desire to follow less environmentally friendly diets for various reasons. This conflict may result in factors other than environmental degradation winning out, and the respondent following a diet that entails more environmental harm. The third theme was the lack of cogent reasoning in a significant portion of the responses. This lack was often apparent in the use of broad, simple explanations behind beliefs, which is associated with a lower likelihood of adhering to these beliefs in behavior, and could explain why people are stating a belief and behaving in ways that are not in line with them.

These conclusions may seem speculative, and it is likely that someone else would come up with vastly different ones given the same results. Such is the nature of surveys though, especially those that include open text responses, and I have deduced what seems to me to be a reasonable explanation of the above findings based on a framework provided from existing literature in the field. While many other conclusions could be made, it seems

safe to say that: 1) it is not possible to make any definitive conclusions about the relationship between environmental ethics and ENVS majors' dietary choices, 2) there are other values in the open text responses that may influence the respondents' choices, and these are common in multiple diets, 3) there seems to be a discrepancy between stated beliefs and actual behavior in the rankings section, where respondents listed environmental degradation as either first or second most important in all diets, and 4) the open text responses support three main themes that might explain this discrepancy: situational factors, ambivalence, and a lack of cogent reasoning behind beliefs.

These findings provide important insight into the common discrepancy between stated beliefs and actual behavior, specifically concerning those who care about the environment. While my project began as a way to collect information on ENVS majors' food choices so as to try to persuade them to adopt plant-based diets, it instead ended up identifying the obstacles that prevent people from adhering to the diets they may wish to. Perhaps more importantly my findings provide a way forward: now that these obstacles have been identified, future research and initiatives can focus on overcoming them. Ultimately, it would be beneficial for the environment, animal welfare, and personal health for more people to adhere to a plant-based diet. What my thesis shows is that a significant portion of ENVS majors might wish to follow such a diet; now all we have to do is address these obstacles in order to find ways for people to make this a reality.

Personal Reflection Part II

I have found the experience of working with the results and implications of this survey to be fascinating, and feel I would be remiss in not reflecting on it as I close the project. Perhaps the most surprising result was that it was not possible to draw a clear conclusion between environmental ethics and diet. While the limitations of the survey, discussed above, may be responsible for this, I had anticipated that at least a weak relationship would become apparent. For me, environmental ethics often plays a role in my lifestyle decisions, at least those that are significant enough to substantially impact the environment. Of course, I am as fallible as anyone in caving to everyday temptations that are less than environmentally friendly, so I recognize that holding certain beliefs does not always lead to certain behavior. However, I was still interested in seeing to what extent environmental ethics influences the behavior of ENVIS majors.

I take the results of this survey as a reminder that people are motivated by a great variety of different factors; some that have an influence on me hold no sway over others, and vice versa. While this is perhaps an obvious conclusion, it is tempting to assume that people who are like-minded with you in one way, namely through a shared interest in the environment, are like-minded in every other way. It is a lesson in the complexity of human rationale, motivation, and thought that even people who appear to share a similar mindset may have arrived at their beliefs in vastly different ways, and may adhere to them in an equally varied fashion.

In regard to the discrepancy I found between stated beliefs and actions, I experienced a combination of frustration, then empathy, and ultimately optimism. When I first noticed that “environmental degradation” ranked within the top two motivations across all diets, I

was at first frustrated by this contradiction. If people claimed to be concerned about environmental degradation, why were they not following more sustainable diets? Honestly, I felt people were trying to have it both ways, and was annoyed that I was putting in quite a bit of effort to try to mitigate this contradiction by being vegetarian, while others did not seem to be. I then went back to my initial reflection, and remembered that, while I have often felt I should be vegan, I have not put in the effort to achieve this. Perhaps a more appropriate reaction to the results is an empathetic and understanding one. Maybe others feel this same conflict between ideal beliefs and daily behavior. Either way, I have been reminded of the environmentalists' struggle to act out their values in practice while allowing themselves the freedom to be human, which has in turn allowed me to be more understanding of others' decisions when it comes to diet.

Ultimately, I was able to find optimism in the results as well. While my original hope to find either a clear relationship between environmental ethics and diet, or learn of fascinating reasons I had never considered for why others chose theirs, remained largely unfulfilled, I still found optimism in the fact that the vast majority of respondents cited the environment as among their top considerations. I chose to see this as a way forward, that perhaps all we need to do now is figure out what *does* motivate people to act in line with their beliefs, and perhaps also what obstacles are keeping them from doing so, and use these findings for the benefit of the environment.

Bibliography

- (2008). Vegetarianism in America. *Vegetarian Times*.
- Adams, C. (2000). Feasting on life. *Ecotheology: Journal of Religion, Nature and the Environment*, 5(9), 38.
- Armitage, C. J., & Conner, J. (2000). Attitudinal ambivalence: a test of three key hypotheses. *Personality and Social Psychology Bulletin*, (26)11, 1421-1432.
- Barton, J., Kearney, J., Stewart-Knox, B. J. (2011). Knowledge of food production methods informs attitudes toward food but not food choice in adults residing in socioeconomically deprived rural areas within the United Kingdom. *Journal of Nutrition Education and Behavior*, 43(5), 374-378.
- Bess, K. D., & Freedman D. A. (2011). Food systems change and the environment: local and global connections. *American Journal of Community Psychology*, 47(3), 397-409.
- Booth, C. (2009). A motivational turn for environmental ethics. *Ethics & the Environment*, 14(1), 53-78.
- Brennan, A. & Yeuk-Sze, L. (2011). Environmental Ethics. *Stanford Encyclopedia of Philosophy*.
- Brooks, D. (2009). The smoking vegetarian. *Angelaki: Journal of the Theoretical Humanities*, 14(2), 129-137.
- Deckers, J. (2009). Vegetarianism, sentimental or ethical? *Journal of Agricultural and Environmental Ethics*, 22(6), 573-597.
- Des Jardins, J. R. (2006). *Cevre etigi*. Ankara: *Imge Kitabevi*.
- Environmental Program. (2004). Mission statement. Retrieved April 27, 2011.
- Fessler, D. M., Arguello, A. P., Mekdara, J. M., & Macias, R. (2003). Disgust sensitivity and meat consumption: a test of an emotivist account of moral vegetarianism. *Appetite*, 41, 312-341.
- Fox, N., & Ward, K. (2007). You are what you eat? Vegetarianism, health and identity. *Social Science and Medicine*, 66(12), 2585-2595.
- Fox, N., & Ward, K. (2008). Health, ethics, and environment: a qualitative study of vegetarian motivations. *Appetite*, 50(2/3), 422-429.
- Gaard, G. (2002). Vegetarian eco-feminism: A review essay. *Frontiers*, 23, 117-146.

- Harris, P., Trumball, M., & Gruben, P. (2008). Vegetarianism in America. *Vegetarian Times*.
- Hauser, M., Jonas, K., & Riemann, R. (2011). Measuring salient food attitudes and food-related values. An elaborated, conflicting and interdependent system. *Appetite*, 57(2), 329-338.
- Henry, J. (2007). Red meat in the diet: a balanced approach. *Practice Nurse*, 34, 2.
- Hoek, A. C., Luning, P. A., Stafleu, A., & de Graaf, C. (2004). Food-related lifestyle and health of Dutch vegetarians, non-vegetarian consumers of meat substitutes, and meat consumers. *Appetite*, 42, 265-272.
- Holmes, R. (2010). What's the beef with meat? *New Scientist*, 207(2769), 28-31.
- Hood, S. (2008). The vegan diet. *Practice Nurse*, 35(3), 13-17.
- Hourdequin, M., & Wong, D. B. (2005). A relational approach to environmental ethics. *Journal of Chinese Philosophy*, 32(1), 19-33.
- Husar, K., & Harris, P. (2010). Children who choose not to eat meat: a study of early moral decision-making. *Social Development*, 19(3), 627-641.
- Institute of Grocery Distribution. (2006). Retail and foodservice opportunities for local food, 48.
- Kalof, L., Dietz, T., Stern, P. C., & Guagnano, G. A. (1999). Social psychological and structural influences on vegetarian beliefs. *Rural Sociology*, 64(3), 500-511.
- Karpen, S. (2012). Discrepancies between implicit and explicit attitude measures as an indicator of attitude strength. *European Journal of Social Psychology*, 42(1), 24-29.
- Koster, E. P. (2006). Diversity in the determinants of food choice: a psychological perspective. *Food Quality and Preference*, 20(2), 70-82.
- LaPiere, R. T. (2010). Attitudes vs. actions. *International Journal of Epidemiology*, 39(1), 7-11.
- Lavin, C. (2009). The year of eating politically. *Theory & Event*, 12(2), 8.
- Lawrence, V. (1993). Is vegetarianism a diet or an ideology? *Canadian Medical Association Journal*, 148(6), 998-1002.
- Maio et al. (2001). Addressing discrepancies between values and behavior: the motivating effect of reasons. *Journal of Experimental Social Psychology*, 37(2), 104.

- Mangels, R. (2011). What influences people to make major dietary changes? *Vegetarian Journal*, 24(3), 67-82.
- McStay, J., & Cunningham, J. (2009). How many vegetarians are there? *Vegetarian Resource Group*.
- Milosevic, J., Zezelj, I., Gorton, M., & Barjolle, D. (2012). Understanding the motives for food choice in Western Balkan countries. *Appetite*, 58(1), 205-214.
- Mueden, L. (2010). The way we were. *Psychology Today*, 43(3), 51-2.
- Olatunji, B., & Sawchuk, C. (2005). Disgust: Characteristic features, social manifestations, and clinical implications. *Journal of Social and Clinical Psychology*, 24(7), 932-962.
- Olsen, S. O. (1999). Strength and conflicting valence in the measurement of food attitudes and preferences. *Food Quality and Preference*, 10(6), 483-494.
- Pallotta, N. R. (2008). Origin of adult animal rights lifestyle in childhood responsiveness to animal suffering. *Society & Animals*, 16(2), 149-170.
- Petty, R. E., & Briñol, P. (2009). Implicit ambivalence: a meta-cognitive approach. In *Attitudes: Insights from the new implicit measures*. New York, NY: Psychology Press, 1190165.
- Povey, R., Wellens, B., & Conner, M. (2001). Attitudes towards following meat, vegetarian and vegan diets: an examination of the role of ambivalence. *Appetite*, 37(1), 15-26.
- Rozin, P., Markwith, M., & Stoess, C. (1997). Moralization and becoming a vegetarian: the transformation of preferences into values and the recruitment of disgust. *Psychological Science*, 8(2), 67-73.
- Rudy, K. (2012). Locavores, feminism, and the question of meat. *Journal of American Culture*, 35(1), 26-36.
- Shaukat, A. et al. (2008). Systematic Review: effective management strategies for lactose intolerance. *Annals of Internal Medicine*, 152(12), 797-803.
- Shea, S. B. (2008). Explore with a localvore. *New York State Conservationist*, 62(6), 2-6.
- Sobal, J., & Bisogni, C. (2009). Constructing food choice decisions. *Annals of Behavioral Medicine*, 38, 37-46.
- Sparks, P. et al. (2001). Ambivalence about health-related behaviours: an exploration in the domain of food choice. *British Journal of Health Psychology*, 6(1), 53.
- Stahler, C. (2011). How many vegetarians are there? *Vegetarian Journal*.

- Stanner, S. (2007). Healthy reasons to eat red meat. *Practice Nurse*, 34, 2-4.
- Steptoe, A., Pollard, T. M., & Wardle, J. (1995). Development of a measure of the motives underlying the selection of food: the food choice questionnaire. *Appetite*, 25, 267-284.
- Stringer, R. S., & Umberger, W.J. (2008). Food miles, food chains and food producers: consumer choices in local markets. *The University of Adelaide Waite Campus*.
- Svoboda, T. (2011). Why there is no evidence for the intrinsic value of non-humans. *Ethics and the Environment*, 16(2), 25-36.
- Tobler, C., Visschers, V. H., & Siegrist, M. (2011). Eating green. Consumers' willingness to adopt ecological food consumption behaviors. *Appetite*, 57(3), 674-682.
- Van der Kooi, M. (2010). The inconsistent vegetarian. *Society and Animals*, 18(3), 291-305.
- Walker, C. (1995). Meet the new vegetarian. *American Demographics*, 17(1), 3-9.
- Walsh, C., & Johnson-Laird, P. N. (2009). Changing your mind. *Memory & Cognition*, 37(5), 624-631.
- Wang, Y., Beydoun, M., Caballero, B., Gary, T., & Lawrence, R. (2010). Trends and correlates in meat consumption patterns in the US adult population. *Public Health Nutrition*, 13(9), 1333-1345.
- Wilson, M., Weatherall, A., & Butler, C. (2004). A rhetorical approach to discussions about health and vegetarianism. *Journal of Health Psychology*, 9(4), 567-581.
- Zamir, T. (2004). Veganism. *Journal of Social Philosophy*, 35(3), 367-379.

- D. ____ Convenience
- E. ____ Other, please describe_____

For all that you ranked above, please briefly describe which specific aspects of each have influenced your choice:

Personal health: _____

Animal welfare: _____

Environmental degradation: _____

Convenience: _____

Other: _____

7. If you could describe in a single sentence the reasons behind your dietary choice, what would it be? In other words please complete the sentence that applies to you:

“I eat industrially produced meat because_____”

“I eat only local meat because_____”

“I do not eat meat because_____”

8. If you were to want to change your diet, which of the following might discourage you from doing so? Circle all that apply.

- a. My friends would not support the change.
- b. My family would not support the change.
- c. I would be concerned that my diet would not be nutritious enough.
- d. A different diet would be too expensive.
- e. I worry that I would feel isolated from my friends, family, or society if I followed a different diet.
- f. The food that I want to eat is not sold at my grocery store, or is in any way inaccessible.
- e. Other, please describe_____

8. Which aspects of the environment are most important to you? Circle all that apply.

- a. Wildlife
- b. Forests
- c. Land and soil
- c. Climate
- d. Human environmental health
- e. Water
- f. Other, please describe_____

Appendix B: Final List of Survey Questions

These are the questions I used for the actual survey on LimeSurvey. The red text indicates changes that were made to the initial list of questions based on comments I received from the pilot test. Additional changes were made in response to confusion in the process of completing the survey that became apparent during the pilot test. These issues are also noted in red, and the wording of the question was subsequently changed.

1. Please indicate your class standing:

- A. First year
- B. Sophomore
- C. Junior
- D. Senior

2. Please indicate your gender:

- A. Male
- B. Female

3. Please choose the dietary option with which you most closely identify:

- A. Omnivore – Consume mostly conventional, industrially produced meat and animal products
- B. Vegan – Never consume any meat or animal products e.g. cheese, eggs, or milk
- C. Vegetarian – Never consume any meat, including fish, but do consume animal products
- D. Localvore – **Consume mostly** meat and other food that has been raised within 100 mile radius
- E. **No red meat – Never consume red meat, but do consume poultry, fish, and animal products**
- F. **Hunted meat – A substantial portion of the meat I consume comes from animals I have killed myself**

4. For how long have you followed this diet?

- A. Less than six months
- B. More than six months **but less than two years**
- C. More than two years **but less than five years**
- D. More than five years **but less than ten years**
- E. More than ten years **but less than your entire life**
- F. Entire life

5. On a scale from 1-5, with 1 being the most, indicate how strongly you agree with the following statements:

The environment should be respected and protected because it holds intrinsic value.

1 2 3 4 5

The environment exists primarily to benefit and serve humans.

1 2 3 4 5

“I eat industrially produced meat because _____”

“I do not eat any animal products because _____”

“I do not eat meat because _____”

“I eat only local meat because _____”

“I do not eat red meat because _____”

“I eat meat that I have hunted myself because _____”
