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Bard

Recognizing the Interdependent Self:

The Perception of the Production and Consumption of Meat at Bard College

Senior Project Submitted to

The Division of Social Studies

of Bard College

by

Avery Cross

Annandale-on-Hudson, New York

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Our current environmental crisis was created by thousands of small acts, mostly done unthinkingly. It can also be undone by thousands of small acts — and if we engage in those acts consciously, problems can often be resolved more quickly than they were created.

-Karmapa XVII

Vital Connection:

To be for the environment is to be for one's individual self. The individual and the environment are interdependent and taking care of one implies taking care of the other. The connections we have with other people serve as a bridge between the individual and the environment, which are often falsely recognized as independent entities. Other people exemplify the interdependence between the individual and the environment, and to embrace an interdependent self is to support oneself, other people, and the environment.

Taking care of oneself always involves other people. To be able to support anyone else, it is necessary that you, yourself, are supported and this is impossible to do without depending on other people. If one were to listen to music for oneself, the one person relies on whoever created the music, whoever designed the radio that allows the music to play, whoever introduced the person to that artist, etc. If one goes on a walk to exercise for oneself, one relies on whatever conditions allowed the person to be at that place and time, whoever bought that person a first pair of shoes, whoever let the person take a break from work to do so. Similarly, to take care of oneself is to take care of other people. As one engages in self-care, cultivating benefits for one's own self, one also cultivates benefits for other people. The person who decided to take the time to listen to music calmed down and can now communicate effectively to others. The person who went on the walk to exercise is healthy enough to physically assist other people. By taking care of oneself, one is able to take care of other people.

The relationships between the self, other people, and the environment highlights the nature of interdependence. To take care of the environment is to take care of both oneself and other people, and the benefits are interdependent. We physically depend on the planet for

survival; the basic levels of oxygen allow us to breathe, water allows us to replenish our thirst, the food of the earth sustains us with energy, we build shelters and tools from all sorts of materials, etcetera. If one runs a beef operation sustainably, one can refrain from polluting a local river, people can rely on the river for clean drinking water, and the plant and animal species living in the river are healthy. By keeping the water clean, the people benefit simultaneously as the environment benefits. Likewise, if one runs a beef operation unsustainably, one can pollute a local river, cutting off access to drinking water and harming the species living in the water. As seemingly simple these dependencies are, they are easily taken for granted, as people resist attempts to move toward more sustainable adaptations to environmental degradation and climate change.

Our survival depends on the conditions and resources of the environment, but fortunate enough to do so, people seek for more than physical survival in the environment. Everything material comes from the environment, despite whether we are able to perceive its source or not. Whether it be the metals derived from the earth to create the car that got you where you needed to be, the oil used to fuel the car, the trees used to build your home, and even the materials used to make computers, dishware, pipes, tubes of toothpaste, everything. Not only do we physically depend on the environment, we constantly attempt to discover and cultivate meaning within the environment. Every familiar pattern of existence, every novelty, every moment of reward, letdown, pleasure, disgust, intensity, peace, stillness, and motion that we observe in life can be observed in the environment as well, through the display and shaping of these moments. Clearly, we can perceive distinctions between humans and the environment, yet the environment is composed of components critical to the mental and physical foundations of human beings. The environment is often thought of as what surrounds us in some way, what we exist “in,” what

exists around “us,” in reference to our individual selves. I use the term “environment” to refer to these surroundings, but this definition is inherently both broad and limiting, as it breaks down when one examines it closely, and this is my point. We can also be understood to exist “as” the environment through our constant forms of connection, through both tangible interactions, such as the exchange of gasses between human lungs and the atmosphere, the touch between grass and shoe, the eating of another being, as well as through less visible interactions, a memory of childhood linked to a forest one used to explore, knowing a friend’s street is approaching by the change of skyline, or watching a movie about a savannah desert ecosystem. All of these exchanges with the environment are ways in which we make meaning through identification and comprehension of our interactions with aspects of our environment. Our very sense of who we are depends on environmental interactions: we rely on the environment for comprehension of reality.

I aim to emphasize that the environment has never been and will never be something separate from human beings. Often the term “nature” is also used to describe the environment. “Nature” evokes something ideal and distant from human civilization, something that once was but now is not, something that was originally whole but is now fragmented, which humans enter and can leave. The most notable product of believing people are separate from this nature is the environmental crisis of climate change. Climate change is happening now and scientific evidence asserts that human beings are the cause.¹ Climate change is an environmental issue, to say the least, and inherent in our observation of it is the fact that humans are acting as a geophysical force of nature.² Humans are constantly engaging with nature because humans are nature, and

¹ International Panel on Climate Change (IPCC). “Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.”

² Timothy Morton, *Dark ecology: for a logic of future coexistence*, 9.

both the environmentally destructive and the environmentally conscious risk abstracting the reality of environmental issues through losing sight of this seemingly simple fact of being. I use the term “interdependence” to refer to the constant engagement between phenomena, the way in which all components of the environment, including humans, depend on all the other components, each one serving as both a cause and effect of others. Studying Environmental and Urban Studies at Bard, I have learned that environmental issues emerge from a set of interdependent components, and so do the solutions.

To present the law of interdependence, I refer to the Jewel Net of Indra, a central Buddhist image depicted in the Avataṃsaka Sūtra. The jewel net depicts the way in which all phenomena occur as both the cause and effect of all other phenomena:

Now the celestial jewel net of Kanishka, or Indra, Emperor of Gods, is called the net of Indra. This imperial net is made all of jewels: because the jewels are clear, they reflect each other’s images, appearing in each other’s reflections upon reflections, ad infinitum, all appearing at once in one jewel, and in each one it is so—ultimately there is no going or coming.³

Each jewel, being clear, contains the reflection of all the other jewels in the net. The way in which one jewel is inextricably tied to the others, reflecting and being reflected by the other jewels, highlights the way in which one component of the environment cannot be isolated from the rest. Just as the image of all the jewels is seen within one individual jewel, one jewel contains all the others, meaning just as the individual is made up from the whole, the whole is made up of individuals. Interdependent existence implies each jewel exists relative and in exchange with the other jewels. The jewels in the net are all clear and distinct, allowing for the web of reflection, yet interdependence is not always clearly observed. Even when interdependence is observed,

³ Tu- Shun, "The Jewel Net of Indra," *Dharma Rain: Sources of Buddhist Environmentalism*. Boston, MA: Shambhala Publications, 2000, 58-59.

recognition of the other jewels does not necessarily imply that we see ourselves as part of the total.

In my project, I investigate the perception of the production and consumption of meat as an environmental issue because it exists within a web of interdependent environmental problems, such as emissions of carbon dioxide, nitrous oxide, and methane, all greenhouse gasses which drive climate change, as well as associated problems of intensive land, water, and resource use. Moreover, the solutions to addressing environmental issues rely on orienting ourselves toward interdependence. If students are informed of the environmental issues associated with the production and consumption of meat, the decision to eat meat or not demonstrates how individuals relate to the environment because it involves making a conscious decision, multiple times every single day through eating. The decision to eat meat or not also involves option, as Bard's dining hall, Kline Commons, provides a range of both meat and vegetarian dishes every meal, therefore providing the opportunity to make an active choice. Furthermore, I address the production and consumption of meat because it relates to the life of other beings. I argue that we should be completely aware and supportive of the ways in which we directly impact other beings, whether we justify the killing of animals or not, and whether we decide to eat them or not. Bard students are taught to think critically and they care deeply and diversely about the ever-developing problems in the world, both at the local and global level. If Bard students believe they have the option to either do what is either good or "bad" as they articulate in my research, and that they choose what is bad, what does this say about the meaning of the consequences of our actions? What does our inability to perceive our position during direct exchanges with the environment (referring to the physical engagement of both killing and eating other animals) mean for our ability to address less "visible" and ever-present environmental issues, such as

contributing to climate change through buying chocolate and indirectly supporting palm oil production? What types of support do we need to develop in order to be confident and comfortable with our impact on the environment?

It is critical to address environmental issues such as the production and consumption of meat at Bard College because we can access information of the environmental impact, and we have the physical resources and the determination to address environmentally detrimental activities. There is a gap between the knowledge of interdependence and the actual experience of interdependence, which limits our ability to address environmental issues, as well as limits the potential to connect to others. The production and consumption of meat is one of infinite topics related to climate change and environmental issues, but the way in which students perceive it as an environmental issue at Bard College is key to understanding how people in general perceive their position in the environment. We need to be deliberate in recognizing interdependence and recognizing our limits to perceiving it because embracing interdependence is crucial to responding to climate change effectively and righteously, as well as to forming meaningful connections to other people and the environment.

In the first chapter of my project, *Establishing Interdependence as Reality: Evidence and Observations*, I define interdependence and establish its existence as a fact of being. In the second chapter, *Knowledge versus Experience of Interdependence: Locating the Individual Jewel*, I discuss the difference between knowing interdependence as a concept versus actually experiencing and sensing interdependence as a reality, and how the disconnect between knowledge and experience limits our ability to perceive our position in environmental issues and solutions. I then discuss how Buddhist practice provides insight to how interdependence can be experienced rather than simply conceptualized. In the third chapter, *Perception of*

Interdependence in the Production and Consumption of Meat: A Case Study of Bard Students, I investigate how Bard students perceive the production and consumption of meat as an environmental issue. I then discuss how community building and intentional practice can help us experience our individual positions within interdependent relationships in order to address the environmental issues associated with Bard's dining hall, Kline Commons.

I: Establishing Interdependence as Reality: Evidence and Observations

It is necessary to acknowledge and embrace interdependence when designing and implementing adaptation strategies against climate change, and to address all environmental issues. People participate in a global exchange of materials and information, whether it be through eating a piece of fruit from a different continent or speaking with someone on Facebook 4000 miles away. Food webs are often used to depict the interdependence within food consumption in which producers and consumers rely on their mutual connections in order to eat food. If one were to walk into a restaurant to order a sandwich and attempt to trace the interdependent relationships which allowed the situation to emerge, one would become entangled in a massive web of connections. To be able to order a sandwich, not only does one depend on the ingredients the sandwich is composed of, but the people involved in serving, cooking, transporting, and growing the ingredients for the sandwich, as well as the different resources that allowed these activities, the plate, the grill, the truck, and the land that the ingredients grew on, etcetera. The various connections and conditions listed are already simplified and trying to trace back to the original, independent point of the sandwich's existence is impossible, as one gets tied into the life history of the people who started the restaurant, the hour long rainfall a few miles away during the previous month that allowed the sandwich lettuce to survive the dry season, and the car advertisement you saw for the car that brought you to the restaurant in the first place. Climate change serves as one of the largest, literal symbols of interdependence because similar to the sandwich scenario, it has no single source of origin and yet it is inevitably interdependent with the life of all human beings.

Before I discuss the ability to perceive interdependence, it is necessary to establish it as foundational to existence. From an ecological perspective, interdependence is a biological fact.

American ecologist Henry J. Oosting discusses the environmental complex in which all phenomena depend on their interactions with other phenomena:

Environment includes everything that may affect an organism in any way. It is, therefore, a complex of factors, which may be: substances, such as soil and water; forces, such as wind and gravity; conditions, such as temperature and light; or other organisms. These factors may be studied or measured individually, but they must always be considered in terms of their interacting effects upon organisms and each other. The resulting complexity of environment and the array of subject matter encompassed suggest the necessity for drawing upon the knowledge of all fields of science for its understanding.⁴

Oosting points out how everything in the environment exists in relation to its interactions with other components, which exist through a range of forms, including substances, conditions, and organisms. The seemingly separate forms Oosting describes interact and depend on each other, and more importantly, change through these interactions. The environment being composed of different ecological forms such as both substances and forces, demonstrates how a human being is not just related to other human beings, but also related to a single particle of air in the atmosphere. Oosting notes that we obviously make distinctions between forms, acknowledging that specific factors can be studied as individual units, yet he also states that we must always understand the individual units as interactive with other factors, as interdependent phenomena. Ecological studies highlight the environment as a fluid, intricate system of interdependent connections. Whether through imagining the net of jewels or the ecological description, both narratives lead to the same conclusion, that all phenomena are interdependent. Each jewel, or in Oosting's description, each form, substance, condition, or organism, cannot be isolated and must be understood in relation to the other factors. Every distinct form exists relative and in exchange with the other forms, and this composes the environment. Therefore, the notion of interdependence provides guidance to how we are to interact with the environment.

⁴ Oosting, *The Study of Plant Communities; an Introduction to Plant Ecology*, 5.

One of the most significant contributions to climate change in which the individual, other people, and components of the environment interact is the production and consumption of meat. The production and consumption of meat is an example of the interdependence within environmental issues because it is tied to greenhouse gas emissions, land use, in terms of crop production, deforestation, and habitat destruction, the intensive use of water, pesticides, fertilizers, and antibiotics, as well as large amounts of waste, which contribute to pollution and other environmental issues, and all of these are tied to people who produce and/or consume meat. Many arguments against the production and consumption of meat are based on valuing the health of ecosystems as well as human dependency on these ecosystems.⁵ World hunger arguments focus on the resource intensive inefficiencies of raising beef.⁶ Despite the range of environmental impacts that arise from the production and consumption of meat, the decision to eat meat does not arise from supporting the associated environmental issues.

It is important to note that within agricultural production, including the production of meat, there are a range of means of production which are often categorized as sustainable or unsustainable, depending on a subjective set of criteria. Unsustainable meat production often refers the majority of meat in the United States, which depends on concentrated animal feeding operations (CAFOs), also known as factory farming.⁷ CAFOs contain at least “1,000 large animals such as beef cows, or tens of thousands of smaller animals such as chickens,” and many raise much more, “with tens of thousands of beef cows or hogs, and hundreds of thousands of

⁵ Stephanie Kaza, “Western Buddhist Motivations for Vegetarianism,” *Worldviews: Environment, Culture, Religion*, 9:3 (2005): 389.

⁶ Simon, Fairlie, *Meat: A Benign Extravagance*, (White River Junction, VT: Chelsea Green Publishing, 2010) 2.

⁷ Food & Water Watch, “Factory Farm Nation: 2015 Edition,” accessed April 28, 2017, <https://www.foodandwaterwatch.org>.

chickens.”⁸ Sustainable meat production raises a smaller amount of animals on a larger portion of land and relies on a range of practices that work with interdependent systems.

The International Panel on Climate Change, the scientific and intergovernmental body established by the United Nations, summarizes the general sets of measures to reduce greenhouse gas emissions in agriculture.⁹ One measure is to enhance carbon removals from the atmosphere, which includes restoring degraded lands, minimizing soil disturbance, and incorporating organic matter. Interestingly, raising animals on the land can both support and work against the enhancement of carbon removals and other mitigation efforts. In industrial-scaled farming operations, too many animals are raised on a small portion of land. If too many animals are raised on pasture, this can contribute to over-grazing and soil-disturbance, inhibiting the soil from storing carbon. Yet animals can contribute to carbon removals by adding organic matter to the soil through their manure, if balanced with the other environmental components.

Scale is one of the most general ways of assessing sustainability and scale is also essential to being able to perceive environmental issues, which I discuss later. Another measure of mitigating climate change involves optimizing nutrient use, or a precise dosage and timing of fertilizer application to the soil. Again, the measures to mitigate climate change can potentially involve raising animals on the land, as animals contribute to fertilizer application through adding nitrogen to the soil from their manure. But whether or not animals contribute to climate change or its mitigation relies on the scale of the operation, the number of animals being raised. Too many animals on the land means too much manure, which means too much nitrogen added to the soil and the potential for nitrous oxide emissions and pollution. During rainstorms and extreme

⁸ United States Department of Agriculture- Economic Research Service, "Statistics & Information," (2015), accessed December 04, 2016, <https://www.ers.usda.gov/topics/animal-products/cattle-beef/statistics-information/>.

⁹ IPCC Fifth Assessment Report on Climate Change, "Food Security and Food Production Systems," Chap. 7: 1, <http://www.ipcc.ch/report/ar5/wg2/>.

weather, the excessive amount of nitrogen-heavy manure can be washed away to other lands as well as to water sources, contaminating the areas. To farm sustainably requires balancing the needs of all environmental components and embracing interdependent relationships.

One of the top priorities of reducing food related greenhouse gas emissions is the reduction of meat production and consumption.¹⁰ Emitting more greenhouse gasses than can be removed from the atmosphere contributes to the greenhouse gas effect, the heating of our planet, which drives climate change. Research suggests that a person consuming a mixed diet with the mean American caloric content and composition causes the emissions of 1485 kg CO₂-equivalent above the emissions associated with consuming the same number of calories, but from only plant sources. The difference between eating a meat versus plant-based diet amounts to over 6% of the total U.S. greenhouse gas emissions.¹¹ The concentration of greenhouse gasses in the atmosphere depends on the balance between sources and sinks, or what is emitted into the atmosphere versus what is removed from the atmosphere.

The production of meat contributes to climate change through the emissions of nitrous oxide (N₂O), methane (CH₄), and carbon dioxide (CO₂).¹² While carbon dioxide makes up more than 80 percent of US greenhouse gas emissions, methane has about 23 times the global warming potential of carbon dioxide and nitrous oxide is about 296 times as potent.¹³ The majority of the nitrous oxide emissions comes from animal manure and urine, and from fertilizer applications of

¹⁰ Tara Garnett, "Where are the best opportunities for reducing greenhouse gas emissions in the food system (including the food chain)?" *Food Systems* 36, (2011): 23-32, doi: S0306919210001132, 29.

¹¹ Gidon Eshel and Pamela A. Martin, "Diet, energy and global warming," *Earth Interactions* (2005), accessed April 9, 2017, doi: 10.1175/EI167.1.

¹² Garnett, "Where are the best opportunities for reducing greenhouse gas emissions in the food system (including the food chain)," 23.

¹³ Doug Gurian-Sherman, "Raising the Steaks: Global Warming and Pasture-raised Beef Production in the United States," *Union of Concerned Scientists*, 2011, accessed April 9, 2017, <http://www.jstor.org/stable/resrep00056>.

nitrogen.¹⁴ Methane emissions come from enteric fermentation, or the digestion processes of ruminants, such as cows, sheep, and goats.¹⁵ Ruminants are mammals with a rumen, a unique stomach which allows animals to absorb nutrients from plants prior to digestion through fermentation processes. Carbon dioxide emissions come from fossil fuel energy use and machinery, such as used to manufacture fertilizers, and once the meat is produced, additional emissions arise through the transportation and refrigeration of the meat.¹⁶ There is plenty of research to support the idea that reducing the production and consumption of meat in the United States would significantly reduce greenhouse gas emissions, but meat is normalized as an essential part of the diet to the extent that not only is it expected to be available daily, but for every meal in some cases such as at Bard’s dining hall.

The loss of land in the United States is another component in the food web of interdependence, as it is completely connected to the production and consumption of meat. Raising animals as livestock is the world’s largest human-related use of land, as it uses 30 percent of the Earth’s entire land surface, including 33 percent of the global arable land for animal feed production.¹⁷ Almost half of the total land area in the lower 48 states, roughly 1.9 billion acres, is devoted to agriculture: various pasturelands represent about a third of that, while corn, hay, and other feed crops account for almost all the rest.¹⁸ By comparison, all the lettuce,

¹⁴ Garnett, “Where are the best opportunities for reducing greenhouse gas emissions in the food system (including the food chain),” 23.

¹⁵ Arvin Mosier et al., “Methane and Nitrogen Oxide Fluxes in Tropical Agricultural Soils: Sources, Sinks and Mechanisms,” *Tropical Agriculture in Transition — Opportunities for Mitigating Greenhouse Gas Emissions?*, 2004, 17, doi:10.1007/978-94-017-3604-6_2.

Short note: Mosier et al., “Methane and Nitrogen Oxide Fluxes in Tropical Agricultural Soils: Sources, Sinks and Mechanisms,” 17.

¹⁶ Garnett, “Where are the best opportunities for reducing greenhouse gas emissions in the food system (including the food chain),” 23.

¹⁷ “The John Hopkins Meatless Monday Project.” *John Hopkins Public Health Magazine*, 2003. Accessed April 28, 2017. http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/projects/MMP_old/.

¹⁸ Jonathan Shaw, “Eating for the Environment,” *Harvard Magazine*, (2017), accessed March 4, 2017, <http://hardvardmagazine.com/2017/03/eating-for-the-environment?page=all>.

tomatoes, fruits, and nuts people eat are grown in less than one-half of 1 percent of the agricultural lands.¹⁹ To raise animals on grain-based diets, such as those raised in CAFOs and which make up the majority of meat operations in the United States, crops such as corn often contribute to the clearing of land, soil disturbance, intensive water use, the use of greenhouse gas emitting fertilizers, and inefficiencies in growing crops to produce meat, rather than for directly feeding people.²⁰ The clearing of land for agricultural purposes contributes to lost carbon sequestration, meaning the land's ability to store carbon within the soil is significantly lowered, further contributing to the greenhouse gas effect, climate change.²¹ The human population is currently estimated to be 7,515,284,153 and is growing.²² It is simply impossible to imagine raising enough animals and having enough land to support the mean American diet for every human being while simultaneously providing enough land for more people.

The decision to eat meat is also dependent on the use of an extensive amount of water. Water is used in all stages of meat production from feed to care to process.²³ Raising cows for meat requires an extremely large amount of water mainly with regards to livestock watering, feedlots, dairy operations, and other on-farm needs.²⁴ The demand for water will continue to increase as diets in many countries shift from predominantly starch-based foods to more meat and dairy in response to economic growth.²⁵ Associated with climate change is the increased risk

¹⁹ Ibid.

²⁰ Ibid.

²¹ Garnett, "Where are the best opportunities for reducing greenhouse gas emissions in the food system (including the food chain)?" 30.

²² "Current World Population," World Population Clock: 7.5 Billion People (2017) – *Worldometers*, accessed April 30, 2017, <http://www.worldometers.info/world-population/>.

²³ "The John Hopkins Meatless Monday Project." *John Hopkins Public Health Magazine*.

²⁴ United States Geological Survey (USGS), "Livestock Water Use," (2000), accessed April 28, 2017, <https://water.usgs.gov/edu/wulv.html>.

²⁵ "The John Hopkins Meatless Monday Project." *John Hopkins Public Health Magazine*.

of weather extremities, natural disasters, and polluted water sources and meat production operations intensify the potential damage of these scenarios.²⁶ As climate change puts the water bodies we rely on at risk and as more and more people need access to drinking water, it is negligent for us to allocate so much water to the production of meat.

Growing enough food to raise an excessive number of animals is dependent not only on an immense sum of land and water, but the intensive use of chemical-based fertilizers. Often nitrogen-based fertilizers are used in order to grow the crops allocated to animal feed.²⁷ Fertilizers add nitrogen to the soil, which speeds up the growth of the crops used to create feed for the cows, which consequently modifies the drainage of the soil.²⁸ Irrigation water leaves the soil quickly, degrading the ability of soil biota, or microorganisms within the soil, to neutralize reactive compounds.²⁹ The production of beef leads to six times as much water-polluting reactive nitrogen as other livestock categories.³⁰ Effects of reactive nitrogen include nitrate and nitrite contamination of water, which pollutes drinking water as well as leads to toxic algae blooms.³¹ Fertilizer runoff into bodies of water leads to an oversupply of nutrients, which leads to overgrowth of plants and algae and this process of excessive enrichment is called eutrophication.³² After these organisms die, the decomposing biomass consumes the oxygen in the water leading to a state of hypoxia, or low oxygen, which becomes detrimental to organisms

²⁶ IPCC Fifth Assessment Report on Climate Change, “Food Security and Food Production Systems.”

²⁷ Shaw, “Eating for the Environment.”

²⁸ Ibid.

²⁹ Ibid.

³⁰ Ibid.

³¹ James N. Galloway and Ellis B. Cowling, “Reactive Nitrogen and The World: 200 Years of Change,” *AMBIO: A Journal of the Human Environment* 31, no.2 (2002): doi 10.1639/0044-7447(2002)031[0064:rnatwy]2.0.co;2, 64.

³² Ibid, 68.

living in the water.³³ Dependent on the environmental issues listed, to produce meat intensively relies on the degradation of the environment.

It is important to note that not only do production methods of meat differ across the United States, but the environmental impact differs across different types of meat. In the United States, beef production is a major industry and contributes to more greenhouse gas emissions than the production of any other food.³⁴ Excluding imported beef products, 28.752 million heads of cattle were slaughtered in the United States in 2015 and 24.8 billion pounds of beef were consumed, with the average person consuming 67 pounds of beef per year.³⁵ In the United States, emissions through beef production contribute to one third of greenhouse gas emissions associated with agriculture in the United States.³⁶ Beef production contributes to climate change, mainly through the emission of the greenhouse gasses methane and nitrous oxide. Enteric fermentation in beef cattle accounts for 52 percent of all U.S. methane emissions.³⁷ The Union of Concerned Scientists conclude that the storage of manure is responsible for 18 percent of U.S. methane emissions.³⁸ Beef is especially environmentally detrimental as it is the food most interdependent with climate change.

As noted before, contributions to climate change are often dependent on other environmental degradation. Beef production uses in aggregate 28 times more land than the average of other livestock categories.³⁹ The production of beef relies on land for both providing cows pasture, 771 acres of land in the United States, and providing the cows feed, another 91

³³ Ibid.

³⁴ Eshel, "Diet, energy and global warming," 9.

³⁵ United States Department of Agriculture- Economic Research Service, "Statistics & Information," (2015).

³⁶ Gurian-Sherman, "Raising the Steaks: Global Warming and Pasture-raised Beef Production in the United States."

³⁷ EPA, "Inventory of U.S. greenhouse gas emissions and sinks, 1990–2010."

³⁸ Gurian-Sherman, "Raising the Steaks: Global Warming and Pasture-raised Beef Production in the United States."

³⁹ Shaw, "Eating for the Environment."

million acres of land.⁴⁰ Because pasture-based beef production is dependent on the use of land and water, the number of cattle that can be raised sustainably is limited. Most beef cattle in the United States are raised in CAFOs, which aim to fatten up cattle quickly on concentrated areas of land.⁴¹ Many animals raised in factory farms are exposed to hormones, pesticides, antibiotics, and other additives.⁴² By the time grasslands have been moderately or intensively used for grazing cattle, research shows, more than half the species once native to the landscape have been lost.⁴³ Beef relies on 11 times more irrigation water than the average of other livestock categories such as pork and poultry.⁴⁴ To produce a 4oz hamburger requires 450 gallons, or 26 showers-worth of water.⁴⁵ A 16oz steak requires 1800 gallons, or 105 showers-worth of water.⁴⁶ The numbers are shocking, and also abstract, as the individual person most likely only engages with this amount of water over the span of weeks. Beef is associated with far more environmental issues compared to other types of meat and this should be acknowledged in debates over meat production and consumption.

To reduce the environmental impact of meat production, we can change the practices of meat production, change the types of meat we produce, and reduce the total production and consumption of meat in general. Certain efforts to reduce the environmental impact of meat include working with interdependent systems that acknowledge scalability, such as raising cattle on pasture, and raising less cattle, which integrates animals proportionally to the land. Scientific research define opportunities for mitigating greenhouse gasses in agriculture through

⁴⁰ Ibid.

⁴¹ Gurian-Sherman, "Raising the Steaks: Global Warming and Pasture-raised Beef Production in the United States."

⁴² Kaza, "Western Buddhist Motivations for Vegetarianism," 377.

⁴³ Shaw, "Eating for the Environment."

⁴⁴ Ibid.

⁴⁵ Skip Showers for Beef.

⁴⁶ Ibid.

three categories, reducing emissions, enhancing removals, and avoiding emissions.⁴⁷ These categories can be seen as intervening before emission-related activities, during emission-related activities, and after emission-related activities. If the national resources required to produce beef American consume annually were devoted to poultry production instead, the number of useful calories produced would increase by five and the protein amount would be enough to meet the dietary needs of an additional 140 million people.⁴⁸ Research has shown that a meat-free diet would eliminate about 80 percent of greenhouse-gas emissions attributable to agriculture in the United States, because most of that comes from ruminant livestock emissions, and growing their feed grains.⁴⁹ The different effects of different practices highlight how contextual and conditional the production of meat is to other interdependent factors.

It is necessary to change the means of meat production in order to mitigate the effects on the environment. For example, even within pasture-based operations, the specific plants grown for the animal diet can play a large role in mitigating climate change as increasing the percentage of legumes in forage diets can improve the nutritional quality, reducing methane emissions associated with cattle digestion.⁵⁰ Proposed measures of mitigating emissions in livestock management include improved feeding practices, dietary additives, longer term management changes, and animal breeding.⁵¹ For manure management, mitigation measures include improved storage and handling, anaerobic digestion, and more efficient use as a nutrient source.⁵² For cropland management, such as the corn grown for the cattle diet, there are a range of

⁴⁷ P. Smith et. al, "Greenhouse gas mitigation in agriculture," *Philosophical Transactions of the Royal Society B: Biological Sciences* 363, no. 1492 (2008), 794, doi:10.1098/rstb.2007.2184.

⁴⁸ Shaw, "Eating for the Environment."

⁴⁹ Ibid.

⁵⁰ Gurian-Sherman, "Raising the Steaks: Global Warming and Pasture-raised Beef Production in the United States."

⁵¹ P. Smith et. al, "Greenhouse gas mitigation in agriculture."

⁵² Ibid.

improvements such as tillage management, water management, and nutrient management.⁵³

Nutrient management within the ecological framework require the use of varied nutrient sources and increased plant diversity to restore functions such as nutrient and soil retention⁵⁴. Sustainable agricultural practices rely on ecosystem ecology, acknowledging that nothing can be isolated from its environment.

Practices that embrace the interdependent relationships between humans, animals, land, water, and the atmosphere are critical to addressing environmental issues associated with the production of meat. Each step of production needs to be considered in regards to meat, the conditions which allow it to emerge and the conditions its production creates. The environment clearly supports the life of animals as more than one million different species live on earth. However, the animals raised for meat in the United States at an industrial scale, such as cows, pigs, chickens, turkeys, and sea animals such as lobsters and fish, are sustained strictly because of the intensive levels of human intervention, such as breeding and overfeeding practices that allow extreme overpopulation in concentrated areas. Industrial scale farming supports an overpopulation of animals, temporarily, as they are strictly raised, made alive, in order to be killed and processed as food. When animals are forced to survive in concentrated factory settings, interdependence leads to destruction as maximizing the amount of meat is prioritized, without regard to the environmental impact of doing so.

While debate continues on whether or not we should raise animals for meat, plenty of research supports that we need to change the means of production and consumption to reduce the environmental impact of meat, as the world continues to engage in its supply and the demand. But how does the information on the interdependent environmental issues impact how people

⁵³ Smith et. al “Greenhouse Gas Mitigation in Agriculture.”

⁵⁴ Drinkwater, Laurie E. “Improving Fertilizer Nitrogen Use Efficiency Through an Ecosystem-based Approach,” 293.

engage with meat? In terms of greenhouse gas emissions, of acres of land we currently use and that which we could use for something else, of gallons of water we use to raise animals and that which we could conserve or use for drinking water— do the specific numbers listed before matter? If these numbers increased or even doubled— would it matter more and would something change? I argue that knowledge of environmental interdependence is often abstracted and distanced during the individual's engagement with meat. The individual person's decision to eat meat *is* the production and consumption of meat, which directly contributes to climate change. While the methods of meat production need to change, it is critical that consumers demand these changes and support a transition to more sustainable meat production practices. But what is the individual's role in the web of interdependence?

II: Knowledge versus Experience of Interdependence: Locating the Individual Jewel

a. Disconnect:

Perceiving the interdependence of climate change, in terms of both cause and effect, is extremely difficult because it emerges across inconceivably immense scales, both spatial and temporal. Philosopher Tim Morton suggests that ecological awareness, the realization of the interdependent nature of reality, can result in depression and discomfort rather than responsible action.⁵⁵ In his book *Dark Ecology: For a Logic of Future Coexistence* Morton explains the strangeness and paradoxical nature of contributing to climate change as an individual human being:

There you are, turning the ignition of your car. And it creeps up on you. You are a member of a massively distributed thing. This thing is called species. Yet the difference between the weirdness of my ignition key twist and the weirdness of being a member of the human species is itself weird. Every time I start my car or steam engine I don't mean to harm Earth [...] Furthermore, I'm not harming Earth! My key turning is statistically meaningless. In an individual sense this turn isn't weird at all. But go up a level and something very strange happens. When I scale up these actions to include billions of key turnings and billions of coal shoveling, harm to Earth is precisely what is happening.⁵⁶

Morton accurately depicts the way our actions can appear simultaneously insignificant and significant, which limits the ability to recognize our direct contribution to climate change. He emphasizes that you, a single person, also *are* the human species. This suggests that the actions of one person do matter to the whole. Recognizing oneself not just as an individual but as part of the human species can seem intangible and boundless, but adaptations to climate change must incorporate this understanding. The dilemma Morton depicts suggests that addressing

⁵⁵ Morton, *Dark ecology: for a logic of future coexistence*, 8.

⁵⁶ *Ibid.*

climate change relies on the statistically significant whole, which is composed of statistically insignificant individuals. While we need to make policy and regulation changes that regulate the total impact of human populations, we also tend to reject any perceived limit to the individual's freedom to choose. We need to recognize the ways in which we can balance individual choice with interdependent necessity. It is essential to embrace an interdependent orientation toward the world in order to gain support for adaptations to climate change that are most effective and justified for all.

Knowledge of interdependence does not imply that one believes they play a significant role, but the experience of interdependence stresses that every action matters, every action is both a cause and effect of another and therefore essential to the totality. Although something enormous as climate change can be conceived as invisible by the individual person, the individual person is intimately interdependent with its emergence as well as its consequences. Similar to how the individual person turning the ignition of the car is also a part of the total human species, in the Jewel Net of Indra the one jewel ultimately impacts the whole web and likewise the whole web impacts the one jewel. This can be conceived by imagining what would happen if one were to put a dot on one of the jewels in Indra's Net, "When one jewel is dotted, there are dots on all the jewels in all directions. Since there are dots on all the jewels in the ten directions, we know that all the jewels are one jewel."⁵⁷ All the jewels being clear and reflective, the dot on one jewel is reflected in all the others, yet the originally dotted jewel is impossible to find. Just as all interdependent components impact the individual, one individual has an impact on all the other interdependent components. It is critical to understand our position as individual

⁵⁷ Tu- Shun, "The Jewel Net of Indra," 60.

human beings as one of something larger, as a part of a species, and as a component of the environment itself.

The ecological notion of interdependence is often limited by excluding the notion of the individual human sense of self when discussing organisms. Both the ecological knowledge of interdependence and the actual experience of being a component within an interdependent web are necessary to addressing the extent of environmental issues. The basis of ecology focuses on understanding interdependent relationships between organisms and the environment yet human identity is often imagined as something beyond simply that of an “organism.”⁵⁸ An ecological description of how all living beings are dependent on the energy produced by the sun signifies the way in which the individual person’s notion of identity is not inherently included in ecological understanding of interdependence with the environment:

Such relationships, or energy cycles, exist in every environment that supports organisms. Thus we see that the basic relationship binding all organisms to each other and to the environment is one traceable to energy needs and uses; and, because the ultimate source of energy for both plants and animals is the sun, all organisms are mutually related to each other and to their environment. If groups of organisms live together successfully, their demands and effects upon the energy cycle will not disrupt it. All the processes and activities taking place within the group will be in balance with the available energy. A major concern of ecology, therefore, is to learn what the balance is and what controls it.⁵⁹

Recognition of environmental interdependence is limited when the individual’s sense of self is excluded. It is unclear whether Oosting perceives himself as an observer or a participant in the functioning of organisms as he states that the major concern of ecology is “to learn what the balance is and what controls it,” implying that humans have the ability to fully understand interdependence in a way that the other participating organisms do not. Ecological analyses

⁵⁸ "Ecology." Merriam-Webster.com. Merriam-Webster, n.d. Web. 8 Mar. 2017.

⁵⁹ Oosting, *The Study of Plant Communities; an Introduction to Plant Ecology*, 12.

unmistakably acknowledge the inextricable links between organisms and the sun, but this does not imply that human beings actually experience the conclusions of being interdependent. As an ecologist, Oosting most likely does consider human beings to be organisms interdependent in the energy cycle, as humans clearly rely on the energy of the sun. But as mentioned earlier, it seems it is easier to imagine humans as an abstracted whole when relating ourselves to the environment than it is to imagine the individual relation to the environment, especially when we acknowledge environmental issues. The ecological concept of interdependence is accurate in recognizing the mutuality and exchange between human beings and other environmental forms, but it does not necessarily inform the individual ecologist's notion of self as we continue to separate ourselves from the roles we play in the emergence of environmental issues.

To respond to environmental issues, we must expand the notion of the individual self to recognize interdependence with the environment. Zen Buddhist master Thich Nhat Hanh exemplifies not only how the implicit order of the universe is interdependence, but the sense in which he considers the environment within his sense of individual self. Hanh expresses the way in which one can expand the notion of individual self to the environment to experience our interdependent relationships:

We have to remember that our body is not limited to what lies within the boundary of our skin. Our body is much more immense. We know that if our heart stops beating, the flow of our life will stop, but we do not take the time to notice the many things outside of our bodies that are equally essential to our survival. If the ozone layer around our Earth were to disappear for even an instant, we would die. If the sun were to stop shining, the flow of our life would stop. The sun is our second heart, our heart outside our body. It gives all life on Earth the warmth necessary for existence. Plants live thanks to the sun. Their leaves absorb the sun's energy, along with carbon dioxide from the air, to produce food for the tree, the flower, the plankton. And thanks to plants, we and other animals can live. All of us— people, animals, plants, and minerals— 'consume' the sun, directly and indirectly. We cannot begin to describe all the effects of the sun, that great heart outside of our body".⁶⁰

⁶⁰ Thich Nhat Hanh, "The Sun My Heart," *Dharma Rain: Sources of Buddhist Environmentalism* (Boston, MA: Shambhala Publications, 2000), 84.

The sun functions as what Hanh describes as our “second heart,” guiding the processes that allow us to survive both physically and mentally. Plants rely on the sun directly for photosynthesis and growth, and the human body relies on these plants in terms of food and in terms of providing oxygen for breathing. While one can distinguish a sense of self independent from other environmental forms, the physical composition of the human body expands beyond this notion as Hanh points out how the many things outside the human body are equally essential to our survival. We rely on the processes of photosynthesis to grow the plants we consume, or to feed other animals in order to consume them. Consumption is one of the most intimate ways in which we interact with other environmental components, as the human body physically absorbs and processes them. Not only do the human body and the environment function both as a physical form and a symbolic entity, making it difficult to extract their exact purposes, but the functions of the body and of the environment are completely interdependent. Defining the boundaries of either individual body or environment, physical or symbolic function, becomes difficult as one examines interdependence closely. Hanh points out that we cannot “begin to describe all the effects of the sun,” highlighting that our perception is limited in sensing the totality of interdependence, just as it is essential to our motivation and ability to respond to environmental issues. In order to address environmental issues responsibly, it is critical to realize the individual as interdependent, and as we prioritize freedom to choose, that we are limited in this process of recognition.

Sensory experience is one of the most important ways to establish interdependence as a felt experience rather than just a known event. Knowledge is not enough to motivate pro-environmental behavior as evidence shows that increased knowledge and awareness of the

environment does not necessarily shift behavior.⁶¹ Environmental education programs rely heavily on direct sensory engagement with the environment in order to increase awareness and knowledge about environmental issues and as the EPA states on its website, this “[...] provides the public with the necessary skills to make informed decisions and take responsible action.”⁶² Decisions are motivated by an interplay of different forms of “knowing,” which involves experience and sensory input helps strengthen this knowledge. For example, a study on how environmental education impacts the perspective of children compared the effects of an outdoor ecology program involving different physical activities at a national park, and these activities had a significant impact on perspective of the environment.⁶³ Evidence supports that environmental education experiences, such as the outdoor ecology program at the park, can positively impact environmental perspective.⁶⁴ More than information in itself, sensory activities are powerful in feeling connected to something. However, the sensory experiences many environmental education programs provide do not necessarily inform us to how we are connected to the parts of the environment we do not directly engage with.

The interdependent self cannot be recognized when we perpetuate the environment as something separate and distanced from everyday life, something that we can enter and then leave, whether to be preserved or destroyed. Environmental education experiences that involve outdoor experiences are extremely valuable and should not be taken for granted. However, we also need to develop more intimate experiences with the environmental components that we do not commonly imagine as those of “nature,” such as the origin and destination of materials like

⁶¹ Anja Kollmuss and Julian Agyeman, "Mind the Gap: Why Do People Act Environmentally and What Are the Barriers to Pro-environmental Behavior?" *Environmental Education Research* 8, (2002), doi:10.1080/13504620220145401.

⁶²EPA, “Environmental Education.”

⁶³ Franz X. Bogner, “The influence of short-term outdoor ecology education on long-term variables of environmental perspective,” *The Journal of Environmental Education* vol. 29, no. 4 (1998): 27, accessed April 8, 2017, doi: 10.1080/00958969809599124.

⁶⁴ Ibid.

plastic and aluminum, because we are constantly interacting with the environment through exchanges less visible and less appealing to the senses than those at a protected, national park. Full recognition of interdependence acknowledges that the environment is something we interact with intimately through every moment, as it is the very way we occupy time and space. To confront environmental issues, it is critical to perceive humans as an inherent component of the environment and the environment as an inherent component of humans.

To decide whether we believe that the environment is something we are responsible for saving or that we are meant to dominate and control shows estrangement in itself in that both views are made an option, despite our physical interdependence. We can imagine the views as a debate of whether interdependence is to be supported or suppressed, despite its existence. Anthropologist Tim Ingold provides insight to the ways that people imagine their position relative to planet earth, either as connected or separate. He defines the connected view as the spherical, life world perspective and the separated view as the global perspective.¹¹ Both can be imagined in how we identify our position relative to the environment. The spherical perspective is related to the space of auditory perception, as a “sphere that surrounds (without enclosing) the listener at its center” while the global perspective is grounded in visual perception, implying the “externality of the perceiver” looking with the eyes from a separate location.¹² The spherical life-world view involves the perception of living within the environment while the global view involves being able to switch between being in and out of the environment.

Sensing the interdependent self is difficult because our individual sense of self appears abstract at the planetary scale. The global perspective involves viewing the environment the way we visualize earth through photographs, drawings, and globes one might interact with, as a planet that is only seen this way when the viewer is removed from it. He suggests that the notion

of the global environment, “far from marking humanity’s reintegration into the world, signals the culmination of a process of separation”.¹⁴ While many environmentalists are genuinely motivated by the image of earth as a unified whole, Ingold points out the danger in believing that we can exist separate from this totality. The global environment view constitutes the earth as “presented to or confronted by life” rather than as an environment we live within and are always exchanging with. Ingold argues that environmental issues arise in our ability to visualize this dissociation:

Much of the current concern with the global environment has to do with how we are to “manage” this planet of ours. That it is ours to manage, however, remains more or less unquestioned. Such management is commonly described in the language of intervention. But to intervene in the world [...] implies the possibility of our choosing not to do so [...]. It implies that human beings can launch their interventions from a platform above the world, as though they could live on or off the environment, but are not destined to live within it. Indeed, this rendering of action towards the environment as planned intervention in nature is fundamental to the Western notion of production [...].⁶⁵

The global perspective implies that even discourse over environmental issues and how to solve them often assumes the notions of “construction and control,” grounded in the discourse of “intervention.”¹⁶ The language of “intervention” falsely implies that humans only act as a cause and not an effect, and what is more alarming, that we only act as an intentional, active cause rather than as an unintentional, passive cause, which is far more difficult and critical to address in the face of climate change. The problems presented in discourse on global environmental change are real and need to be addressed, yet as Ingold mentions, many of these problems have their source in the perceived alienation of humanity from the world.¹⁷ This is due to switching between the global and spherical perspectives rather than being able to bridge them together. Ingold’s argument suggests that in considering how to address climate change, people view the problem not as a personal one but as one that the species can take over when it is convenient. We

⁶⁵ Ingold, *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill*, 215.

need to discuss the issue of climate change not as just the earth's issue but as a human issue, at both the individual and species level, as we are all interdependent with both the problem and solutions.

To address the enormity of environmental issues, we must consider the individual as interdependent with all environments, the aspects we engage with directly, as well as the aspects we engage with indirectly. A spherical life world view incorporates human beings as a part of the environment itself and is much more tangible than the global view. When asked to picture an existing example of the environment, one might come back to the individual-experienced level and think of an area behind one's house, a cluster of trees beside a building, the building itself, a street in a busy city, a sight from a specific mountainside, the sound of birds or flowing water, people talking and cars honking, a forest, the smell of flowers, a side road, the touch of grass, heat, cold, a meadow, a bridge, a farm, wherever it is, it is rooted in a subjective position of a specific landscape and specific time. The narratives and associations that define the "real" environments we can imagine are often the ones we have had direct engagement with. Specific environments are easier to imagine when the senses are involved in its depiction, whether it be where you live, where you get food, where you see those you love, where you walk, where you felt something, where you thought of something, or where you interacted with another being. The spherical view supports the notion that identity extends beyond individual selves and into the environment as environmental components make up our memories and the ways we refer to ourselves, they compose who we are. However, we are limited by our perception to extending the intimate, sensed view of the environment to the environments we do not directly associate ourselves with. This highlights the need to acknowledge there is a bias in which environments we conceptualize versus which environments we sense concern toward.

b. Principle and Practice of Interdependence in Buddhism

Buddhist principles and forms of practice can inform an environmental ethic that promotes and works with interdependence. In The Pali Canon, the first known and most complete Buddhist set of texts based off of the Buddha's teachings, the Buddha grounds his ethical appeal upon not only compassion for other beings but "[...] upon our instinctive concern for our own long-term welfare and happiness. He tries to make us see that to act in accordance with ethical guidelines will enable us to secure our own well-being both now and in the long-term future," and the Buddha's argument "[...] hinges on the important premise that actions have consequences. If we are to alter our accustomed ways, we must be convinced of the validity of this principle."⁶⁶ The Buddha's ethical appeal can be applied to an environmental ethic because it promotes benefitting oneself for the benefit of others, and benefitting others for the benefit of oneself, with the goal to cooperate and embrace interdependence. Buddhist thought also stresses realization and warns against blind faith, and this means establishing principles based on one's own sense of truth, which is necessary to designing environmental solutions that people truly support and benefit from.

Buddhism intrinsically aligns with an environmental ethic that promotes interdependence. Current Buddhist leaders, such as the Dalai Lama and the Karmapa, work on addressing environmental issues through writing and research, social activism and engagement, and meeting with other world leaders to advocate concern for the environment. The 14th Dalai Lama, Tenzin Gyatso, is the spiritual leader of Tibet, and is understood to be an embodiment of the Bodhisattva of Compassion. Bodhisattvas are "realized beings inspired by a wish to attain Buddhahood for

⁶⁶ Bhikkhu Bodhi ed., Gautama Buddha, *In The Buddha's Words: An Anthology of Discourses from the Pāli Canon* (Boston, MA: Wisdom Publications, 2015): 19-20.

the benefit of all sentient beings, who have vowed to be reborn in the world to help humanity,” and the Dalai Lama travels extensively to spread awareness of environmental issues and to call for environmental responsibility.⁶⁷ The 17th Gyalwang Karmapa Ogyen Trinley Dorje is the current head of the 900 year old Karma Kagyu Lineage of Tibetan Buddhism and he serves as a guide to millions of Buddhists around the world. The Karmapa is committed to addressing environmental issues and he studies environmental science and meets with environmental thinkers and leaders frequently. He invites environmental leaders to help work with Buddhist monasteries and centers in hopes to join other leaders in working toward a global solution to climate change. In relating Buddhism to environmental solutions, I am not claiming that all practicing Buddhists successfully implement an ideal environmental ethic, but rather that Buddhist thought and practice offer a framework that emphasizes interdependence and compassion, and these principles can inform an ideal environmental ethic.

Buddhist ecologist Stephanie Kaza is one of the leading scholars on the links between Buddhism and Ecology and her research serves as a bridge between knowledge and experience of interdependence. She observes how Buddhist teachings have been “[...] received, modified, and elaborated in many ecological contexts” and how the teachings and cultural views vary among different people.⁶⁸ Kaza promotes an interdisciplinary approach to education and problem solving and this is reflected in her academic training in biology, education, and Buddhism.⁶⁹ Her research on Buddhist populations support the idea that perception of the individual self within interdependence can lead to environmentally responsible action. Stephanie Kaza attributes the recognition of interdependence as the central Buddhist teaching relevant to approaching

⁶⁷ Official Website of His Holiness The 14th Dalai Lama of Tibet.

⁶⁸ Stephanie, Kaza, “To Save All Beings: Buddhist Environmental Activism, in *Engaged Buddhism in the West*,” Christopher S. Queen (ed.), Boston, MA: Wisdom Publications, 2000, 165.

⁶⁹ Ph.D. in Biology, University of California, Santa Cruz; M.A. in Education, Stanford University; M.Div., Starr King School for the Ministry; and B.A. in Biology, Oberlin College (Stephanie Kaza’s website).

environmental issues: “Of the Buddha’s teachings, or Dharma, several core principles contribute to a green Buddhist approach. First, it is based on a relational understanding of interdependence and no-self.”⁷⁰ She argues that humans must acknowledge the individual self as inherently interdependent in reference to the Buddhist concept of “no-self,” which highlights the fluid, conditional, and impermanent essence of human identity. As Buddhist practice and philosophy can cultivate a notion of the individual as relative to interdependence, Kaza’s research suggests that recognizing the interdependent factors that one is connected to requires practice and active intention.

Buddhist principles and forms of practice are useful in confronting environmental issues because the notion of individual self is emphasized as interdependent and this motivates decision-making rather. In one of Kaza’s studies, she asked people from 13 different Buddhist centers multiple choice and open-ended response questions on their food choices and interpretations of Buddhism and ecology as related to food practices.⁷¹ While less than four percent of the U.S. population follows a vegetarian diet, 50 percent of the surveyed Buddhist population were vegetarian or vegan.⁷² Whether vegetarian or not, a majority of the surveyed Buddhists revealed the decision to eat meat was made consciously through mindfulness and recognition of interdependence. Cultivating awareness to intention is helpful to environmental activism because to work with interdependence means to follow principles that extend beyond benefitting the individual sense of self. Being conscious of the intention behind one’s action is necessary before being able to intentionally minimize harm to the environment.

Mindfulness is a significant Buddhist practice which helps cultivate awareness of intention and awareness of what ideas and physical forms we are attached to, what we take for

⁷⁰ Kaza, “To Save All Beings: Buddhist Environmental Activism, in *Engaged Buddhism in the West*,” 175.

⁷¹ Steele and Kaza, “Buddhist Food Practices and Attitudes among Contemporary Western Practitioners,” 55.

⁷² *Ibid.*

granted as solidified and ever-accessible. Often interdependence is recognized through mindfulness, the practice of being fully aware of the present moment, which the different schools of Buddhism promote. Whether to avoid causing harm or to live without attachment to specific foods, many Buddhist principles lead to intention and mindfulness in approaching the issue of meat. Theravada traditions emerged in South and Southeast Asia, the Mahayana schools in China and Japan, and the Vajrayana lineages in Tibet, signifying how Buddhist philosophy has developed across different types of environments.⁷³ As Buddhist teachings have been “received, modified, and elaborated in many ecological contexts,” the teachings and cultural views vary but all touch upon the interdependent nature of existence.⁷⁴ Kaza summarizes the Buddhist themes which apply to the decision to eat meat: “Theravada themes emphasize non-harming, Right Livelihood, and detachment; Mahayana themes highlight interdependence, Buddha-nature, and compassion; Tibetan themes consider rebirth implications for human-animal relationships.”⁷⁵ Tibetans have mainly been meat eaters “with much of their native lands too inhospitable for agriculture,” yet because of the emphasis on compassion “many Tibetan Buddhists support vegetarianism in principle and do make efforts to abstain from meat on certain holy days.”⁷⁶ The different approaches emphasize the way in which Buddhist practice has developed across a diverse range of locations, but all involve being mindful to intention and avoiding attachment, which are helpful to an environmental ethic that values interdependence.

Another principle oriented towards interdependence is the Buddhist concept of the “Middle Way” approach. The Middle Way avoids extremes of black and white thinking and acknowledges that phenomena such as the production or consumption of meat, are never simple.

⁷³ Kaza, “To Save All Beings: Buddhist Environmental Activism, in Engaged Buddhism in the West,” 165.

⁷⁴ Ibid.

⁷⁵ Kaza, “Western Buddhist Motivations for Vegetarianism,” 385.

⁷⁶ Ibid., 396.

The approach emphasizes mindful intent, but through which the most effective form of engagement is neither indulgence nor abstinence in order to find a way that transcends these dual approaches.⁷⁷ The Middle Way includes a “general attitude of thankfulness and mindfulness towards food.”⁷⁸ A Soto Zen Buddhist practitioner's response to Kaza's questionnaire asking about their diet exemplifies the Middle Way approach to meat:

What is a “vegetarian”? Is it someone who has never eaten meat? (I have). Is it someone who never again will eat meat? (Who knows?) Is it someone who doesn't kill in the process of eating— (as a gardener I know countless worms, snails, and microbes die at my hands daily, not to mention blood meals, fish kills, etc.) All labels and classifications are flawed, yes, but ‘vegetarianism’ is one of the paradigmatic examples. I am merely a person who is not currently eating meat.⁷⁹

The practitioner's response shows that they are not attached to the title of being a vegetarian, as it does not acknowledge the complexity of environmental interdependence, but that they follow a principle of minimizing harm in awareness of its inevitability amidst interdependent exchanges. The person recognizes interdependence as occurring through both eating meat and through eating vegetarian. Despite the fact that the person does not eat meat, the person does not hold on to the identity of being vegetarian. The Middle Way approach recognizes that no interaction with the environment can be isolated through space and time and mindfulness allows one to acknowledge one's impact on other beings during the time of decision making.

Recognizing one's self as an essential part of interdependence implies responsibility, as one acknowledges both the contextual circumstance as a given, as well as the individual ability to initiate action. Stephanie Kaza argues that the “Western” notion of self does not fit with the understanding of complex and interdependent existence: "If all phenomena are dependent on

⁷⁷ Steele and Kaza, “Buddhist Food Practices and Attitudes among Contemporary Western Practitioners,” 51.

⁷⁸ *Ibid.*, 54.

⁷⁹ *Ibid.*, 58.

interacting causes and conditions, nothing exists by itself, autonomous and self-supporting. This Buddhist understanding (and experience) of self directly contradicts the traditional Western sense of self as a discrete individual."⁸⁰ Kaza explains the understanding and experience of an interdependent self as Buddhist, and in my project I investigate whether this understanding applies to Bard students. I do not use the categories of “Western” as opposed to “Eastern,” instead focusing on the understanding of an independent orientation versus an interdependent orientation in regards to the perception of environmental issues.

Deciding whether to eat meat or vegetarian at a location which provides both puts one in a paradoxical position, as one has to assume one is both powerful in asserting their decision as well as powerless to changing the decisions the dining hall makes about what to purchase, being both dominant and submissive choosing from the chosen options. This often leads to believing we are an independent cause when the consequences of our action are in line with our intention, and assuming something else is the cause our actions have unintentional consequences, when we believe we are merely an effect of interdependence. In my project, I investigate how Bard students recognize interdependence and how they rationalize their choices at the dining hall, whether through responsibility to initiate action, or through being placed in contextual circumstances.

⁸⁰ Kaza, “To Save All Beings: Buddhist Environmental Activism, in Engaged Buddhism in the West,” 167.

III: Perception of Interdependence in the Production and Consumption of Meat:

A Case Study of Bard Students

Environmental issues are difficult to address because of their complexity, and this leads to contradictory situations in which sustainable and non-sustainable options are both made available to choose from. The Bard community is tied to the complex causes and effects of environmental issues as its dining hall provides meat unconditionally, during every meal. To eat meat or to eat vegetarian in a dining hall that provides both options at every meal provides a situation where one is free to “choose” while simultaneously taking part of a system that has already decided for you, one that chooses “both”. The situation of providing both persists even within the meat served, as some of the meat Kline provides is sourced from farms that meet certain sustainability criteria while the larger majority of meat does not fit this criteria. In the case of Kline, providing variety and the freedom to choose is balanced with supporting sustainable food practices. The inconsistency of supporting both sustainable and unsustainable options emphasizes the way in which environmental concern is deemed something to engage with out of choice rather than as a shared and accepted standard, or even more convincing, as a necessity. Just as one may not eat meat specifically out of the concern for animals, a lack of concern for animals is most likely not the specific reason one does eat meat. Just as one might eat meat because of the high protein content, one most likely does not avoid eating meat to avoid the protein content. Addressing any issue involves prioritizing certain goals over others, with the ideal goal of striking a balance that maximizes the benefits, a Middle Way approach.

To truly reduce unsustainable meat production requires following intention before entering the dining hall, especially given that Kline provides a certain amount of a each dish

before students decide to eat it or not. I conducted a survey during the spring semester of 2017, asking students about their decision making process at Kline and how they perceive the environmental issues associated with the production and consumption of meat. In the survey, I focus on the decision to eat meat as contributing to environmental issues because it relates to behaviors every person does on a daily basis (eating being necessary for survival) and it involves alternative, equally accessible choices. While eating meat can be argued as being environmentally harmful and eating vegetarian can be argued as being better for the environment, decision making is a complicated process and neither decision can be simplified to being the “right” or “wrong” one. To address the environmental impact of eating unsustainably produced meat, it is necessary to better understand how people make their decisions. I explore the decisions Bard students make in regard to eating meat, and they articulate what informs these decisions. I explore the interplay between how people perceive themselves in terms of dependent relationships, what informs their decisions on whether to eat meat, and how they understand these decisions as engaging with the environment.

c. Survey Questions:

1. *Please list your major(s) or intended major(s):*

I investigated whether there is a relationship between students' majors and their responses because I wanted to see if people who study the environment, whether through ecology, biology, or whether any disciplines are more likely to sense they are a part of the interdependent environment they study. Kaza argues that many scientific approaches limit a sense of responsibility and compassion as she states, "From my perspective as a Buddhist, what is missing from science training is the practice of compassion. The cultivation of compassion reinforces the insight of interdependence through a felt response to the plight of others."⁸¹ I wanted to test her assertion at Bard to see whether the pursuit of science establishes a sense of responsibility through connection to the environment or a lack of responsibility through objectification of it. In my analysis of the responses, I could not accurately assess whether there was a different understanding between the different majors at Bard because of an underrepresentation of certain majors.

2. *Please select your year*

I ask participants to include what year they are at Bard to see if there is a relationship between one's maturity and development of an individual identity and one's recognition of interdependence. As Bard students experience more time at college, they are more likely to develop critical thinking skills as well as establish the principles that define their sense of selves.

⁸¹ Stephanie Kaza, "Infinite Realms of Observation: Buddhist Perspectives on Teaching and Doing Science," *Ecology and Religion: Scientists Speak*, John Carroll and Keith Warner (eds.), Quincy, Illinois: Franciscan Press, 1998, 29.

In my analysis of the responses, I could not assess if there was a significant relationship between the year of students and their answers because of the diverse ways students responded.

3. *Are there any communities you feel connected to? Please list and describe three communities you feel you are a part of:*

I asked students which communities they feel they are a part of to see who or what Bard students are most likely to feel responsible and compassion towards, beyond their individual senses of self. I want to understand what communities people feel interdependent with because groups unified over a common-ground have the opportunity to articulate and discuss the principles they stand for, and this is a potential platform to introduce the issues associated with meat production and consumption.

4. *Do you eat meat?*

This question is to find out how many students consume meat versus how many do not, to assess the extent of Bard students' participation in the production and consumption of meat.

5. *What kinds of meat do you eat? Please check all that apply.*

I ask what kinds of meat participants to better understand if people are more or less likely to eat certain types of meat and if they provide reasoning for this.

6. *What, if anything, motivates your decision to eat meat/ not eat meat?*

I asked Bard students to use their own words to explain what motivates their decision to eat meat or not to see if interdependence is addressed, whether directly or indirectly. I also framed the question assuming there is a motivation because I want to highlight the decision to eat meat as one that is active, and find out how people describe their intentions at Kline Commons. I

investigate whether or not people who consume meat are more likely to write responses emphasizing a focus on the independent self rather or on a principle extending beyond the individual. I investigate whether or not people have knowledge of the environmental impact of eating meat in the following question and wanted to know whether this has an influence on their motivations.

7. *What do you know about the environmental impact from the production and consumption of meat?*

I asked Bard students to use their own words to explain whether or not they consider meat to be connected to environmental issues to understand whether or not this informs their decision making. Evidence shows that knowledge is not necessarily enough to motivate one's behavior so I investigate how this applies to Bard. The responses to questions 6 and 7 illuminate whether or not one feels rather than just knows the concept of interdependence.

d. Survey Responses and Analysis:

The survey responses reveal that people know that they are a part of the interdependent network contributing to climate change through the consumption of meat, yet this recognition does not necessarily lead to individual responsibility. The majority of participants, both meat-eaters and those who do not eat meat, say that eating meat is “bad for the environment,” in various ways, but that it does not motivate their decision to eat it. This reveals that highlighting interdependence as a concept is not enough for people to sense their position within interdependence. We abstract environmental issues when we understand our decisions as what comes from us as individuals, but what we interact with as effects of circumstance, that which we are disconnected from.

Please select your major or intended major:

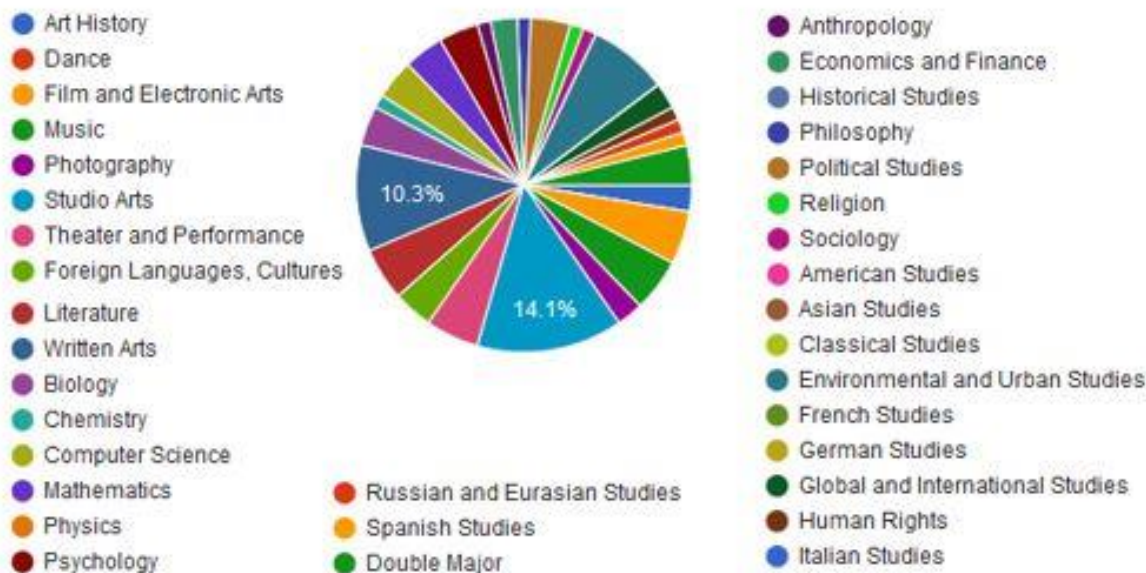


Figure 1. 78 out of 83 participants responded to this question. Each color represents one of the 35 major options offered at Bard College. I did not get a representative number of every major and excluded the responses to this question in my analyses.

Please select your year (82 responses)

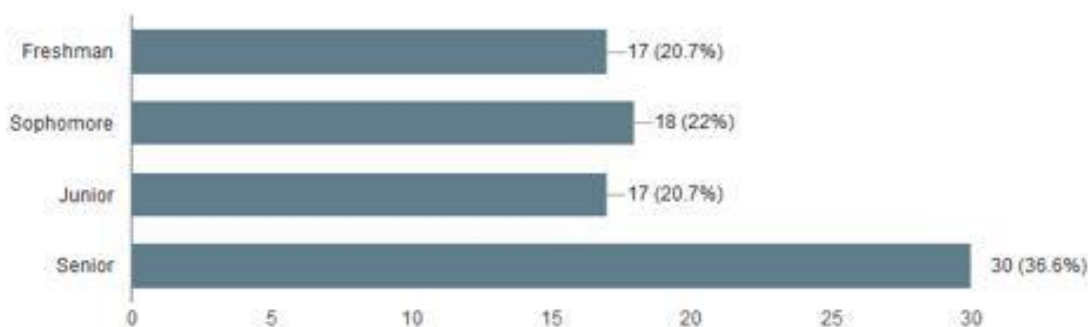


Figure 2. 82 out of 83 participants responded to this question. In my analysis of the responses, I could not assess if there was a significant relationship between the year of students and their answers because of the diverse ways students responded, and the uneven distribution of different years.

Students Who Eat Meat

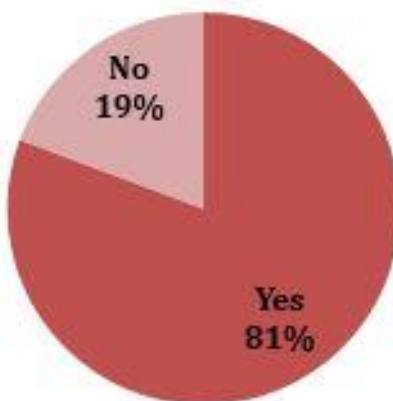


Figure 3. Data from survey involving 83 Bard students who eat at Kline Commons. 67 students reported that they eat meat and 16 students reported that they do not eat meat.

Expressed Knowledge of Environmental Impact of Meat

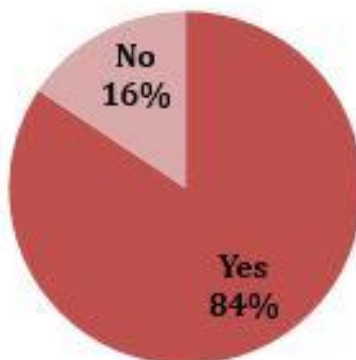
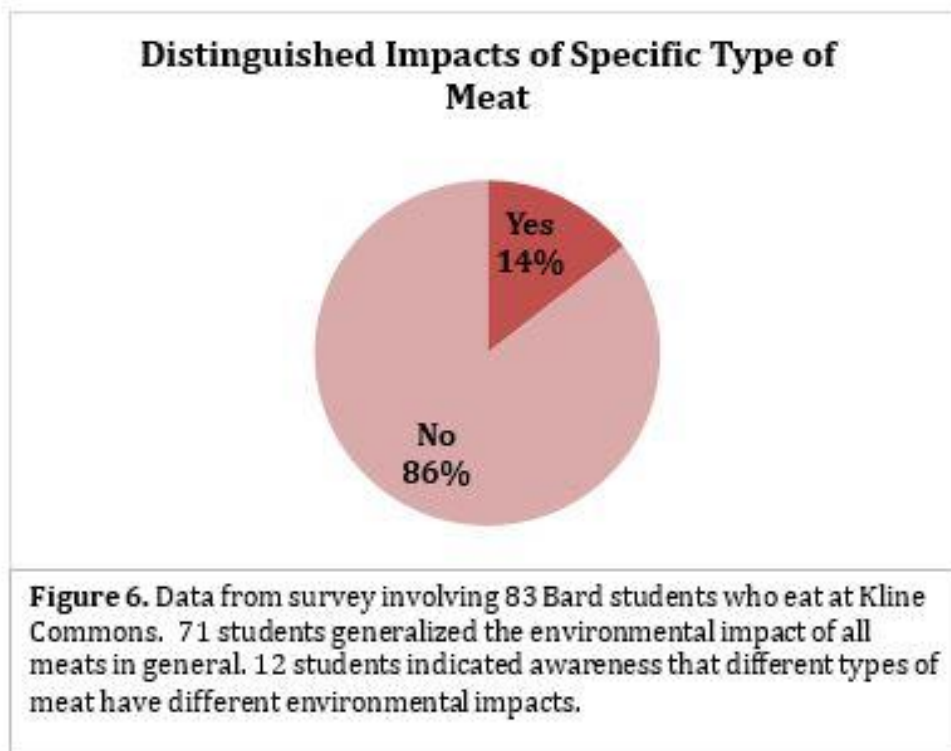
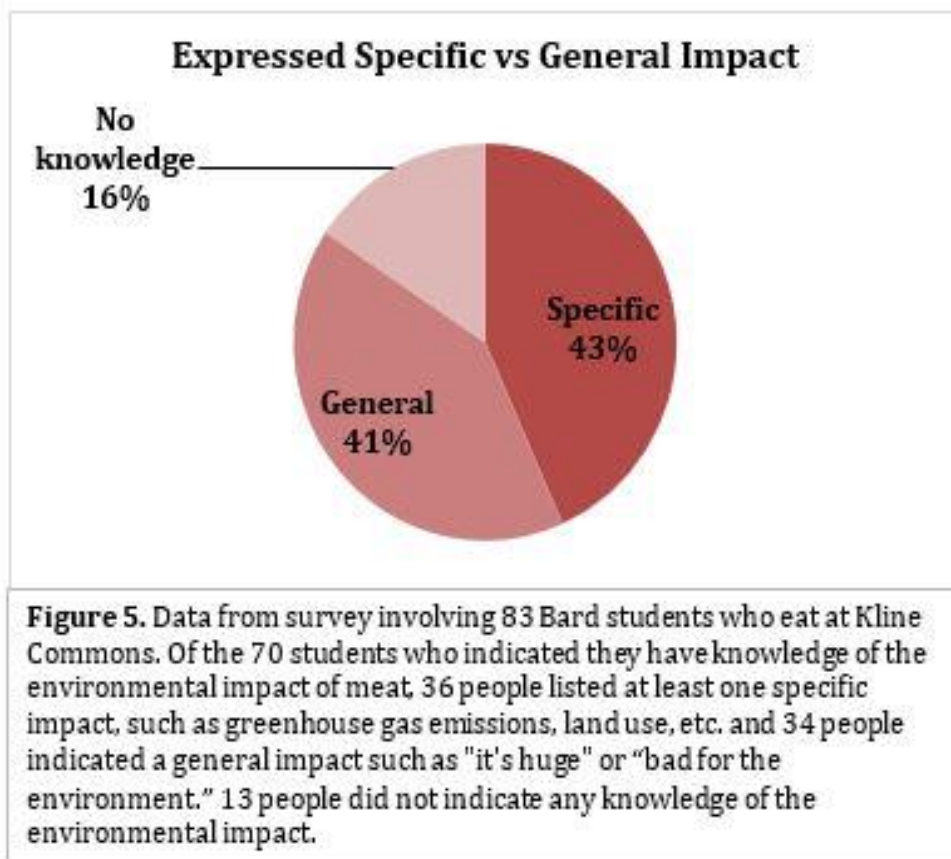
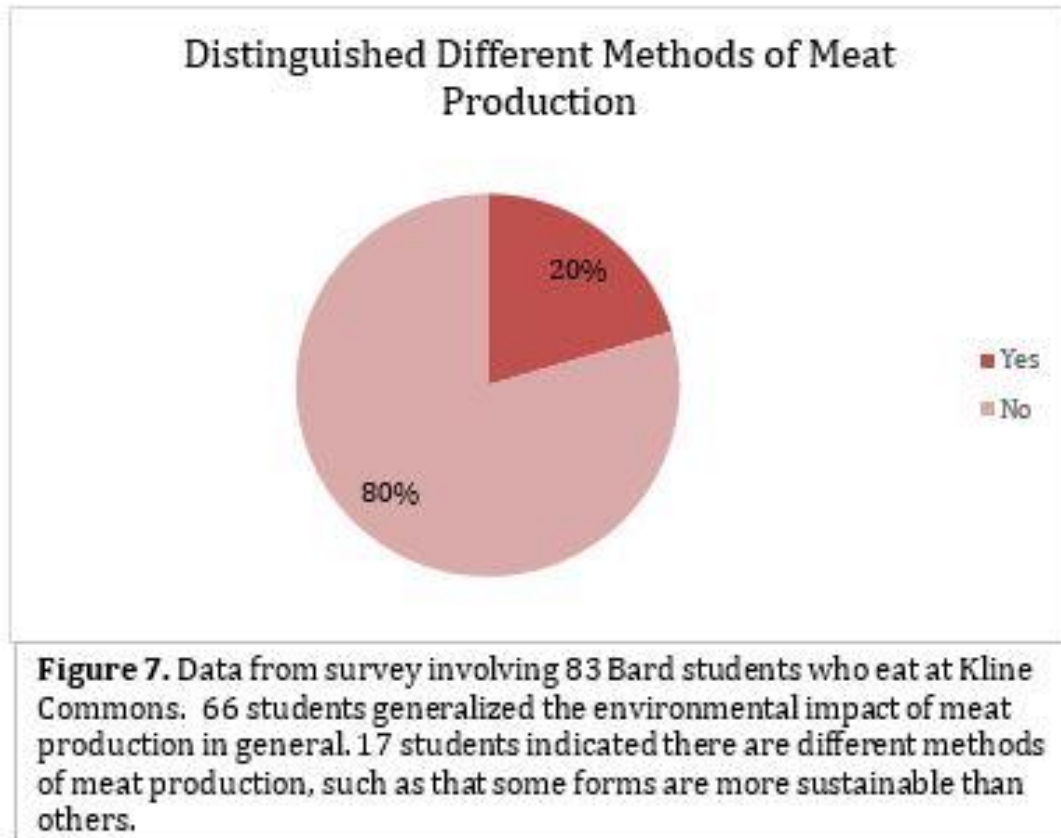


Figure 4. Data from survey involving 83 Bard students who eat at Kline Commons. 70 students reported that they have some knowledge of the environmental impact of meat and 13 students reported that they do not have any knowledge of the environmental impact of meat or did not answer the question.





What kinds of meat do you eat? Please check all that apply. (69 responses)

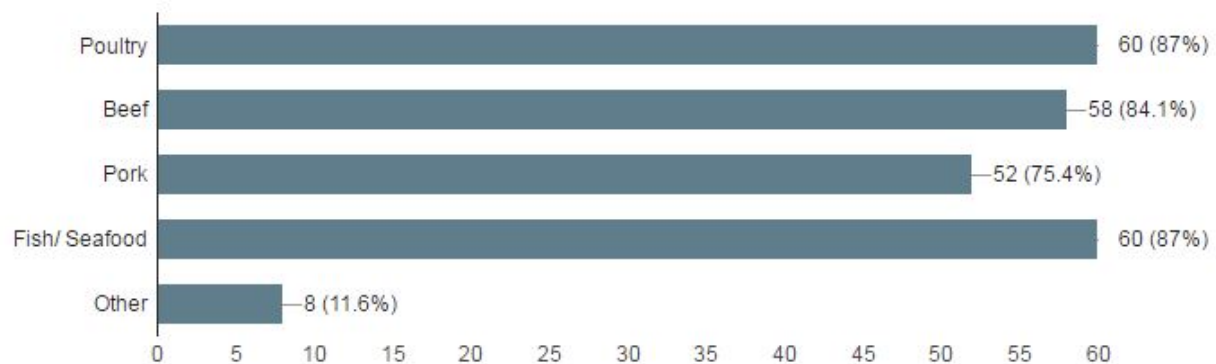


Figure 8. Graph depicts 69 participant responses out of 83 total participants in the survey. Poultry and seafood were tied for the top meat people eat, followed by beef, then pork, and then other types of meat.

The survey responses support the notion that information of interdependence is not enough to motivate decision-making on meat. The majority of surveyed Bard students eat meat as indicated in Figure 3. The majority of surveyed Bard students also indicated they have knowledge of the environmental impact of meat production. Both students who eat meat and students who do not eat meat indicated they have knowledge of the environmental impact but the motivations for eating meat were different from the motivations for not eating meat. For example, both meat eaters and non-meat eaters indicated they knew that meat production was environmentally detrimental.

While many people who do not eat meat expressed knowledge of the environmental impact of meat production and consumption, meat-eaters also expressed this knowledge. All responses are word for word from the participants. **Below are responses (italicized) to the question, “What do you know about the environmental impact from the production and consumption of meat?” from people who do eat meat:**

- [...] meat is bad for the environment. It takes up more land to raise animals, it requires more water, farmers put antibiotics into the animals, cows produce methane, etc... It's a mess, and it needs to be reduced if we are to combat climate change and environmental destruction more generally.

This response highlights some of the information I provided in Chapter 1. Meat eaters consistently indicated they had some knowledge of the environmental impact of meat production and consumption.

-Beef is horrible, all other sources aren't ideal, but much less bad

-Horrid for the environment, worse than cars

-I know that cows are bad for the environment (both the amount of land we need to use for their food, and their body gases).

-That corporate farming is horrible and tried to maximize the amount of profit by fattening up and prematurely impregnating female cows and chickens to give birth earlier

-Industrial Meat production is among the leading causes of climate change. My awareness of the bad stuff doesn't change what I do

“Corporate farming” and “industrial meat” likely refers to the large-scaled, CAFO based farming operations, rather than the alternative, and not as “horrible” practices of more sustainable farming, although the lack of specifics leads to speculation. The responses below are examples of people having knowledge that different types of meat are associated with different types of environmental impacts:

-I'm sure it's bad, but I don't know the specifics. I tend to associate food environmental impact with whether or not the food is local and whether or not it's processed.

-Not much. I know it's pretty harmful, at least in a place like Chartwell's dining halls, where the meat comes from huge factory farms that use hormones, crowded conditions, etc.

-Most meat is not particularly good for the environment; beef specifically is absolutely horrible. The seafood industry, as well, is destroying the oceans in many places.

(Despite the person's distinction of the larger impact of beef and seafood, they indicated that they do eat meat and seafood.)

-Disastrous. Eating beef is a nightmare for CO2 emissions. But I've known this and act the way I do regardless

People directly state that “awareness of the bad stuff” doesn't change what they do, or that they know the impact is “disastrous,” and a “nightmare” of an impact on climate change but they act the same way, regardless. Interestingly, people offer an ethical judgment to the impacts of meat on the environment, but they also indicate that this is not relevant to their independent decision to eat meat, or else they would most likely change the behavior (unless, of course, they are satisfied with doing what is “bad”, which I assume is not the case).

-I know it's pretty bad and severe, but I wouldn't be able to rattle off statistics

-That there is a huge impact on the environment and decreased meat consumption would be beneficial for the world

- [...] bad

-The production of meat under Capitalism is, like anything else, bad.

-so much, it's horrible. abattoir culture extends to the psycho-horizons of America, a country built on butchering and violence. We are destroying ourselves and everything, it's so depressing, but I'm too lazy to change.

In assessing the environmental issues associated with the production and consumption of meat at Bard, my aim is not to condemn people for inactivity, but to understand why people might be disengaged from environmental initiatives. For one to claim that “we are destroying

ourselves and everything [...]” but that one is too lazy to change suggests there is a disconnect between the notion and actual experience of destruction, for if one truly sensed this “butchering and violence,” one might be likely to change their behavior (unless they actually welcome destruction or are unable to initiate change). The laziness implies that they can get away with remaining the same, which makes sense because at the current moment in time, they do. The destruction can be imagined as separate from the person, not only in terms of physical location but in the nature of cause and effect. It is worth reflecting on whether Bard students would respond as they did to the survey if it addressed issues that are not directly said to be “environmental issues”, as in, whether students would articulate that a form of action they partake in is problematic, and then imply that one is separate from it.

-I know as the population grows more and more, we need more space for animals to slaughter and sell for food, especially cows. The cow feces is terrible for the environment and there are many problems with the meat industry in our country.

-i know it is very harmful in terms of the care of the animal and its health as well as external effects due to the processing / factory.

-That the amount of water it takes to produce a pound of meat is ridiculous, the land it requires is astronomical, and the waste is at an incredibly high margin.

-Meat is murder, takes too much water and grain

-I know that it is very bad.

-It's pretty terrible.

The responses emphasize that knowledge is evaluated ethically. The majority of meat-eaters articulate that they know the effects of eating meat are “bad” but that something else is

motivating their decisions. There is a gap between knowledge of interdependence, the idea that our actions contribute to something larger (but that something is just an idea, abstract and distanced) and actually sensing the individual self as part of a larger interdependent community, which is more likely to motivate responsibility and compassion.

One of the reasons interdependence is not felt during the act of eating meat is because the enormity of the environmental impact of meat is abstracted during the time of the meal. Figure 5 supports that the engagement with meat is abstracted as more than half of the surveyed students provided general information of the environmental impact, connecting it to abstract notions, and often ethically-charged, such as “bad,” or “huge,” rather than listing a specific impact of meat production. This could be because students are actually unaware of the specific interdependent issues meat production is connected to and they only have broad associations, or because students did not want to spend the time explaining the depth and complexity of the specifics. Either way, the general and short responses suggest that this is the narrative that came to mind when asked about the environmental impact of meat production— and “bad” was one of the most commonly listed. These words call to mind a vague and negative image, supporting the notion that interdependence is either not recognized in its actuality or that it is avoided because of what it makes the person feel, depressed and overwhelmed rather than inspired and responsible.

Another reason interdependence with environmental issues is difficult to sense is because a range of motivations and experiences occur when we make decisions. For example, the top reasons for eating meat were taste, protein content, and habit. The top reasons for not eating meat were ethical/moral reasons (including animal welfare), environmental concern, and health. It is not as if one who focuses on taste can be convinced that meat does not taste good, or that

someone who focuses on environmental concern can be convinced that meat does not have an environmental impact. One could argue that both meat-eaters and non-meat eaters consider the nutritional value of meat to be the point of focus when deciding whether or not to eat it.

However, even within the category of health, meat eaters and non-meat eaters focus on different aspects of the issue. Meat eaters specifically pointed out the protein content or iron content of meat, which are arguably essential components of a balanced diet. Non-meat eaters pointed to “health” more generally, which might refer to the specific nutrients plant-based diets provide, or the concern over the health effects of chemical fertilizers, pesticides, and antibiotic use to raise certain types of meat. Both the protein aspect of meat and the chemically raised aspect of meat can coexist, making the decision to weigh one aspect against another more difficult. Before weighing the effects of a decision, it is essential to understand the causes that create and shape the decision.

The Buddhist notion of attachment can be applied to how phenomena appear in Bard’s dining hall, Kline Commons. Stephanie Kaza articulates how a lack of mindfulness develops from false views and how this prevents recognition of interdependence:

From a Buddhist perspective, identity formation or ego-based views of self promote ignorance, which means attachment to false views of self and the world. This generally refers to either of two extremes—that things are separate, fixed, and permanent or that things are insubstantial, lacking in reality ... This confusion prevents us from experiencing the world as interdependent, co-creating, and in dynamic flux.”⁸²

Ego-based views, views which are informed by an individualistic notion of self, promote ignorance, or an inability to perceive the ways in which decisions extend beyond the individual and impact interdependent relationships. Attachment to false views of the self and world include holding on to ideas that miscalculate the impact of the individual self. For example, if one

⁸² Stephanie Kaza, “How Much is Enough? Buddhist Perspectives on Consumerism,” 44.

decides to eat meat with the view that one's impact is insignificant to the global total on climate change, one does not see that the total impact is made up strictly of individual impacts. Both the permanent and the insubstantial forms which Kaza notes are experienced in Bard's dining hall, Kline Commons, which promotes the ego-based view of the environment. People only interact directly with the "fixed, permanent," notion as they are free to take the constantly supplied, transformed environmental object, the meat. After the meat is eaten or thrown away, it becomes insubstantial, "lacking in reality." It is hard to perceive one's actions reflecting on the other jewels when the jewels are not immediately visible, when the emissions of greenhouse gasses are concentrated and happening miles away from the dining hall. Kaza frames the perception necessary in environmental activism as Buddhist and the perception which contributes to environmental degradation as non-Buddhist, but I believe both forms of perception have the potential to guide Bard students.

The meat served at Kline Commons appears simultaneously impermanent, as one only engages with the meat in its direct form while selecting it and then eating it, and as permanent, as meat is provided constantly during every meal. In this paradoxical state, it makes sense that an individual would not sense their individual impact because the same amount of meat is provided, regardless of their decision. Abstraction forces one to actively cultivate the experience of interdependent responsibility. The meat is conceptualized as paradoxically permanent and impermanent, consistently and constantly supplied, yet only existing "in" the dining hall, not before the meal, as a living cow, or after it, as a higher level of nitrous oxide in the atmosphere or a shrinking water source. In line with Kaza's rationale, people can be understood as being attached to meat as a food object to be possessed, an object of sensation made available every meal in multiple forms. Yet the sensation of all the environmental components connected to the

production and consumption of meat remain invisible as one's senses focus in on an appealing and abundant source of food.

While one may value animal rights, environmental well-being, a balanced diet, etc., the immediate sensory engagement in which meat consumption takes place hinders the power of these values in guiding behavior. The Karmapa explains how one can value something, such as empathy for animals, yet our perception is limited in enacting these values:

We are able to be tender and loving toward the pet who sits at our side and yet be causing unbearable pain to the animals whose meat sits on our plate. We find this thought distasteful, and so we mentally distance ourselves by not tracing out the chains of causality and interdependence that link our bite of meat to the distress and terror of animals crowded together in narrow cages or filthy cattle yards. Our own taste for meat is a condition that makes us complicit in a chain of causal actions that results in suffering that we could never stomach if we had to watch it. That suffering is caused by us human beings and is rooted in our failure to recognize our connectedness to those beyond our immediate field of vision.⁸³

The Karmapa explains how perceptual limitations make us context-specific to certain values. He notes that we are empathetic toward our pets nearly automatically once we establish an animal as a being we feel compassionate towards and responsible for. Yet this is not in line with the way in which we treat other animals deemed not our responsibility, the ones we consume. Arguably the consumption of an animal is just as intimate as a friendship or caretaking relationship to an animal, yet rationality often does not shape our treatment of farm animals. People generally do empathize with animals but have difficulty perceiving the conditions under which meat is produced because they are not a part of the production process, making it difficult to empathize with the “meat” the animals have been turned into. Furthermore, the conditions

⁸³ Trinley Dorje, *Interconnected: Embracing Life in Our Global Society*, 57.

under which meat is produced are known to be of “distress and terror,” “crowded,” and “filthy,” and this leads to more perceptual limits as people tend to avoid feeling guilt and disgust if they can. The Karmapa states how if people were even witness to the meat production process, experiencing the sensory input of the scene, the sight, the sounds, the smells, etc., they would not be able to eat meat. His argument supports the notion that we fail to experience interdependence because of limits to our perception rather than a lack of values. At Bard, students are unable to perceive that they are a link in the chain because they engage with the meat as a result they are presented to, not an active process they engage in.

Below are some examples of those who eat meat and suggest this is bad, but that this realization is overridden by the power of the sensory experience of being offered meat in the dining hall:

-Hunger. I know it is wrong and do it anyway. I understand that I am directly contributing to climate disaster and the slaughter of animals. But it is too abstract and meat is too normalized. Basically I eat it because I like it and it is everywhere. Simple

This person admits that meat is “abstract” in that although the person understands they are directly contributing to climate change and the slaughter of animals, eating meat is “normalized” as it is consistently made accessible. This suggests the strong potential of the dining hall’s standard of foods in influencing students’ perceptions of the foods, clarifying which foods we support providing and which foods we do not support providing.

-honestly being vegetarian is too hard, I'd rather not think about where else to get protein and I have eaten meat my whole life and I like the taste

-i should be a vegetarian for so many reasons, but I enjoy cooking and eating meat, for sensory and aesthetic Maillard purposes

The responses above indicate that people want to eat vegetarian more than they do but that it is difficult to do so. Many people directly admit the difficulty of changing their individual behaviors and this is completely understandable given the sensory overload at Kline as various dishes being offered with different smells and sights, what rushing students take from and what rushing workers constantly refill. This indicates the need to address the issue of meat production and consumption as a community issue rather than an independent decision, because our decisions are connected to various causes and effects, like what we are used to and what we are offered, as well as what we want.

Though the ethics involved with raising and killing animals for meat should continue to be an on-going discussion and is one of the main reasons I was drawn to this topic, the ethics involved with the environmental impact of meat production is a distinct issue, and a complicated one as it involves a variety of practices, some significantly more sustainable than others. The environmental ethics of meat production become more complicated when we blend into them the ethics of how we treat animals. Like all phenomena, the ethics of animal rights and the ethics involved with mitigating climate change and other environmental issues are interdependent, through factors like scalability, which relate to both how the animals are taken care of and to the level of greenhouse gas emissions. However, generalizing the many factors and consequences of

meat production and consumption hinders the ability to accurately depict and rightfully address the specific aspects of the problem.

Many people responded to the question “What do you know about the environmental impact from the production and consumption of meat?” with knowledge of the treatment of animals raised for meat. Animals are often included in conceptions of the environment but the treatment of animals is the production and consumption of meat itself, and many responses blended the ethical issues of the treatment of animals raised for meat within their descriptions of how production in general causes other environmental issues. One might discuss both the impact on the environment at large and the ethics involved with the treatment of animals in an argument for reducing meat from the diet or why CAFOs should be banned or regulated differently, but clarity is essential when discussing what the problems are. Because some people accept the killing of animals, and even the conditions under which the majority of animals are raised, it is important to emphasize the contributions to climate change and other environmental issues as well, and to clarify what ethical issues are being drawn out in discussing meat production and consumption. Justifiably, when asked what motivates the decision to eat meat, people did answer with concern over the killing of animals or the conditions of raising animals for meat. **Below are all of the responses of those who said they do not eat meat to the question “What, if anything, motivates your decision to eat meat/ not eat meat?” (16 people said they do not eat meat, 3 did not respond to the question):**

-environmental effects and animal cruelty

-I don't eat meat (or most animal byproducts) for ethical, environmental, and health reasons

-ethical choice- mostly the animals. But also for the environment moral grounds

-i don't eat meat because i love animals / workers

-I feel strongly about animal welfare, environmental preservation, and my health

-Do no harm philosophy; upsets my stomach; plant based is more healthy for us; makes me feel squeamish

-Mostly environment but also sympathy for animals

-body image and environment

-meat makes u feel weird

-Ethical issues of the meat industry in the US

-I was raised in a vegetarian household, I tried meat here and there, but never favored it, I could live without it. As i got older and became educated on the negative aspects of the meat industry I became repulsed and refused to eat meat altogether. However I am not opposed to eating meat if I know where it came from, and knew the ethical treatment of the animal.

-At age 19, I have been vegetarian / vegan for eight years. Throughout this time my reasons for not eating meat have shifted from mainly ethical & health to mainly environmental and ethical. I now see that there is an ethical & environmental way to approach meat & dairy consumption, however find it near impossible to do so in our modern day society. I therefore continue to refrain from all meat & most dairy consumption. I also cannot imagine the process of eating meat after refraining for so many years, it's somewhat engrained in my very being now.

The last two responses highlight a Middle Way approach, as the students acknowledge the conditionality of different aspects of meat production and consumption. These responses indicate that the majority of meat is produced in ways they do not accept ethically and that alternative forms of production do meet their ethical standards. Because meat is an interdependent phenomenon, some people find it easier to refrain from consuming meat altogether, while acknowledging that different types of production exist. Others continue to eat both sustainable and unsustainable meat, while also acknowledging the different types of production.

Both meat-eaters and non-meat eaters articulated a difference between methods of meat production. **For example, below are responses of those who do eat meat and similarly articulated a Middle Way approach:**

-I eat meat rarely. I try for once a week, although sometimes more depending on the vegetarian options at Kline. Eating meat is very bad for the environment so I try to avoid it, but I'm not a purist so if it's the best food available I will eat it. I eat beef the least frequently because of the methane emissions from cows and the water required to maintain them.

-My ideology is everything in moderation. I have not come across an argument that decisively convinces me not to eat meat. Moreover, I believe the problem to have more to do with sustainable meat production than all meat production. I will admit that it is also far more convenient not to have food restrictions.

These meat-eaters indicate a Middle Way approach which attempts to find a balance between competing goals, such as enjoyment of food, a balanced meal, and minimizing environmental destruction. Rather than fight meat as a whole, a Middle Way approach could help inform a meat reduction initiative at Bard by reducing the total amount of meat and reducing the amount of unsustainable meat in the dining hall in order to address the environmental issues associated with meat production.

Environmental issues are at risk of abstraction because most people contribute to them unintentionally. More than not, people hold good intentions and support the idea of protecting the environment as well as fixing environmental issues that exist. While some people still debate whether climate change is real, the larger issue is not that some people want to stop climate change and some do not, it is not that people perceive something as good while others perceive the same thing as bad. The issue is that people focus on different bits of isolated information and experiences surrounding something like meat, and we hold on to these focal points during our engagement with meat, rather than orient ourselves toward interdependence.

e. Solutions and Conclusions

The Middle Way approach to diet is one that tries to find a balance amidst the complex conditions that phenomena emerge, whether it be meat or a vegetarian meal. Philosopher Brian Treanor explains how universal rules tend to only apply to clear-cut situations which hardly exist in reality: “Simple rules like ‘thou shall not kill’ seem straightforward until we begin to consider just war, self-defense, killing to prevent greater evils, passive euthanasia, active euthanasia, assisted suicide, and abortion, to say nothing of whether not this prohibition applies to any forms of non-human life (a thrice dialing decision for most of us).”⁸⁴ Treanor points out how difficult it is to discuss the ethical implications of killing animals for meat because we already hold contradictory views regarding the killing of other humans. The way that a simple rule fails to function under different scenarios can be applied to the limits of arguments for any particular diet. For example the rule of “thou shall not kill animals” can become more complicated in its implementation. We might consider the killing of a suffering animal or the killing of an animal for food when none else is available, or even the killing of an animal for food on occasion, to be more just and acceptable than the constant, industrial-scaled operation of killing animals. The Middle Way approach allows principles such as “to minimize harm” to guide one’s decisions but which might lead to a different decisions under different contexts.

To integrate a Middle Way approach at the dining hall at Bard, we would first need to define the extremes we are finding a balance between. Currently, the dining hall prioritizes the value of option, providing both meat and vegetarian protein options, and within these categories, both sustainable and unsustainable versions. Therefore the option to choose sustainable food is

⁸⁴ Brian Treanor, “Just What Sort of Person Would Do That?” *Emplotting Virtue: A Narrative Approach to Environmental Virtue Ethics*, Albany, NY: State University of New York Press, 2014, 11.

provided as well as the option to choose unsustainable food, within both meat and vegetarian dishes. A Middle Way approach that prioritizes interdependence between humans and the environment should find a middle ground between option and sustainability, providing some meals with all options available and some meals with all sustainably produced food. Bard can spend the same amount of money currently allocated to meat to increase the amount of sustainable meat while simultaneously lowering the total meat consumption, lowering the school's contribution to climate change and related environmental issues. Unless Kline is to provide 100% sustainable meat, holding a meatless day or a meatless meal is a viable version of prioritizing sustainability as well as the value of option. While the majority of students surveyed indicated awareness of the environmental impact of meat production and consumption, other students indicated little to no knowledge. Holding a meatless meal or meatless day and articulating the reasons for doing so would simultaneously increase knowledge of environmental issues and bring them into a more public and widespread dialogue, which includes debate.

In an effort to reduce Bard's impact on climate change from serving meat, Chartwells agreed to implement "Meatless Monday" at Kline at some point before 2014, which actually entailed only one meatless meal, a vegetarian dinner. Meatless Monday is an initiative that was founded in 2003 by Sid Lerner in association with the John Hopkins Bloomberg School of Public Health Center for a Livable Future within the health-focused Monday Campaigns in association with Columbia University, John Hopkins, and Syracuse University.⁸⁵ At Kline, Meatless Monday worked under the guise of an Italian style meal but when it was advertised as promoting "meatless," students immediately pushed back and the initiative was cancelled, indicating the prioritization of option over sustainability.

⁸⁵ "The John Hopkins Meatless Monday Project." *John Hopkins Public Health Magazine*.

Although the Meatless Monday initiative is currently not in place, Bard College has the potential to reinstate it and Chartwells is open to students' wants such as asking for less unsustainable meat and more sustainable meat. Bard student Emma Patsey found that to meet Meatless Monday goals to achieve an equilibrium point at which allocation budget for meat purchasing is equal to quantity that can be afforded to purchase by sustainable suppliers, Kline must reduce aggregate quantity demanded by 2,502 pounds, a 20 percent reduction from its current procurement.⁸⁶ She conducted a separate survey fall semester 2016 and asked students whether Bard EATS posters and labels hung up in the dining area affected their food choices, half the students reported "Yes, my choices are affected" while the other half reported either "No, my choices are not affected" or "What posters/labels?" indicating some people are not even aware of Bard's efforts to raise sustainability awareness.⁸⁷ She also asked what people's favorite proteins were and found that the favorite meat choice was chicken, followed by vegetable/plant based proteins, then beef, then fish, and then pork.⁸⁸ Her findings suggest that a large majority of students are open to non-meat protein sources. The reason we do not have 100% sustainable meat is because the cost is much higher and the current economic system cannot properly assess the cost of unsustainable practices versus sustainable practices. In one month, a total of \$56,714.02\$ was spent on meat.⁸⁹ While Bard spends more money on sustainable meat, an October 2016 Invoice Assessment found that the total purchase of 12,590 pounds of meat in October 2016 was nearly evenly divided between the sustainable and unsustainable distributor, with 49 percent purchased from Purdy & Sons and 51 percent purchased from Sysco.⁹⁰ Purdy & Sons is a New York-based meat distributor that falls under the Real Food Challenge criteria.

⁸⁶ Emma Patsey, "Bard College: Meatless Mondays," 2016.

⁸⁷ Ibid.

⁸⁸ Ibid.

⁸⁹ Ibid.

⁹⁰ Ibid.

Sysco does not fall under these sustainability criteria. If students articulate that the majority of meat is produced irresponsibly and unethically and they choose to consume it anyways, there is a clear disconnect between what people believe is ethical and what their role is in participation in ethical behavior.

Cost of Meat Purchased for 1 Month (\$)
(total= \$56,714.02)

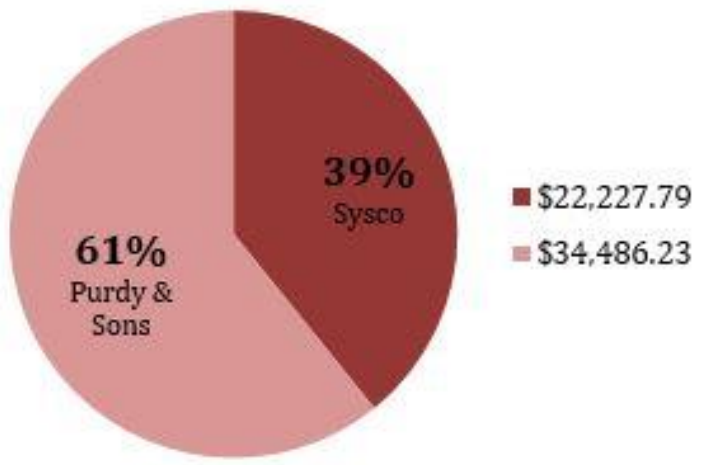


Figure 8. Data from October 2016 Invoice Assessment. Purdy & Sons is a New York-based meat distributor that falls under the Real Food Challenge criteria. Sysco does not fall under these sustainability criteria.

Quantity of Meat Purchased for 1 Month (lbs)
(total= 12,593 lbs)

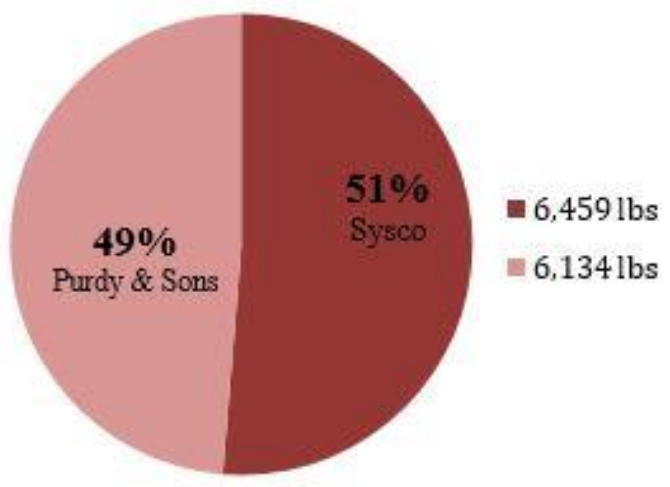


Figure 9. Data from October 2016 Invoice Assessment.

Currently there is no sustainability initiative specific to the environmental degradation caused by the production and consumption of meat, despite the high levels of awareness of its existence. Bard College signed the Real Food Challenge Commitment in 2013 as a part of the school's efforts toward sustainability. The Real Food Challenge Commitment promised to increase Bard's spending on "Real Food," or food meeting certain sustainability criteria, by 20%. Bard reached an average of 24% purchasing of Real Food in spring 2015, beating the goal five years early.⁹¹ Since 2015, the sustainability committee Bard EATS has developed the Bard EATS Food Criteria Rubric which states that the values of the Bard community include humanely raised animals, nutritious whole foods, and ecologically sustainable practices.⁹² Bard College has developed a Climate Action Plan to work toward Bard's goal of carbon neutrality which includes working with Sea to Table, a seafood wholesaler, and featuring plant-based protein options to reduce red meat consumption. Chartwells Dining Service started purchasing some of its meat from Purdy & Sons Meat distributor, which meets the Real Food Challenge standards but there is no guideline for how much meat within the dining hall should meet sustainability criteria.⁹³ Other meat products at Kline Commons come from Baldor and Sysco, two suppliers which do not fall under the Real Food or Bard EATS criteria. If we divide the total amount of meat purchased in one month by the number of days in one month, nearly 420 lbs of meat are served in one day, costing roughly \$1890.50. If we were to reduce the amount of meat we purchase by even having just one meat-free day we would lower our environmental impact and have a significant amount of money saved to go towards other dining initiatives. If this practice were implemented more frequently, the environmental impact would go down as the

⁹¹ Nicole Leroy, "Case Study: Bard College." *Farm to Institution New England*, November 24 2015, accessed February 18, 2017, <http://www.farmtoinstitution.org/blog/case-study-bard-college>.

⁹² Patsey, "Bard College: Meatless Mondays."

⁹³ Patsey, "Bard College: Meatless Mondays."

amount of money saved would go up even more. As Bard College suggests it is committed to sustainability and as a majority of students believe we are contributing to environmental issues through the production and consumption of meat, it is necessary to address the production and consumption of meat specifically at the dining hall.

To gain support for the implementation of any meat-reduction initiative, we need to people to acknowledge their responsibility in interdependent relations. When we think of environmental issues such as climate change, the immensity and complexity of the issue can lead us to believe that individuals cannot possibly be deemed responsible for the magnitude. However, the immensity and complexity arises from the total of the range of individual perceptions, motivations, and actions, the interdependent web we all exist in. The Karmapa explains how we shift responsibility when we are discontent with the consequences of our actions:

Most often we feel it is primarily the fault of those running the government, the policy makers, the CEOs of the multinational corporations, or whoever is at the top of our power hierarchies. But this is a false argument. [...] If we fail to vote against them, if we silently go along with their policies, if we buy their products and support their business practices, we are forming an ongoing part of their power base. We all have a responsibility—and a part to play in this interdependent world—to ensure that all have access to what they need to alleviate suffering.⁹⁴

The Karmapa explains that government officials and business owners are powerful when we support the policies and purchase the products they offer. If we are not actively rejecting practices, we are passively welcoming them. Again, this highlights the responsibility of people to actively recognize interdependence. The Karmapa explains how climate change appears as an

⁹⁴ Trinley Dorje, *Interconnected: Embracing Life in Our Global Society*, 94.

enormous and overwhelming problem, yet if we look at the causes and conditions, it is easy to identify specific actions and human behaviors that contribute to its arising.⁹⁵ This includes eating meat versus not meat, or eating only sustainable meat and not unsustainable meat, for example. When enough conditions and causes are changed, so will the extent we contribute to climate change and related environmental issues.

Recognition of interdependence needs to empower individuals to untangle the web of connections we are a part of, not point fingers at individuals and evoke feelings of guilt and immobility. The Karmapa highlights the values of compassion and responsibility as necessary to motivating responsible action and states that they require cultivation, existing through time and through the interplay of other conditions.⁹⁶ Designing and following more specific sustainability initiatives as a community can help cultivate compassion and responsibility. To address the complexity of environmental issues requires engaging in practices that enable people to initiate with intention. Sensing interdependence is an active practice that brings out the good qualities of individual people.

The perception of interdependence is just as significant as the phenomena of interdependence itself in contributing to climate change and environmental issues. The Karmapa discusses how both the inner world, what relates to human consciousness, whether it be emotion, imagination, perception, etc. and the outer world, the environment in which people and all beings exist, time and space itself, are distinct yet related in that they both effect each other. In the

⁹⁵ Trinley Dorje, *Interconnected: Embracing Life in Our Global Society*, 129.

⁹⁶ Trinley Dorje, *Interconnected: Embracing Life in Our Global Society*, 67.

Karmapa's discussion between inner and outer, once can also imagine the spherical and global, the individual self and the human species:

When I speak of the inner world, I do not have in mind an inner world that is totally distinct from the outer world. However, between our outer and inner conditions, I would argue that these inner conditions have more influence in shaping our world than the outer. This is because our inner world is constantly shaping the way we perceive and respond to the circumstances we find ourselves in. [...] Your inner world has a powerful role in determining how you experience your external conditions and respond to them.⁹⁷

Similar to the range of environmental components, whether imagined as the jewels in the net or as Oosting's ecological forms, the Karmapa brings up that there is clearly a distinction between what is inside of us from what is outside of us, but both are composed through their interactions. Not only do the inner and outer world effect each other, but the Karmapa argues that the inner world, our perception, is much more significant in shaping reality. The "inner world" shapes the way we perceive reality and therefore reality depends on the inner world. Whether or not one eats meat, engaging with the Karmapa's "outer world," of cows, land use, water use, greenhouse gas emissions, etc., the decision arises from the inner world. In line with the Karmapa's argument, it is necessary to understand the inner world, the ways in which people perceive and respond differently, just as much as it is necessary to understand the realistic changes necessary to mitigating climate change, how to produce and consume meat sustainably.

While reducing meat helps lower the impact of climate change, the Middle Way approach recognizes that any environmental interaction or decision incorporates a balance between different principles. The Middle Way approach to eating meat is helpful because excluding meat

⁹⁷ Trinley Dorje, *Interconnected: Embracing Life in Our Global Society*, 30.

from the diet does not eliminate all adverse environmental impacts.⁹⁸ As Kaza suggests, it is more virtuous to cultivate compassion in a person's relationship to food over any self-righteous attachment to a particular diet.⁹⁹ As we might appreciate a nice dessert at the end of the meal, the dining hall provides dessert options consistently. But we do not expect our favorite dessert option to be provided at every meal. Similarly the dining hall provides protein options consistently and this allows us to achieve a well-balanced diet, but we also seem to expect meat to be provided abundantly at every meal.

The Middle Way allows us to be intentional in the balance of competing principles. Kaza's definition of an ecological diet is helpful to articulating the principles one can follow to eat in line with interdependence. The ecological diet incorporates six principles: minimal intake of meat and animal products, minimally processed foods, minimally packaged foods, organically grown food, locally grown food, and free-range animal products.¹⁰⁰ By following an ecologically sound diet simultaneously without being attached to a diet, one is able to apply different principles to specific situations, in which the principles are weighed against other principles, such as accepting and appreciating what one has access to, receiving a gift respectfully, or not letting food go to waste over the principle of not eating a specific food for being what it is.

The interdependence between environmental degradation and ethical assessments force us to question our values as we address the issues. Evidently, many people discussed the ethics of killing animals when asked what they know about the environmental issues of meat production and consumption. Animals are often considered a component of the environment from simply being alive, and therefore they are a large part of environmental concern, but the

⁹⁸ Steele and Kaza, "Buddhist Food Practices and Attitudes among Contemporary Western Practitioners," [doi:10.1558/ecotheology.v5i2.49](https://doi.org/10.1558/ecotheology.v5i2.49).

⁹⁹ Ibid.

¹⁰⁰ Ibid.

moral questions that emerge from killing animals for food can be seen as a distinct, but interdependent issue from the contribution to climate change. The conflicted feelings of respect for animals and the enjoyment of meat mirror the conflicted feelings of wanting to address both climate change and the enjoyment of meat, as well as engaging in activities like driving or controlling the temperature of our buildings. Environmental issues require us to reflect on what we value and we must be intentional in which values we are prioritizing in our activities.

The Buddhist concept of The Middle Way and the Buddhist practice of mindfulness are helpful to confronting environmental issues because recognition of interdependence is prioritized over satisfying the individualized sense of self, whether through eating meat or eating vegetarian. Vegetarians are also prevented from servicing in a practice of environmental well-being when the individual identity of being vegetarian is prioritized over the interdependent interaction between food and the individual. To truly recognize interdependence with the environment, writer, environmental activist, and Buddhist thinker Gary Snyder encourages each individual to find their own understanding pointing out how “the simple distinction between vegetarian and non-vegetarian is reductionist and can lead to false pride.”¹⁰¹ While Buddhist writings often encourage vegetarianism, they also discourage attachment to vegetarianism.¹⁰² Therefore recognition of interdependence is the principle guiding decision making over the prioritization of the individual self, and this ideally cultivates a sense of moral responsibility and compassion under each unique context.

It is more important to show people how a certain action is beneficial to themselves and for the environment than to show people how a certain action is harmful to themselves and for the environment. Clarification of information is essential and the first step. But information is not

¹⁰¹ Steele and Kaza, “Buddhist Food Practices and Attitudes among Contemporary Western Practitioners,” .doi:10.1558/ecotheology.v5i2.49, 54.

¹⁰² Ibid, 51.

enough, for many people have access to it and are aware that it does not motivate their decision-making. “Horrible,” “bad,” “worse,” “ridiculous,” “murder,” and “harmful” are evident of moral and ethical judgments people use to assess the environmental impact of meat as such. I believe the disconnection between knowledge and experience comes from not believing we have the power to change our actions. Of course to change requires the want to do so, but this is still informed by the perception that we are actually able to change, as both individuals and as larger groups, whether it be as Bard students or as a part of the human species.

True perception of interdependence recognizes the web of cause and effect we are entangled in, that the individual person is essential to the environment like the individual jewel is essential to the total sum of the jewels in Indra’s Net. Part of the limitations to sensing interdependence is that we underestimate the freedom and potential of the individual person, which seemingly contradicts the way people seem to prefer to view themselves when making decisions, as independent individuals. People in the survey indicate that the production of meat is an environmental issue but they view themselves as distant enough to accept their participation in it. We are limited in recognizing how interdependence functions when we believe our actions are only the effect of a separate cause and therefore justifiable as we assume to be the victim of circumstance. We devalue our contributions to meat in that production and consumption are mutually effective, as meat is supplied because it is also demanded. The Karmapa states that “[W]hen we ignore our interdependence, we are disregarding the importance of others to our well-being. We devalue their contributions to who we are.”¹⁰³ While the Karmapa brings up it is important to remember our dependency on the environment, in the case of eating meat, we also must remember the importance of our individual selves to the well-being of others, not only the

¹⁰³ Trinley Dorje, *Interconnected: Embracing Life in Our Global Society*, 63.

animals we are eating but to other people and all environmental components. We deprive not only others but ourselves when we devalue our contributions to the world.

It is important to focus on how to inspire people to engage with environmental issues rather than to tell them how to act, and cultivating awareness of interdependent relationships is key to making people recognize and reap the benefits of doing so. Many Bard students actively participate in issues addressing identity politics and I observe that the environment is often left out of dialogue and initiatives surrounding identity politics at Bard. This might be specifically because the environment is considered a non-human issue, despite climate change being impacted by human beings and despite the inevitable, unequal distribution of environmental issues people experience across the earth. As we assume the right to have a constant access to meat, we assume the right to deprive others:

The average Iowa cornfield has the potential to deliver more than 15 million calories per acre each year (enough to sustain 14 people per acre, with a 3,000 calorie-per-day diet, if we ate all of the corn ourselves), but with the current allocation of corn to ethanol and animal production, we end up with an estimated 3 million calories of food per acre per year, mainly as dairy and meat products, enough to sustain only three people per acre. That is lower than the average delivery of food calories from farms in Bangladesh, Egypt and Vietnam.¹⁰⁴

We are growing crops to assure that some people have the right to meat rather than to assure that all people have the right to food. While I believe it is worth addressing climate change and environmental issues for the sake of all of life, environmental issues are deeply intertwined with social-justice, human issues and addressing environmental issues provides an opportunity to address how people of specific identities are impacted differently than others. To

¹⁰⁴ Jonathan Foley, "It's Time to Rethink America's Corn System," *Scientific American*, March 5, 2013, accessed May 2, 2017. <https://www.scientificamerican.com/article/time-to-rethink-corn/>.

produce one pound of beef depends on 16 pounds of grain, the other fifteen pounds of grain go to producing energy, developing body parts we don't eat, or are excreted.¹⁰⁵ Our dependency on meat is tied to environmental degradation and inequality, as we use resources inefficiently and deprive others of them completely. Therefore, it is essential to bring environmental ethics into all forms of dialogue at Bard College, such as the realm of identity politics, to design solutions that are both sustainable and adaptable to different populations of people and types of environments.

Following certain principles such as reducing the consumption of meat at Bard's dining hall, can be a liberating experience if we establish enough individual support of such an initiative. Of course, given the opportunity to pay attention to reflect on and articulate what we want, regardless of the external context, might lead the majority of students to assert that they are content with the current amount and types of meat the dining hall serves. But I argue that the survey responses suggest students are not content with the conditions meat is produced under, and that they want to do what is right but do not feel they have the ability to do so. While a meat reduction can be argued as a limitation, it can also be viewed as an assertion of what we support and expect, an exercise of our free will. The Karmapa argues that genuine freedom arises within ourselves rather than from external circumstances because complete control over the external environment is impossible, since we are inherently interdependent.¹⁰⁶ Rather than be able to do anything without facing the consequences, freedom is actively deciding which consequences we will contribute. Liberation happens when we reject passively responding to our immediate environment and when we demand actively, engaging intentionally in our environmental exchanges.

¹⁰⁵ Kaza, "Western Buddhist Motivations for Vegetarianism," 390.

¹⁰⁶ Trinley Dorje, *Interconnected: Embracing Life in Our Global Society*, 136.

There is always work to be done to move toward a better world and it is necessary to involve people from all disciplines, with different levels of knowledge, different worldviews, and with different goals in order to embrace the interdependent world we live in. It is crucial to focus on the individual in order to establish the experience of interdependence, to recognize and appreciate the particular characteristics of the individual which contribute to the larger, interdependent community. Ecological studies support the claim that diversity establishes stronger and more resilient communities, specifically under a changing environment and the call for adaptation. It is harmful and restrictive, not just for the environment but for our individual sense of selves, to be living in a constant state of dissociation, where we assume and accept the large disconnect between our intentions and the consequences of our actions. We all have something to offer, especially when we act intentionally, and this should be the focus of environmental issues to inspire compassion and responsible action.

We need to cultivate ways to sense interdependence, as well as recognize our limitations to this sensation, in order to gain support to re-implement a meat-reduction initiative. To actually sense interdependence requires practice, active intention that extends toward doing something larger than the immediate individual benefit. To address the complex web of interdependence involved in the production and consumption of meat, we need to start with something specific and concrete that traces our individual responsibility in the web. People know that eating meat contributes to climate change and other environmental damage, and this is not enough to change their behavior. To do the “right” thing all of the time is impossible and complicated under the lens of interdependence. Therefore we need to create opportunities for people to articulate the principles important to them, creating scenarios of reflection and intention to address what we find problematic, and to respond with specific goals in line with these principles. Sensory

experience and mindfulness are key to the emergence of environmental issues as well as the solutions because they allow us to sense the interdependent network we are a part of.

We are all in this together, and with our capacity to reflect and be mindful to our actions, we owe ourselves the opportunity to initiate change. No information is neutral, as we weigh the implications of knowledge logically and ethically. We logically know that the production and consumption of meat is contributing to environmental degradation through interdependence. We can respond to the ethical dimension of this information by repressing and avoiding this information, or owning our awareness and responding conscientiously. A Middle Way approach calls for a reduction in the meat we purchase and consume, specifically a reduction in meat produced unsustainably. The Buddhist concept of the Middle Way is helpful to designing a meat-reduction initiative because it makes sure that the value of mitigating climate change and limiting our environmental impact is balanced with the values of option and enjoyment in life. Interdependence deserves respect and celebration, for the sake of the environment, the human species as a whole, and our individual sense of self, as it asserts that each jewel in the web beholds essential value.

Postscript

The concept of interdependence is emphasized across many disciplines and a liberal arts education is in line with producing this recognition. Bard provides a unique opportunity to cultivate an interdisciplinary perspective which can help orient people toward interdependence. Many academic and non-academic groups at Bard investigate the intersections of different phenomena, whether they be social, political, economic, physical, mental, etcetera. Currently, discussion of identity politics and privilege dominate many forms of conversation on campus and environmental topics allow us to enter these discussions in a way that unifies us, rather than divides us, through our shared interdependency with the environment. Bard students engage with interconnected ideas through intersecting forms of communication and activity, whether it be discussing, reading, writing, performing, painting, sculpting, singing, dancing, filming, cooking, etcetera; a majority of these involve appealing to the senses and community building. Topics of environmental interdependence, such as the production and consumption of meat need to enter the spheres of creativity and activism as they call for the articulation of different values and the proper way to balance these values.

During the spring of 2017, Bard had its first Zero-Waste Day at the dining hall, a student-ran initiative that worked with the dining hall to offer only reusable dishware for the day, preventing the use and waste of any disposable dishware. Students who eat at Kline use up to 22,000 paper cups in just one week. The cups cannot be recycled because of a plastic liner that enables them to hold hot liquid, and the cups waste thousands of dollars each year. While the main point of the Zero-Waste Day was to reduce waste and the environmental impact of the dining hall, it also brought out the question of responsibility in environmental issues to

everyone's awareness. The dining hall has had hundreds of reusable dishes stolen, preventing them to be washed and reused, and increasing the dependence on disposable dishware. Many people were concerned and even angry upon hearing about the initiative, as some perceived the event as a limitation to our freedom, our right to be inefficient and environmentally detrimental. The students running the initiative send out many notices preparing us for the event, telling us that no disposables would be placed out when they ran out of clean reusables. However, the students running the initiative also supplied extra reusables from Bard's Free Store, told students to bring their own, and the reusables were washed quicker than usual that day, all of which helped to make sure people had access to dishes. When I went to Kline that day, I noticed a distinct difference in how people were moving about. It was notably quieter and calmer, as people could not run in to get a disposable cup and run out of the hall. The event was a success. We created Zero-Waste and just as significant, the initiative brought to light the ethical and environmental aspects of our dependence on paper cups. What do we deserve access to as Bard students? What is our responsibility in the dining hall? What do we want? How are we impacting the environment? How do we respect each other and the dining hall as a facility? I believe a similar initiative can, and should, take place in regards to meat.

I created a follow-up survey to ask students if they would support a meatless day once a week, a meatless meal once a week, if they would support Kline providing less meat overall in order to source from more sustainable meat producers, or if they have any ideas for ways to be more sustainable at the dining hall. I want to know if people will support an initiative aimed at improving the quality of our meat, in terms of sustainability, in exchange for reducing the total quantity. I also ask students what they consider the top 3 most important factors in regards to the meat purchased and served at Kline (including different sustainability criteria such as organically

raised, lower greenhouse gas emissions, and other factors such as quality/grade, price, etc.). I hope to start a sustainability initiative specific to the production and consumption of meat, and to bring environmental issues into the on-going conversations of problem-solving and philosophical inquiry at Bard College. I hope to emphasize coming together as a community to articulate our intentions in awareness of the environmental issues associated with the production and consumption of meat.

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