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Final Write-Up: Senior Project

CEP 462

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Abstract

This project will assess how plant-based meat substitutes can most effectively replace animal-based meat. I focus specifically on chicken, the most widely-produced animal in the meat industry. 9,000,000,000 chickens are killed for meat every year in the United States, dwarfing the number of all other animals used for meat combined. Chicken production is a threat to global health, because it contributes to the emissions of greenhouse gases. An environmental justice issue arises as low-income communities with little political power live near slaughterhouses and experience polluted waterways from the animal waste. The scope of the chicken industry demands that a solution to its problems account for scale of implementation. For this project, I interviewed experts in the fields of plant-based food technology, farm transformation, and poultry industry economics. I plan to discover why poultry is one of the most prominent agricultural industries in the United States, focusing on supply chains and subsidies. I then compared these factors to corn, wheat, and soy, the most common ingredients in plant-based meat. The current state and levels of production of the meat and animal product industry are financially inefficient, environmentally harmful, and unhealthy for our communities. For plant-based meat to realistically compete with real chicken, it must be widely available, reasonably priced, and equally nutritious. My project aims to explain what this would look like in practice.

Introduction

My senior project was incredibly significant to my personal and academic growth. I have been vegan for over five years, and I am always trying to find new ways to make the case that veganism is a joy, not a sacrifice. I began the year thinking that my project was going to have something more to do with my internship in the transportation sector, although I had always known that animal rights and veganism were what I was truly passionate about. I expressed my uncertainty to a friend in the Seattle vegan community, and I learned that she had just started a plant-based food company called Seattle Food Tech. It is an engineering firm that makes vegan chicken nuggets but focuses on implementation at scale. She proposed to be my mentor and for me to study how plant-based meat alternatives could replace the role of meat in communities. The role of chicken in rural America was an especially relevant code to crack.

I could not believe that I had never thought to combine my major in urban planning and my life's ground project of veganism into something that considered the impact of factory farming and animal agriculture on communities. This project was born out of a desire to discover what a food system built on compassion and respect for animals would be like, and how to appeal to people who are currently in the field of animal agriculture by showing them that there is still a place for them in a world with less animal exploitation in our food system.

Methods

Interview

I interviewed Leah Garcés, founder and former Executive Director of Compassion in World Farming U.S. She has now taken the role as president of Mercy for Animals, an international

nonprofit farmed animal protection organization (Mercy for Animals, 2019). She is also the author of *Grilled*, which details her journey visiting chicken farmers in rural United States and her conversations with them. This new book explores the idea of turning poultry farmers from adversaries into allies.

The interview was composed of the following questions:

- From your experience, what are some of the most powerful forces behind the economics of the poultry industry?
- What do you think are the most difficult human labor or socioeconomic issues for slaughterhouse workers or farmers?
- Have you identified the most convincing argument for whole communities to ditch the chicken processing industry?
- On the level of community-scale economics, it seems that many people who work in slaughterhouses are either people who are undocumented, have been convicted of a crime, have little proficiency in the English language, and/or are part of another marginalized group that makes it difficult to obtain employment in other industries. Do you see vegan “meat” as a potential substitute to solve these issues?
- Do you have any advice for economic disruption of animal agriculture? In your work in writing the book *Grilled*, what did you find to be the most impactful solution for farmers, the animals, and other stakeholders?

Research of USDA data

For this step of my research process, I analyzed the spatial relationships between where farmed animals are currently raised in the United States and where ingredients typically found in plant-based alternatives are grown across the United States. Limitations of this step include the rapid diversification of source crops for plant-based meats. In previous years, the most popular ingredients in vegan alternatives were wheat, soy, corn, and pea protein. While many of these are still in production, newer brands of plant-based meats have ingredients derived from coconuts, bamboo, potatoes, mushrooms, and dozens of other crops.

Results: [FINAL PRODUCT, WRITTEN REPORT](#)

Next Steps

There were many facets of this project upon which my explorations only scraped the surface. There were dozens of study sessions where I would go down a very specific, narrowly-focused rabbit hole that would leave me with more questions than answers. This led to many frustrating nights where I felt that I had made little progress and only further complicated the scope of what I wanted to accomplish. I plan to create a study or project plan with my same mentor, Christie Lagally, and continue exploring more of questions during my Master's program at the Evans School of Public Policy and Governance. In this program, I think I will learn more about how subsidies and legislation function to keep the animal agriculture industry on top, and how I can use those tools to reverse that. During my presentation on senior project night, CEP alumna Genevieve Stokes gave me her card and told me she would like to connect so that I could eventually work in the agricultural sector of the legislature and hopefully influence the food

system to become more friendly to plant-based alternatives. It would be my dream to use all the hard work I have put into academia and into my professional life as a way to benefit the animals who are and will be stuck in factory farms.

What did I learn

First of all, I learned the importance of defining research questions and limiting my scope. Because this was a subject about which I was so passionate and knowledgeable, I was incredibly overwhelmed for most of the year trying to decide which issues were relevant and how deep of an explanation was appropriate. I delved into many wormholes that took a lot of time, then felt I had a conglomeration of knowledge that was difficult to organize. Scoping research projects is incredibly important, especially ones about which you care deeply, so that you don't spend endless nights-turned-into-mornings tearfully staring at your laptop that has nearly 40 tabs open. During senior project night while the reviewers were giving me feedback on my presentation, they said it seemed like I did about four research projects at once, and my response was that I felt that way too. I was incredibly overwhelmed for most of the year until I really sat down and figured out a "story" to tell that brought my research together, and meeting with (very patient) professors and advisors was absolutely crucial to this process.

Secondly, I learned that small farmers who raise animals are not the enemy, nor are the people who kill them in the slaughterhouses. With every video of animal slaughter I see, it is so easy to build up a hardened heart against those who are most visible as individual perpetrators of this violence. Whether it be those who farm animals, those who kill them, or those who eat them, my journey throughout veganism has always had a kernel of disdain and frustration for these

individuals. It was so easy, I thought, for me to see what they were doing was wrong, and that if only I could make them see what they were really doing, maybe I could “convert” them and we could save all animals from the fate of animal agriculture together.

This project taught me that the manifestation of this unjust industry is at a much more systemic level rather than an individual one, and that those who are functioning within the system are not perpetrators compared to those who uphold the infrastructure of the food system reliant on animal agriculture that would not operate under the deliberate and extreme financial interventions performed by our government. While I am still an animal activist who wants to operate on a person-to-person level and use my platform as a student with a bubbly personality to show that veganism is joy, I am more sympathetic to the plight of those who have no choice but to be a part of the industry. Chicken farmers are not malicious people who want to harm animals: many of them are compassionate to these birds and were manipulated to sign away their lives and enter into an industry that has been compared to modernized serfdom. They are exploited for their positions as a vulnerable rural American with very few opportunities for financial upward mobility, just as chickens are exploited for their misfortune of being born into a species that is the most factory farmed across every continent in the world. Families who earn low-incomes may not have time to think about who they are eating, and if they do feel sympathy for victims of animal agriculture, they might be financially restrained from what it takes to eat healthily and within their means.

As a white, middle-class college student who lives in one of the most vegan-friendly cities in the country, I do recognize that veganism is oftentimes a privilege and that extending my personal experiences into others’ lives may be seen as insensitive or downright ignorant. “White

veganism” is a term for this exact phenomena, and I wanted to use this project to be a part of the solution to this problem of willfully blind privilege that is so pervasive in many vegan circles and in the solutions proposed by those within the animal rights community.

Finally, although this project was incredibly daunting, I learned that I am not alone in my desire to fight for animal welfare with the solution of plant-based meat alternatives. A senior policy analyst with the Good Food Institute, Dr. Ken Forsberg, has shown interest in my final report. This project has helped me find my true calling and has motivated me to pursue it as a life ground project.