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Farm to Label: A Critique of Consumer Activism in the Sustainable Food Movement

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Introduction

It is easier than ever to be a foodie in California. Walking into the cold blast of air of a natural foods store such as Whole Foods 365 in Upland, CA, you are greeted with an abundance of shiny, colorful produce and "healthy" snacks as far as the eye can see. Many of the fruits and vegetables are marked proudly with "organic," "Whole Trade Guarantee," and "Fairtrade Certified" stickers. Locavores have no trouble finding locally grown produce, while those with global palates are offered an array of international food options, such as acai packets from Brazil and "superfood" powders from Peru. At the back of the Upland store is the Meat and Seafood section, with more assurances of guilt-free grocery shopping. Whole Foods 365 promises sustainable and humane meat production with banners outlining the "5-Step Animal Welfare Standards" and claiming, "We only sell sustainably caught or responsibly farmed seafood." Many of the plastic beef, pork, and poultry packages indicate that the animals are "free of antibiotics and hormones" and raised "humanely" on vegetarian feed.

In this way, food distributors such as Whole Foods are integral players in the "good food movement" that has gained momentum in the United States over the past few decades (Guthman 2004). With the wholesome labels adorning each of their products and impressive promises made by the graphically pleasing signs plastered all over the store, such food distributors encourage consumers to believe they are part of a greater cause: not only making healthful food choices, but making the world a better place by spending their money there instead of on the "pink slime" burgers and other industrial food products that large, multinational food corporations churn out. Grocery stores offering "alternative" products promote activism through consumption by providing an arena for consumers to "vote with their dollars." This phenomenon is referred to as "green consumerism." Green consumerism is based on the premise that environmental and social

issues, including those arising from the modern industrial food system, can be remedied through market-based solutions.

But when it comes to the food we buy, is this assumption valid? How environmentally sustainable are the individually packaged veggie burgers and macadamia nut milk imported from Australia filling natural food store shelves? Are the working conditions on a local or organic farm more humane than those on a large monoculture plantation? How "good" for the general population are the products of the "good food movement" if their prices are almost 30 percent more expensive than at a bargain grocery store like Walmart (Business Insider 2017)? These questions are important to consider as consumers seek to bring about change in a capitalistic food system that threatens to decimate our natural resources and perpetuates social inequality.

Within the sustainable food movement, the promotion of plant-based foods is one of the most prominent examples of how food choices and ethics are inextricably linked. In the wake of overwhelming evidence of inhumane and environmentally unsustainable factory farm meat production practices, the number of vegans and vegetarians in the United States has increased considerably, and so have the vegan and vegetarian options in restaurants and grocery stores. Major food conglomerates and small start-up companies alike have flooded the market with products catering to these valuable consumers. The terminology that permeates the food-sphere has evolved to reflect the growing attention to non-meat options: "plant-based," "meatless," "blended burgers," and "protein flip" are becoming as prevalent as the straightforward terms of "vegan" and "vegetarian" in describing foods.

It is indisputable that the current state of food production – dominated by factory farming, resource-intensive monocultures, and large agribusiness corporations that exploit laborers and threaten international food security, among other injustices – is unsustainable.

Growing public awareness has increased the urgency to address these issues, and "conscious consumption" for organic, local, natural, and plant-based food products has come to the forefront as the way average individuals can bring about change. The question remains, however, whether consumer-centered strategies can achieve the goals alternative food advocates are fighting for.

This thesis takes a critical look at the sustainable food movement's emphasis on neoliberal market-based strategies and green consumerism in achieving a "food revolution" that opposes the modern industrial food system. It will begin by outlining the development and guiding principles of the alternative food movement in the United States, using organic foods as an example of how market-based strategies can end up co-opting and undermining the goal of a more sustainable food system. It will then explore the concept of green consumerism and illuminate how these sustainability values are utilized in the market. Using plant-based foods as a case study, it will investigate the ways in which these capitalistic approaches fall short, and the potential implications of market-based solutions for the trajectory and success of the sustainable food movement. It will conclude with recommendations for multi-sector activism to address structural issues of the food system through institutional change and community regeneration instead of through market forces.

My aim in this paper is not to discourage the goals of an environmentally sustainable and socially responsible food system, nor do I intend to discredit the important work done by activists to bring about this change. Rather, I wish to caution well-intentioned consumers against relying on the capitalist market to revolutionize the modern food system.

Chapter One: The Momentum of the Sustainable Food Movement

I. The Tale of Organic

Food quality in the United States has come a long way from the atrocities Upton Sinclair portrayed in his novel, *The Jungle.* In that 1906 international bestseller, Sinclair exposed the inhumane working conditions, chemical manipulation and mislabeling of contaminated meat products, and rampant diseases among both the animals and laborers within the US meat industry. In response to the public outrage generated by the novel, Congress passed and President Roosevelt signed the Meat Inspection Act of 1906, which led to the formation of the federal Food and Drug Administration (FDA).

Although consumer confidence in the food supply initially increased due to these measures, today the conversation on the safety, quality, and integrity of the food we eat has been revived to a heightened degree. Thanks to the exposés performed by documentaries and books such as *Food, Inc.* and *Fast Food Nation*, and the investigative journalism of alternative food movement celebrities such as Michael Pollan, consumers are once again questioning the provenance and healthfulness of the food on their plates and demanding better options.

Like a pendulum swing, the sustainable food movement currently sweeping the nation emerged as a reaction to the rapid industrialization of food production beginning in the 20th century. Organic foods became the favored alternative to large-scale commodity crops and are now a pillar of the alternative diet. Today, organics is the fastest-growing supermarket category, increasing at a rate of 20 percent every year in the 1990s. According to the Organic Trade Association, retail sales of organic products increased thirteen-fold in two decades, from $3.6 billion in 1997 to $47 billion in 2016 (Cooper 2018, Alkon 2014).

This lucrative market could hardly be what the original counter-culturists had intended, however. The modern organic food movement in the United States has its roots in the 1960s "back-to-the-land" movement, in which thousands of people left the city to form more than 3,500 organic subsistence-style farms across the country. These communes were established as alternative production, distribution, and consumption models to counteract the social and ecological disruptions of the centralized industrial agriculture system (Gordon 2016). Over time, the revolutionary values of organic have been simplified and commoditized by the very system it was developed to challenge. Today, the term "organic" has come to primarily indicate the absence of chemicals in the production process.

Use of chemical inputs for growing crops became widespread with the 20th century introduction of the Haber-Bosch mechanism, which industrialized the transformation of atmospheric nitrogen into ammonia to fertilize soil. Lauded as a miraculous technological success, the development of chemical concoctions was meant to remedy the soil degradation resulting from previous agricultural innovations. The process of agricultural industrialization and consolidation began early in the 19th century, with inventions such as John Deere's steel plow and Cyrus McCormick's reaper that bolstered labor efficiency but depleted nutrients in the soil. Synthetic inputs such as chemical pesticides and fertilizers appeared to overcome this obstacle to unlimited production. At the end of World War II, factories used for weapon production shifted to manufacturing chemical pesticides, herbicides, fertilizers, and tractors at unprecedented rates. From the 1970s to 2011, fertilizer use increased by nearly three times (Nesheim et al. 2015). Today, these inputs are omnipresent in the American food supply: the FDA found the residue of over 200 different pesticides in food it sampled in 2016 (FDA 2016).

While these chemicals appeared to solve the problem of nature's requirements of time and a balanced ecosystem to produce life, their over-use brought environmental degradation in its wake. Chemical pesticides, herbicides, and fertilizers squeezed crops out of the earth like never before, and decimated any other life forms that threatened their success. Synthetic agricultural inputs have been shown to destroy soil biomass, increase soil acidity, and pollute surrounding waterways (Raupp 1997). The United States Environmental Protection Agency (EPA) attributes 70 percent of the pollution of the country's rivers and streams to industrial agriculture products, livestock animal waste, and silt runoff (Horrigan et al. 2002). Excessive use of pesticides specifically has disrupted predator-prey balances between birds and insects, created pesticide-resistant insects that threaten food security, and poisoned many species ranging from honeybees to whales (Horrigan et al. 2002).

Chemical inputs also threaten human safety, for many of them are known carcinogens, neurotoxins, and endocrine disruptors. The EPA currently approves 400 pesticides, but dozens more were formerly approved and then banned due to health threats (Gordon 2016). Many of these toxins, including DDT (the dangers of which were highlighted in Rachel Carson's groundbreaking *Silent Spring*), remain in the soil and continue to show up in food. The compaction and degradation of soil structures has resulted in the continuing loss of fertile land around the world; a 1990 study estimated that since World War II, industrial agriculture has damaged 550 million hectares of land, which is equivalent to 38 percent of farmland in use today (Horrigan et al. 2002).

The organic food movement emerged to challenge this unsustainable system of farming, a "counterculture" to the matrix of Big Agriculture. The concept of "permanent agriculture," or permaculture, was first recognized in the United States in the 1930s in response to the depressed

agricultural prices and ecological disaster of the Dust Bowl during the Great Depression. Permanent agriculture is founded upon the principles of agroecology, the understanding of the farm as part of an ecological system and the concern with environmental impacts of farming practices (Guthman 2004). This regenerative system of production eschews synthetic chemicals and limits external inputs of any kind while "return[ing] as much to the soil as it removes" (Pollan 2001) using soil conservation measures such as crop rotation and terracing.

Ecologically regenerative food production was not invented by US farmers in the 20th century – the philosophies of organic farming have been practiced for millennia and continue to be the "conventional" means of producing food for many global communities. What is considered conventional farming in the United States today results from the naturalization of a technological revolution. Nonetheless, the discovery of chemical additives led the principles of permanent agriculture and agroecology to provide the theoretical foundation for the contemporary organic farming movement.

In the 1960s, organic farming gained momentum with the "back-to-the-land" movement that sought to establish "alternative institutions as a way of modeling social change" (Gordon 2016, 57). The subsistence-style farming communities established by thousands of people reflected the original principle of organic agriculture as "a system of small-scale local suppliers whose direct marketing, minimal processing, and alternative forms of ownership explicitly challenged the food system" (Guthman 2004, 30). Therefore, the movement originally not only intended to create a less ecologically disruptive mode of production through permanent agriculture, but also included the popularization of alternative forms of distribution such as farmer cooperatives and health food stores. The ideology of organic farming as a community-

based, justice-oriented means of food production was therefore as pertinent as its focus on ecological sustainability.

In the first decades of the 21st century, however, “organic is becoming what we hoped it would be an alternative to” (Pollan 2001). As consumer interest in organic foods grew, organic agriculture began to “[attract] the attention of the very agribusiness corporations to which the organic movement once presented a radical alternative and an often scalding critique” (Pollan 2001). Mega-companies such as Gerber’s, Heinz, Dole, ConAgra, and ADM began creating or acquiring organic brands in 1990. From 1995 to 2005, large food companies bought out independent organic processing companies until only 15 of 81 remained (Food Revolution Network 2016). In 1999, Cascadian Farm, an older organic brand with the slogan "Better Food for a Better Planet," became a subsidiary of General Mills, the third biggest food conglomerate in North America. Horizon, a $127 million public corporation, controls 70 percent of the organic milk retail market. Today, five farms control one half of the $400 million organic produce market in California. Small farms that were integral to the creation of the movement now struggle to compete with these monoliths and are often either acquired or disappear.

While this consolidation reduced prices of organic foods in some cases, Dr. Philip Howard, a professor at Michigan State University who created the “Who Owns Organic?” infographic, which shows an intricate web of organic food processors acquired by major corporate agribusinesses, warns that “there is continual pressure to weaken the national organic standards to increase profits” (Washington Post 2013). Big Food certainly has the political power to influence the functioning of the food system. For example, transnational corporations that own organic food brands, such as Coca-Cola, Pepsi-Co, and General Mills, contributed millions of dollars in 2012 to oppose California’s Proposition 37, which would require labeling of

genetically engineered foods statewide (Forbes 2013). Gene Kahn, the founder of Cascadian Farm, served on the USDA's National Organic Standards Board for five years, playing a key role in determining the standards for many processed organic foods. Members of the USDA often consist of a "revolving door" between the government and representatives of corporate entities, a professional cycle in which industry officials are given government positions while former federal employees become lobbyists, consultants, and strategists for agricultural and dietary interests they previously oversaw (Nestle 2014).

The first organic certification program in the United States, California Certified Organic Farmers (CCOF), was started in Santa Cruz in 1973 by a group of around fifty "self-proclaimed hippie farmers" (Guthman 2003, 47). Yet it was not until 1990 that Congress passed the Organic Food Production Act, which constituted the beginning of federal recognition of organic agriculture. This legislation required the US Department of Agriculture to establish uniform national definitions for organic food and farming that focused solely on components of the food production process, standardizing a previously philosophically nuanced and culturally loaded term.

With such powerful influence over consumers imbued in this term, large food manufacturing and agribusiness companies fought to define "organic" broadly in their favor. The USDA obliged, instituting standards almost a decade later in 1997 that allowed for the use of genetic modification, irradiation, and sewage sludge in organic food production. After receiving enraged public backlash, the USDA reevaluated the definition. However, the new standards did not effectively serve the original ideals of the organic food movement. Arguing that "you couldn't have organic processed foods without synthetics" (Pollan 2001), food manufacturers succeeded in passing national standards of organic that included a list of permissible synthetic

additives ranging from ascorbic acid to xanthan gum. Even organic agricultural inputs themselves are contentious; for example, Chilean nitrate, a fertilizer allowed within organic standards, is known to destroy soil micro-organisms and to contribute to groundwater pollution (Conway & Pretty 1991). Notably, the CCOF, which originated as an annual gathering of ecological farmers, is now a major industry conference.

II. Industrial Organic

Walking into your local health food store today, you are faced with an overwhelming selection of quick, easy, ready-to-go organic meals. In his *New York Times Magazine* article, "Behind the Organic-Industrial Complex," Michael Pollan (2001) investigated the production of one of these "organic TV dinners." Following the life cycle of a Cascadian Farm Country Herb frozen meal, he found a list of three dozen ingredients spanning the gamut of modern food technology innovations. The chunk of organic chicken breast is accompanied by "natural chicken flavor, high-oleic safflower oil, guar and xanthan gum, soy lecithin, carrageenan and natural grill flavor" made from tapioca maltodextrin, all highly processed additives that are legally considered organic.

The ingredients of each meal travel across a half-dozen states and two countries, where they are frozen, defrosted, injected with marinade by hypodermic needles, cooked, refrozen, and packaged. Greenways Organic is a 2000-acre organic produce operation in California that supplies vegetables for Cascadian Farm's frozen dinners. Like all the biggest organic operations, Greenways Organic is owned and operated by an even larger conventional "mega-farm." Organic fields using compost to fertilize the crops are located next to a field where toxic fumigants are applied to sterilize the soil. Beyond this detail, the crops, machines, crews, rotations, and fields are virtually indistinguishable.

The reality of large-scale organic agriculture is far from the romanticized "hedgerows and compost piles and battered pickup trucks" portrayed on product packaging. Instead, Pollan found "migrant laborers, combines, thousands of acres of broccoli reaching clear to the horizon" when he investigated organic operations at their source. As demand grows, food corporations prioritize efficiency, which often means buying from one 1,000-acre farm instead of ten 100-acre farms or even importing organic produce from across the globe. To meet demand, crops are cultivated out of season in environments not naturally conducive to growing them. Instead of diversifying crops to maintain soil health and stability, contract farming has encouraged monocultures that deplete soil nutrients and are more prone to pests and disease. With hundreds to thousands of acres of farmland, farmers are pushed to plant certain crop strains that ripen all at once and will hold up during processing. In this way, organic agriculture can be just as devastating to crop biodiversity as industrial agriculture is. The Food and Agriculture Organization of the United Nations (FAO) estimates that industrial agriculture has resulted in the loss of at least three-fourths of the global biological diversity of foods (Cockrail-King, 2012); only 30 species of foods currently provide 95 percent of the human food energy consumed globally (Atalan-Hilecke 2012).

Let us take a moment to acknowledge the irony of organic farming's journey. The techniques of agriculture and community-based distribution practiced by the first agrarian communities and traditional cultures around the world later became promoted as solutions to the environmental damage wrecked by industrial inventions of the "green revolution" such as machinery and chemical inputs. In response to increasing consumer demand for food produced in ecologically sound and community-building ways, these values were standardized, manipulated, and capitalized off of to create the mega-business that is now termed "industrial organic," which is accused of spawning some of the same problems caused by conventional agriculture.

This is one of many examples of the “revalorization of local, often indigenous tastes and traditions” in alternative markets (Jaffe & Barendregt 2014, 5). At the same time, organic foods are heralded as a symbol of the modern diet, a successful development in food supply that warrants higher prices. Organic foods therefore have become “not a revolution so much as a market niche” (Pollan 2001) – a market in which its very pioneers no longer have a place.

Chapter Two: The Origins and Operations of Green Consumerism

I. The Demand for Green

"Early conservationists were obsessed with questions of economically efficient production, while later environmentalists have been equally obsessed with questions of ecologically responsible consumption."

- William Cronon 1993, 9

The rise of organic foods is symptomatic of a larger trend of "ethical" or "conscious" consumption, also termed "green consumerism" or "green capitalism," arising nationally over the past few generations. Green consumerism fundamentally refers to "a purchasing choice which expresses a preference for less environmentally harmful goods and services" (Adams 1990, 11). This may include using paper towels made from recycled material, drinking Fairtrade coffee, or buying in bulk to reduce excess packaging. Instead of prohibitive policies, such as taxes on plastic bag use, green capitalism reinforces the consumer's individual freedom to purchase what they desire. By monetarily supporting the goods that align with their values and avoiding those that do not, consumers use purchasing power to secure the product of their choice and encourage producers to provide more of the same. This "leave[s] intact the assumed links between consumerism and growth, wealth, and status" (Guckian et al. 2017, 75), with a twist: growth is assumed to be towards environmental sustainability, and status is reinforced through consciousness of environmental issues and the ability to act upon it.

The success of green consumerism is apparent in the rapid rise of green markets in everything from natural cosmetics to electric cars. Jaffe and Barendregt (2014, 12) note that "the consumer marketplace today offers us every kind of ethical, ecological, and healthy option we can imagine." The number of new products claiming to be "sustainable," "environmentally friendly," or "eco-friendly" launched in 2008 doubled the number launched the year before (Green Biz 2009). Major companies such as Deloitte and Walmart have taken notice of the ways

"green is emerging as an important brand differentiator" (Bearse et al. 2009, 9). A 2017 global consumer study conducted by Unilever claims that the market for sustainable goods currently stands at $2.65 trillion, with over $1 trillion in opportunities for brands who successfully capitalize off consumers' environmental concerns (Sustainable Brands 2017).

Beyond a simply pragmatic attention towards the sustainability of natural resources, green consumerism represents "a combination of lifestyle politics, environmentalism, spirituality, beauty, and health, combined with a call to return to simple living" (Jaffe & Barendregt 2014, 1). As Iyer and Banerjee (1993) proclaim, "green is in, no question about it."

II. A History of Consumer Activism

Through the seemingly unlimited availability of green products emerges a new choice of modern lifestyle, in which the average citizen can express environmental concerns and moral literacy at their local grocery store, or even online from the comfort of their couch. This form of activism represents a stark departure from earlier means of consumer activism.

One of the earliest forms of consumer activism, the boycott, is blatantly *anti*-consumerist. Although boycotts can be traced earlier in history, the first recorded use of the term "boycott" occurred in Ireland in 1878, when peasant workers formed a union and refused to harvest the oats of Captain Boycott until they received better wages and working conditions (Micheletti 2003). Today, there are blog posts listing "43 Eco-Friendly Products Will Help You Save The Planet" (Lamothe 2018). How did consumption, which is "inherently antithetical to issues of the environment and sustainability" (Prothero et al. 2010, 147) become a prominent mode of environmental activism (Alkon 2014)?

Gabriel and Lang (2005) separate the history of consumer activism into four phases, beginning with cooperative activism that originated in nineteenth century England and predated

mass-consumerism. Those involved in cooperatives considered themselves both producers and consumers, and therefore shared responsibility in all stages of the market. Founded on "the politics of necessitous consumption" (Hilton 2003, 29), cooperatives were designed as an alternative to capitalist logic of profit maximization and corporate monopolies on food. Other consumer movements in the United Kingdom in the early twentieth century were closely tied to the Labour movement and advocated for affordable goods while trying to increase public awareness of the political implications of certain commodity items.

Activism that focused more centrally and exclusively around a consumer identity developed during the post-war era. The rise of mass consumerism and the growth of the middle class in the twentieth century granted consumers the ability to focus on the value and prices of luxury items (e.g., electric appliances) instead of simply the acquisition of necessary commodities (e.g., food and coal). This period also saw an increasing separation between consumers and producers. Around this time, the magazine *Consumer Report* started as a way for consumer organizations to provide information about the quality of different goods and enhance consumer choices. Ralph Nader's 1965 book, *Unsafe at Any Speed*, brought about the third phase of consumer activism, which portrayed unregulated corporate capitalism as a threat to consumers' health and safety. This anti-corporation activism was predominantly bottom-up, mobilizing grassroots organizations and legal campaigns "to prevent capitalist systems from being dominated by unscrupulous corporate actors prioritizing profit over public safety" (Johnston 2007, 238). While individual consumers were the main agents in this approach to social change, they were encouraged to act as a collective entity to organize and lobby the government to protect public safety.

The fourth phase of consumer activism that Gabriel and Lang (2005) delineate is where "alternative consumers," "green consumerism," and "ethical consumption" emerge in the 1980s. In contrast to past movements that focused on making the market safer for individual consumers, ethical consumption originated out of the concern that collective consumption patterns of the time were unsustainable. Post-industrial environmentalism in the 1970s and wariness about the social and economic impacts of globalization fueled this movement, along with the ironic "unease with abundance" that began to settle over the more affluent consumers (Hilton 2003: 298, Soper 2006).

This phenomenon was not limited to the United States. A journal article in 1990 discussed the rise of green consumerism in the United Kingdom (Adams 1990). Multinational policy actions throughout the 1990s, such as the 1992 UN convention on climate change and 1997 Kyoto Protocol, brought sustainability to the global forefront. More recently, Prothero et al. (2010) credit two key elements that further facilitated the rise of the green commodity discourse in the United States: the global economic recession of 2008, which fostered distrust among consumers in existing economic and financial structures, and popular media, through global coverage of natural disasters and emotionally compelling and informative works such as Al Gore's *An Inconvenient Truth*.

Although it originated in environmental rhetoric, ethical consumption evolved to include "the panoply of late capitalist concerns ranging from human rights, unfair global trade, sustainability, corporate power, and other concerns of the global social justice ('anti-globalization') movement" (Johnston 2007, 238). As awareness of these interconnected issues grew, radical movements seeking to challenge consumer society itself gave way to a "more popular ameliorative message encouraging consumers to consume carefully or differently"

(Johnston 2007, 238) through buying hybrid cars or energy-efficient appliances. Ethical consumption became promoted as one of the "easy" and "simple" ways the public could "save the planet" (The Guardian 2002). Instead of legislative decrees, citizens are instructed the best ways to act through celebrities with eco-friendly clothing lines (Loewe 2016), company ad campaigns, and even a "sustainable" cruise (Webber 2018). By highlighting individual purchasing decisions, this most recent phase of activism inverts the empowering phrase of 1970s feminist activism – "the personal is the political" (Adams 2015, 7) – by reducing the political to the personal.

III. Citizen-Consumer Ideology

"While activists busy themselves with food drives, heirloom tomato sales, and garden plots, the state surreptitiously diminishes its responsibility for basic needs like food and shelter."

- Josée Johnston 2007, 97

The logic of the neoliberal citizen-consumer, interchangeable with consumer-citizen, follows that individuals' consumption patterns can lead to optimal social and environmental outcomes. Therefore, individuals practice responsible citizenship through certain purchasing decisions. Neoliberalism is a political economic philosophy popularized in the 1980s "that asserts that human well-being can best be achieved if the so-called free market is allowed to function with little to no intervention from the state" (Alkon 2014, 28). With the retraction of formal political citizenship, neoliberalism proposes a "normative notion of citizenship as entrepreneurialism and self-reliance within a marketplace meritocracy, regardless of identity and background" (Singer 2016, 349). The neoliberal philosophy defers the responsibility of addressing glaring environmental and social issues to the consumer-citizen "whose contribution to society is mainly to purchase the products of global capitalism'' (Guthman & DuPuis 2006, 443).

The rise of mass consumption resulting from mass production achieved by technological advancements appears to "democratize" commodity choice, extending spending power beyond the wealthy elite and fostering "a lifestyle politics of consumption" (Johnston 2007, 246). Instead of joining social movement organizations, lobbying the government, or being involved in community projects, consumers are instructed by media and advertising to express their values through buying green products promising social justice and environmental sustainability in the hopes of enacting change in the larger system. Underlying this rhetoric is the neoliberal oversimplification of decisions using "reward/sacrifice tropes" (Singer 2016, 349) – through decisions made convenient by the wonders of the capitalist economy, "we can change the world without sacrifice or any more effort than smarter shopping" (Jaffe & Barendregt 2014, 1).

(Sweet Earth, a plant-based foods manufacturer that was acquired by Nestlé in 2017, relies on the consumer-citizen ideology to market their Traditional Seitan "clean protein." Sweet Earth equates buying their product with "creating a more sustainable planet." Highlighting the word "now" further emphasizes the direct connection between the product purchase and activism. Source: Olivia Whitener)

One of the tenets of consumerism is the protection of individual choice among abundant options. This sense of freedom in the marketplace is central to the identity construction of the modern self through seemingly autonomous choices based on awareness about the injustices of the food system. The ideology of consumerism encourages individuals to "reinvent themselves continually through the process of consumption" (Prothero et al. 2010, 30). The voluntary aspect

of green consumerism therefore reflects the self-image of the conscious consumer as an ethically driven, collective-minded member of the community regardless of the actual effect of the purchase.

Values such as environmental sustainability are commoditized into easily consumable (to those who can afford them) products, "offering an attractive way to combine taste and style with care for personal wellness and the environment" (Jaffe & Barendregt 2014, 1). This identity construction facilitates the moral hierarchy of those seeking alternative means of consumption in opposition to those who appear "uneducated" about environmental pressures or are assumed to simply not care.

Johnston (2007, 232) summarizes the position of "citizen-consumer" thus:

> This hybrid concept of a 'citizen-consumer' is found in both activist and academic writing, and implies a social practice that can satisfy competing ideologies of consumerism (an ideal rooted in individual self-interest) and citizenship (an ideal rooted in collective responsibility to a social and ecological commons)… Consumerism focuses on individual choice and shopping pleasure, while citizenship generally emphasizes the importance of civil society to channel citizens' rights and responsibilities for the greater public good, or commons

IV. Green Consumerism in the Sustainable Food Movement

"When you vote daily in the supermarket, you get precisely what you voted for, and so does everyone else. The ballot box produces conformity without unanimity; the marketplace, unanimity without conformity."

- Milton & Rose Friedman 1990, 66

At the core of ethical consumption advocacy and the citizen-consumer ideology is the market for alternative, sustainably produced, and fairly traded foods. The good food "revolution" theoretically implies altering the current food system to primarily supply "foods defined variously as healthy, low-carbon, fairly traded, local, organic, free-range, cruelty-free, natural and/or slow" (Goodman et al. 2010, 1782). "Ethical eating" as a lifestyle, coined by Bell and Valentine (1997), emerged as a counter-trend to the industrial food system and includes practices

such as vegetarianism, direct farmer-to-consumer distribution (e.g., farmers' markets and CSAs), and the Slow Food movement.

Food is an inherently political commodity with respect to its production, distribution, and consumption. What we eat is at once local and global, familial and institutional. In the United States, there simultaneously exists egregious food waste and 40 million people struggling with hunger. Agriculture, which accounts for 40 percent of land area used in the US (Nesheim et al. 2015), attracts the deserved attention of environmental activists as one of the largest industries responsible for environmental degradation and greenhouse gas emissions, as well as for its social impact on laborers, farmers, and local communities. Expansion of international food trade, particularly food items integrated into the standard American diet through the transnational commodity chain, such as sugar, bananas, coffee, and chocolate, has raised concerns of global injustice and labor abuse, as well as threats to food sovereignty. Food is politicized, racialized, sexualized, and gendered, and, above all, it is necessary for life.

"Good" and "alternative" foods have therefore found success representing opposition to the "social, ecological, and economic excesses of conventional food systems" (Goodman et al. 2010, 1783). The United States is the largest market of food and beverage products with ethical labels relating to people, the environment, and animal welfare, estimated at $262.5 billion in 2017 and continuing to increase in 2018 (Cooper 2018). The constant growth of the market for organic and Fair Trade USA-certified food products is indicative of the financial jackpot of sustainability. The food products that originated as "systemic alternative[s] to industrialized food" (Guthman 2003, 52) were once seen as specialty niche items with premium prices. Now, these foods are increasingly available to the masses – through the system that they were initially designed to challenge. The early counter-culturists may be appalled at the fact that by 2008,

nearly half of organic products purchased came from the very chain supermarkets like Walmart and Safeway which were originally considered contrary to organic philosophies. “Alternative” food has become mainstream, driven by consumer desires for options that promise personal and ecological health.

While the “vote with your forks” rhetoric employed in the contemporary “food revolution” has opened avenues for alternative food start-up businesses and local economies such as farmers’ markets and CSAs, the emphasis on consumer choice as democratic participation defers responsibility for environmental risks away from other powerful institutions. The agricultural and food sectors have seen extensive neoliberalization through the privatization of land and water rights, free trade agreements that dismantle national food safety regulations, and the dissolving of programs that combat hunger (Guthman 2008). In the not-for-profit sector, sustainable agriculture and food justice organizations are “doing the work that was once considered the province of the state” (Alkon 2014, 30), such as feeding the hungry and protecting the environment. Food justice advocates push green economic development through urban farms and health food stores in low-income “food desert” areas that originated from decades of institutionally racialized development patterns. Individuals, instead of food producers and institutional actors, are expected to uphold moral regulation of the marketplace through conscious consumption.

Following this ideology, supermarkets, which the average American in 2018 visits almost twice a week, become political arenas. Modern supermarkets, with their abundant options and self-service shopping, are an inevitable by-product of the industrial food system. The mechanization of food production for maximum output fostered the concentration of a farm’s resources into growing a select few crops, namely cash crops such as corn and soybeans. With a

surplus of these crops, food producers developed ways to repurpose them into as many products as possible through intensive processing that created ingredients such as high fructose corn syrup. The shelves, aisles, and shopping carts of supermarkets were designed to stack and store this influx of packaged goods.

The shopping process was also simplified to encourage consumption of these products. During the post-World War II era, grocery shopping involved giving a shopkeeper a list of items that the customer had decided on beforehand. Today, the supermarket operates on an open, buffet-style model with no barriers to excess consumption. Much research has been conducted on the psychology of supermarkets that encourages consumers to buy more, such as placing the most sought-after products in the back of the store to force customers to walk past shelves of other products that they may be tempted to buy.

Nowhere is the neoliberal consumer-citizenship ideology of the sustainable food movement more apparent than in the natural foods stores that have popped up across the nation. Natural foods stores appear to provide an alternative to the chain supermarket in which consumers can express environmental and social values through grocery shopping. In "The Politics of Good Taste: Whole Foods Markets and Sensory Design," Adam Mack (2012) illustrates how the health food supermarket chain Whole Foods "constituted a new development in the sensory history of food retailing because it fused gustatory pleasure with a politics of conventionally liberal causes including sustainable farming, environmental stewardship, and the humane treatment of farm animals" (Mack 2012, 87).

(The produce stand of Whole Foods 365 in Upland, California. Source: Olivia Whitener)

Whole Foods Market is considered the world's leading natural and organic foods supermarket, with almost 500 stores in North America and the United Kingdom. Founded in 1980 by CEO John Mackey, Whole Foods attended to a consumer base very different from housewives in the 1950s: health-conscious, eco-friendly young professionals with committed values and the capital to finance them. With the motto, "Whole Foods, Whole People, Whole Planet," the Austin flagship store represented the fusion of sensual pleasure and political values. Grocery shopping is an inherently sensory experience; the colors, smells, and textures of fresh produce determine their appeal to consumers. In grocery stores, the products themselves are the display, resulting in cartons stacked high with colorful produce, refrigeration techniques that keep vegetables looking crisp and fresh, and on-site bakeries wafting teasing smells to customers. Early Whole Foods stores employed artful lighting and classical music to evoke a mood of luxury, turning the grocery store into an edible gallery. Like perfume retailers, store personnel were strategically stationed to offer samples of their products to entice shoppers to buy them. The expansion from food-based pleasures into the "Whole Body" personal product line

furthered promoted Whole Foods's healthy, sustainable business model – complete with offering 25-minute deep tissue massages in the Austin store.

The attention to sensory detail aimed to induce a sense of separation from the industrial food system (which in reality produces a large proportion of food products at Whole Foods and other natural food stores) and instead "evoke a local atmosphere in which shoppers engaged store personnel about close-to-the-source, environmentally friendly food that commanded a higher price, but only because it tasted so good" (Mack 2015, 90). Not only did consumers feel as though they were contributing to a worthy cause of environmental conservation through purchasing products sold at Whole Foods, it was also pleasurable for them to do so.

Instead of the anonymous conveyor belt-style efficiency of previous supermarket chains, Whole Foods incorporated a consumer community into its operations through additions such as coffee bars and restaurants. The Austin flagship store was the first to feature sit-down eateries, including a raw bar, barbeque station, trattoria, and wine and cheese venue. Open kitchens were employed so customers could see the preparation of their food and converse with employees. Restaurants were located at the front of the store, often with their own doors, to intentionally create social spaces for busy professionals on their lunch breaks. Cooking classes were offered at several locations to "bring like-minded shoppers together to create the impression that Whole Foods shoppers constituted a community in their own right" (Mack 2015, 91). Whole Foods was so successful at encouraging socializing and the customer base of Whole Foods became so well-defined that the grocery stores evolved their own social scene. One *New York Sun* article described the Bowery Street Whole Foods as a "meet market" (Karni 2007), in which "New Yorkers shopping at Whole Foods Bowery are turning grocery shopping into a thriving pick-up scene." In this way, food choices allow shoppers to engage in the "continual creation,

negotiation, and re-creation of identity" (DeLind 2011, 279) and strengthen their membership within certain communities.

By 2017, Whole Foods had become a natural foods goliath with global net sales of $16 billion, and it continues to cater to its young, affluent, athletic, and tech-savvy customer base with these tried and true strategies. That was evident when its Upland Whole Foods 365 location opened in the summer of 2018: customers are greeted with upbeat alternative music, mountain imagery, bright colored-signs stating Core Values of environmental care and customer satisfaction, and 30-second videos of simple recipes broadcasted for customers while they wait in the cashier line.

(Reusable tote bags have become a symbol of consumers' environmental consciousness and are offered at many natural food stores, such as the Upland Whole Foods 365 store. Source: Olivia Whitener)

With Amazon's $13.7 billion acquisition of Whole Foods in 2017, stores have begun to offer discounts for Amazon Prime members and sell Amazon's technological products among the edible goods. Whole Foods's merger with Amazon provides valuable data for the online retail monolith on the desires of this indispensable population of consumers and provides an

entrance for the company into the sustainable food market. Whole Foods is a prominent example of how food outlets and natural food stores in particular have great influence in not just what is offered consumers but also "popular norms about how food should be produced, packaged, and distributed" (Freidberg 2004, 518).

V. Green Marketing

An integral aspect of green consumerism is green marketing. Like green consumerism, green marketing refers to selling products or services based on their environmental benefits (Ward 2018). Ethical consumption is dependent on a philosophy of "*conscious* reflexivity, such that people monitor, reflect upon and adapt their personal conduct in light of its perceived consequences" (Guthman 2003, 46). This reflexivity is built upon knowledge, education, and awareness of the issues within the food system. A large part of the alternative food movement is necessarily focused on information dissemination and educational campaigns with the aim of "demystify[ing] commodities" (Isenhour 2012, 8) and motivating consumers to alter their behaviors in favor of more sustainable foods. However, food manufacturing companies also have significant power in the way they package and market their products. Market research in the 1980s revealed that "heightened environmental awareness, a growing consumer interest in green products, and a pronounced willingness to pay for green features" (Peattie & Crane 2005, 358) compelled corporations to re-evaluate the way they marketed their products. Between 1989 and 1990, the volume of green print ads and green TV ads grew by 430 percent and 367 percent, respectively (Ottman 1993).

Food is an inherently limited good in that a human body can only eat so much. However, by capitalistic logic, it is in the best interest of the company for the public to consume as much as possible. Beyond addictive additives that entice consumers to keep eating, imbuing food

products with environmental stewardship and identity construction exceeds the limitations of food as sustenance. Images in the media and marketing campaigns "play an integral part in the process of turning a set of practices, like foodways, into an identity category" (Flail 2006, 13).

Flail (2006, 20) asserts that "the key to the success of effective marketing… is identification, or the way that audiences imagine themselves in a given scenario or the way in which audiences imagine an advertised product as a natural part of their own lives." Effective marketing strategies that convey "green-ness" and sustainability therefore integrate commodity products into consumers' conceptions of themselves as environmental activists.

For example, the organic chickpea puff company HIPPEAS, which markets its product as being "good for the planet" due to chickpea plants' release of nitrogen into the soil, states on its website: "This is a call to the modern hippies. Who want goodness for mind, body and soil and rally behind those that want the same. Let's stand together: arms in the air, flowers in our hair and crumbs in our beards" (2018). HIPPEAS snacks makes an explicit appeal to a group of consumers self-identified as "modern hippies" who wish to express support for the values of the counterculture of the 1960s without abandoning a contemporary lifestyle. HIPPEAS's rhetoric implies that buying their product affirms membership in a community with similar values. In this way, marketing rhetoric promoting a certain lifestyle "may be seen as a unit of ideological work" (Flail 2006, 25) that encourages participation in consumption while reaffirming or challenging dietary paradigms. Green advertising reveals that the value of a product is not in its material use, but in the "association with social and personal meanings" (Flail 2006, 21); consumerism is therefore justified by sustainability becoming an added value to a product.

Yet the promise of profit from eco-friendly products opens the potential for "greenwashing," the use of misleading or unsubstantiated claims of environmental sustainability

to sell a product or service. Although the US Federal Trade Commission issued the first "Green Guide" in 1992 to address these concerns, those concerns remain. Labels such as "green," "clean," and "eco-friendly" are widely employed with little verification of their meaning. According to data collected by the Nielsen Company (2017), 93 percent of US households purchased a "clean label product" at grocery stores in 2017, which broadly includes claims about lack of artificial ingredients, simplicity of ingredients, and environmental sustainability. Sixty-six percent of global respondents are willing to pay more for products and services from companies that show commitment to positive environmental and social impact. A survey conducted by the Consumer Reports National Research Center in 2015 found that over 60 percent of consumers had purchased food labeled "natural," and 87 percent of these consumers were willing to pay more for these products. The food industry sells almost $41 billion worth of food labeled "natural" each year, but the term itself has no regulated definition (Washington Post 2014).

Notions of "natural" and "simple" goods are also conveyed visually through minimalist packaging and biological imagery. Like the "counter-cuisine" of brown rice and brown bread that emerged in opposition to ultra-processed products like white bread (Pollan 2001), brown paper is often used to package alternative food items, most likely to create an illusion of being harvested straight from the ground as opposed to the days of colorful, crinkly polypropylene. Packaging reveals how the "health halo" effect of marketing products as free from artificial and synthetic additives often overlaps with greenwashing a product as environmentally friendly.

(Dairy-free yogurt company Forager is an example of green marketing in their claim that their product is "better for people and the planet." Source: Olivia Whitener)

However, critical inspection of the techniques of green marketing reveal that products are not always as sustainable as they are promoted to be. One prevalent example of green marketing of food and other products is the use of recycled or biodegradable materials. The promotion of the "sustainability" of these components distracts from the large amounts of material being used or wasted during the entire course of production. In addition, biodegradable and compostable materials require specific conditions to break down, usually only attainable in a high-temperature industrial facility, not left in a landfill or thrown in a backyard compost bin. Fifty million tons of organic waste end up in United States landfills every year, often compacted and left unexposed to the microorganisms necessary for decomposition. Deprived of oxygen, bioplastics and other organic matter may release methane, a greenhouse gas twenty-three times more harmful than carbon dioxide.

Furthermore, the crops necessary for production of bioplastics and other "eco-friendly" packaging, such as corn, cassava, or sugarcane, require large amounts of fertilizers, pesticides,

and water. The demand for land to grow these crops has led to deforestation in tropical regions and countries like Brazil (Szaky 2016). This organic material then requires extensive chemical processing to become "eco-friendly" packaging. Ultimately, a life cycle analysis conducted by the University of Pittsburgh (2010) found that while bioplastics produce less greenhouse gas emissions than traditional plastics, the combination of agricultural inputs and chemical processing resulted in greater amounts of total pollution than traditional plastics. Therefore, the promotion of a product's use of biodegradable or compostable components obfuscates the long-term impact of creating the product in the first place.

While not all products and services promote unsubstantiated claims, highlighting certain desirable aspects of a product often obscures the parts that are not so appealing to the eco-conscious. Attributes that are advertised are often those that are easiest to quantify or manage, such as miles travelled to portray locality, number of ingredients to promote health, or farmers' names to illustrate intimacy. These qualities may be inconsistent or even contradictory with a company's other practices, or may distract from other impacts that are more difficult to measure.

Theorized by ecofeminist scholar Plumwood (1993), this process of "foregrounding" environmental and social values on a product "backgrounds" the complex implications of its production and distribution. A shopper concerned about animal welfare may buy a carton of milk with a picture of a happy cow on it, knowing nothing about the real conditions of life for the animals producing the milk. Someone may buy a granola bar made "naturally" only with "simple ingredients" but be unaware of the extensive processing the "simple ingredients" "straight from nature" undergo to reach the shelves, not to mention the natural resources used and wasted over the course of packaging, transportation, and distribution. The "responsibly sourced" coffee promising "fair" trade and working conditions glosses over details of the hegemonic position of

US and UK companies to determine suitable standards (Freidberg 2003) and the impacts of large-scale agriculture and food processing on local communities around the world. Therefore, the promotion of the consumer-citizenship ideology may contribute to the very problems the sustainable food movement seeks to address, while diverting attention and resources from more significant modes of activism.

Chapter Three: To Meat or Not to Meat – The Shortcomings of Green Consumerism

I. Plant-based Foods Movement

While scholars have extensively documented and critiqued the rise of organic and local food markets, that same focus has not yet been turned to what appears to be the current leading trend in the sustainable food movement: "plant-based foods," a more palatable neologism for the sometimes-polarizing activism of vegetarianism and veganism. "Plant-based foods" now constitute their own section of the sustainable food movement for their promotion of non-meat consumption to address environmentally destructive factory farming.

According to research conducted by the Nielsen data analytics company for the Plant Based Foods Association and the Good Food Institute, sales of plant-based foods in the United States increased by 8.1 percent from 2016 to $3.1 billion in 2017 (Simon 2017). The global plant-based meat market is expected to continue to grow at a compound annual growth rate of 7.6 percent, reaching a value of $6.5 billion by 2026 (Smith 2018). The global vegan cheese market alone grew by 43 percent to $124 million in 2018 (Smith 2018) and is estimated to be worth almost $4 billion by 2024 (Variant Market Research 2017). Market researchers predict that total sales of dairy and meat alternatives will reach $25 billion by 2019 (Jolley 2017). As the number of vegetarians and vegans in the United States continues to rise, plant-based diets have become "sexy," with the endorsement of celebrities such as Beyoncé through her 22 Days Nutrition vegan diet regimen (Fegitz & Pirani 2017) and the abundance of trendy vegan restaurants that provide the assurance of sustainability without the sacrifice of taste or style. According to CB Insights (2017), at least seven of the fifteen most well-funded food and beverage startups are plant-based.

The popularity of meatless diets reflects growing awareness of the environmental and social damage caused by the industrial meat industry. Globally, agriculture is responsible for 70 to 85 percent of the water footprint and one third of greenhouse gas emissions (Smetana et al. 2015). Agriculture in the United States alone is responsible for 574 million metric tons of carbon dioxide emissions each year, and 42 percent of agricultural emissions come from animal agriculture (Friedman et al. 2018), not including fossil fuels used to make the fertilizers to grow feed crops for livestock. The FAO reports that the meat industry alone accounts for nearly 20 percent of global greenhouse gas emissions, particularly methane, which has twenty times the global warming potential of carbon dioxide. Grazing land and cropland dedicated to the production of livestock feed constitutes almost 80 percent of agricultural land worldwide and has led to substantial deforestation, resulting in species extinction and habitat destruction (FAO). For example, about 3 million acres of the Amazon Rainforest in Brazil has been cleared to grow chicken feed. Nearly half of all water used in the United States goes towards raising animals for food through hydrating farm animals, cleaning facilities, and disposing of animal waste. 500 million tons of manure produced in factory farms each year that is stored in massive "lagoons" that often leak into surrounding waterways, contaminating water sources with dangerous microbes and bacteria. Animal agriculture has been revealed to be responsible for about 30 percent of global biodiversity loss due to deforestation, pollution, and climate change (Westhoek 2010).

Animal welfare is an equally compelling case for the reduced consumption of meat. Over 70 billion factory-farmed animals are killed globally every year. The proliferation of "antibiotic-free" and "hormone-free" meat products in health food stores results from the large amounts administered to animals to resist the diseases easily transmissible in crowded and unsanitary

living conditions and to make animals produce larger quantities of meat. Farm-raised fish, which are just beginning to receive more activist attention, also experience inhumane conditions of tight containments and widespread disease.

The meat industry has significant impacts on human lives as well. Working in a slaughterhouse is one of the most dangerous factory jobs in America due to the fast pace, unsanitary environment, and lack of training. Communities surrounding CAFOs (concentrated animal feeding operations) are exposed to harmful particulate matter which is associated with increased respiratory diseases (Sneeringer 2009). Despite increasing attention to the environmental degradation and inhumane conditions of unsustainable meat consumption, growing populations, rising affluence, and urbanization are continuing to increase demand for livestock products, particularly in developing countries. The FAO estimates that global demand will increase by 70 percent by 2050 (FAO).

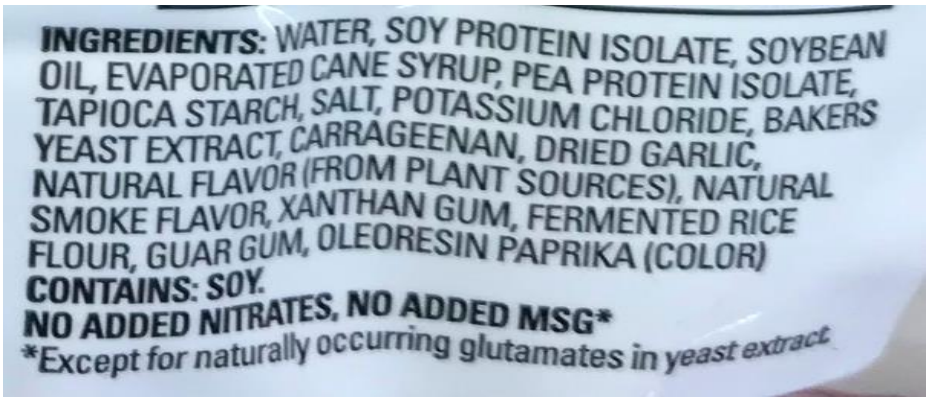
II. Environmental Impacts of Plant-based Foods

In response to increased awareness about the detrimental environmental and social impacts of eating meat, neoliberal consumer-centric activism has resulted in a flood of highly processed meat and dairy substitutes into the market, many of which are designed to mimic animal products as closely as possible. Recent years has seen a proliferation of plant-based food companies, either small start-ups or large corporate entities, promoting the environmental benefits of their alternative food products. Many of these brands, such as GoMacro vegan protein bars, promote their product as the “Clean. Simple. Responsible” (GoMacro 2018) alternative to meat.

Environmental stewardship is often promoted either on their packaging or on their websites through statistics on the environmental benefit of buying their product. For instance,

plant-based meat company Impossible Foods states, “Just one Impossible™ Burger (instead of a burger made from cows) will save the equivalent of: 75 sq ft of land, 1 half tub of bathwater, 18 miles of emissions in a car” (Impossible Foods 2018). Through rhetoric such as “join the movement” (Impossible Foods 2018) and “join the revolution” (Spero Foods 2018) towards a more sustainable food system by purchasing certain products, these companies reinforce the neoliberal ideal of a rational, self-correcting society where citizens perform duties for the collective good through individual consumption.

However, foregrounding the environmental superiority to conventional meat products backgrounds the environmental impacts of plant-based meat analogs’ rapid growth in the marketplace. As an example, consider Lightlife, the plant-based meat alternative company which claims its Smart Dogs to be the number one bestselling veggie dog in the United States (Lightlife 2018). The Lightlife website promotes its vegetarian products as “a healthier choice for our planet” (Lightlife 2018). It further appeals to the eco-conscious consumer by stating, “Like remembering your reusable shopping bags, adding plant protein to your diet makes Mother Earth proud of you” (Lightlife 2018). But closer inspection of the entire life cycle of meatless Smart Dogs reveals the negative environmental externalities of Lightlife’s plant-based products through fossil fuel-dependent production, packaging, and transportation.



(Lightlife Smart Dogs ingredient list. Source: Olivia Whitener)

As can be seen from the product's label, the primary ingredient besides water in Lightlife's Smart Dogs is soy protein isolate, which is soon followed by pea protein isolate. These ingredients are considered texturized vegetable proteins (TVP), and are used by many imitation meat products for their protein content and meat-like texture. The first TVP was developed in 1967 as textured soya flour to make "delicious and succulent meat analogues, innovative soya dairy analogues, frozen prepared soya foods, soya pasta, dry mix dinner kits and much more" (ADM 2005). Soy protein isolate (SPI) derived from soybeans is particularly popular in meat alternatives because soy is considered a "complete protein" (Flail 2006, 92). Despite the general assumption that realistic fake meat is an environmentally preferable alternative to animal products, a life cycle assessment conducted on soy protein isolates by Berardy et al. (2015, 71) for the International Symposium on Sustainable Systems and Technologies reveals that "that SPI may match or exceed environmental impacts of unprocessed chicken, pork and beef in the categories of global warming potential, water depletion, fossil fuel depletion, and energy use."

To explain to the public how meat analogs are made, the Reducetarian Foundation, an organization dedicated to reducing global meat consumption, released a video which portrays a collaboration where a farmer and a scientist "take a plant… apply heat, cooling, and pressure" to turn plants into unrecognizable muscle-like fibers. With childlike cartoons and a twangy banjo soundtrack, the video proclaims, "You could call it cooking!"

Realistically, the process of manufacturing meat analogs is far from the "cooking" consumers typically imagine. Production of texturized vegetable proteins, including soy protein isolates, requires extensive industrial processing in addition to chemical inputs. Texturized proteins are produced using extrusion cooking, which facilitates "denaturing of the proteins,

deactivation of heat liable growth inhibitors, control of bitter flavors and the homogeneous bonding of ingredients that may include colors, chemicals and other additives which can have an effect on appearance or textural quality" (Kearns et al.). Berardy et al.'s analysis found that the heating processes needed for protein extraction result in heavy water usage and fossil fuel depletion.

After "redissolving precipitated vegetable proteins and passing them through a spinneret into a precipitating bath," the resulting fibers are "compacted, shaped, flavored, cooked and/or dried and packaged" (Kearns et al). The natural flavors, synthetic vitamins, and thickening agents like xanthan gum that are added to make isolated protein fibers more appetizing similarly require substantial energy, resources, and facilities to manufacture. The American Soybean Association recognizes that "due to consumer preferences there is a growing demand for marketing gimmicks" (Kearns et al), which has led to the injection of dyes and pigments using high-pressure pumps into the product to mimic fat marbling and striping. Each of these components of production exacerbates meat analogs' environmental footprint.

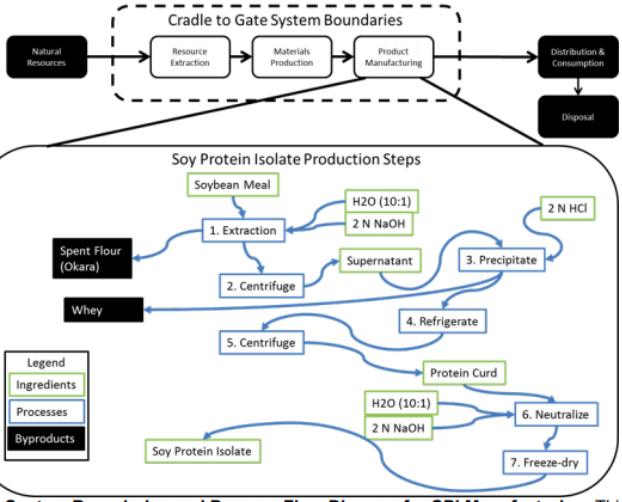


Figure 2. System Boundaries and Process Flow Diagram for SPI Manufacturing. This LCA is cradle to gate, and focuses on product manufacturing. The process of manufacturing SPI, starting with soymeal, is shown in the callout.

(Reproduced from "Life Cycle Assessment of Soy Protein Isolate," by A. Berardy, C. Costello, and T. P. Seager, 2015, *ISSST*, n.p. Reprinted with permission.)

During the manufacturing process, 25 percent of the original soymeal is lost as whey, a waste product that has been found to be toxic (Berk 1992). 40 percent of the soymeal used in the production of soy protein isolates becomes extraction residue, or okara, that is pressed, dried, and either used as dietary fiber or sold as animal feed in an ironic twist where production of plant-based foods benefits the animal agriculture industry. Ultimately, two-thirds of the original weight of soymeal is lost during the production of soy protein isolate, meaning that every kilogram of soy protein isolate produced requires three times as much soymeal (Berk 1992). With consideration of the entire life cycle assessment, climate change potential of soy protein isolates, determined by kilograms of carbon dioxide emissions, can exceed that of chicken and pork and align with the higher end of the range for beef.

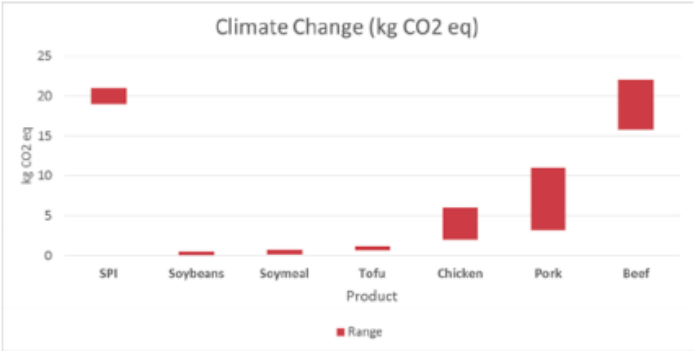


Figure 4. Floating column chart showing approximate ranges for climate change potential of 1 kg each of a variety of comparison products.

As seen in Figure 4, climate change potential of SPI is about 20.2 kg CO_2 equivalents per kg SPI. This can be compared to about 0.6 for soybeans, 0.7 for soymeal, 0.7 for tofu, between 2 and 6 for chicken, between 3 and 11 for pork, and between 16 and 22 for beef (Beauchemin, Henry Janzen, Little, McAllister, & McGinn, 2010; Dalgaard et al., 2008; Farshad, Lepik, Ng, Pedro, & Tsao, 2010; Nijdam, Rood, & Westhoek, 2012; Omni Tech International, 2010; Pelletier, Arsenault, & Tyedmers, 2008). References used are based on similar boundaries and assumptions to ensure a fair comparison.

(Reproduced from "Life Cycle Assessment of Soy Protein Isolate," by A. Berardy, C. Costello, and T. P. Seager, 2015, *ISSST*, n.p. Reprinted with permission.)

The potential for environmental degradation continues with the resource-intensive stages of packaging and transportation, as well as the resulting end-of-life waste of highly processed plant-based foods. The average food item in the United States travels over 1,500 miles – approximately the distance between Iowa and Los Angeles (Cockrail-King 2012), although other studies have found distances reaching over 1000 miles (1640 km) for delivery and 4200 miles (6760 km) for the entire life-cycle supply chain (Weber & Matthews 2008). Soy milk company Silk sources its soybeans from "across the United States, from sunny Texas to the rich, fertile grounds of Ohio," as well as Canada (Silk 2018). Domestic soybean transportation occurs via truck and railway freight typically powered by diesel fuel, which is a major source of harmful atmospheric pollutants such as ground-level ozone and particulate matter (EIA 2018).

Waste generation has steadily grown since 1960, with food packaging accounting for almost two-thirds of total packaging waste by volume (Marsh et al. 2007). In fact, Julie Guthman (2003) argues that while still promoting the idyllic farm-to-table rhetoric, organic foods (specifically organic salad mix) pioneered the widespread use of convenience packaging for produce. Plant-based food companies looking to produce shelf-stable convenience foods that can be shipped nationally require substantial amounts of glass, plastic, and paper packaging. These materials are never as sustainable as they appear; different plastics are often mixed through processes of co-extrusion or laminated with foil or paper that make them difficult to recycle, and simple brown paper containers used to evoke images of nature and sustainability are "almost always treated, coated, laminated, or impregnated with materials such as waxes, resins, or lacquers to improve functional and protective properties" (Marsh & Bugusu 2007, 50). Although packaging of alternative food products can be cleverly designed to emphasize the "green-ness" of the product, at the end of the day even recyclable packaging requires meticulous separation for

it to be effective. The discussion earlier on biodegradable and compostable packaging also hinders the ability of packaging materials to be truly "environmentally friendly."

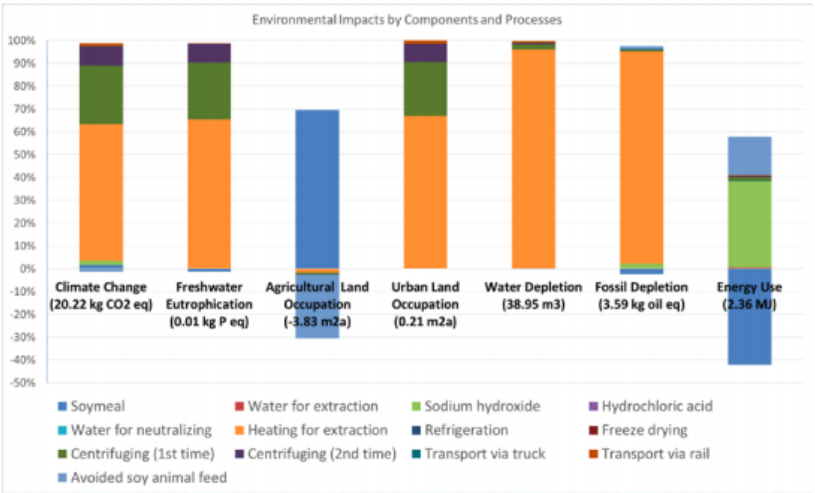


Figure 3. 100% stacked column chart showing contributions to total impacts associated with production of 1 kg of SPI by components and processes.

Figure 3 shows the environmental impacts as percentages of the total for every process across impact categories, and provides the total impact from 1 kg of SPI in each category in parentheses underneath the impact label. It is clear from this graph that the heating for extraction and centrifugation processes are responsible for the majority of impacts. Despite this, soymeal is the main driver of agricultural land use and sodium hydroxide accounts for the majority of energy use.

(Reproduced from "Life Cycle Assessment of Soy Protein Isolate," by A. Berardy, C. Costello, and T. P. Seager, 2015, *ISSST*, n.p. Reprinted with permission.)

Hardcore followers of Michael Pollan's (2009) maxim, "Eat food, not too much, mostly plants," may have forgotten about his supplementary rules, including Rule No. 19: "If it's a plant, eat it. If it was made in a plant, don't." While processed foods are typically conceptualized as candy, snack chips, and fast food favorites, this category also includes the reconfiguring of soy, corn, wheat, peas, and other crops into veggie burgers, vegan cheese, and fishless fillets to satisfy the demands of the ethical eater.

Although Lightlife is one case study, it is not an anomaly among the plant-based products storming the market. Many other products contain similar ingredients and are highly processed. The above discussion does not include the environmental impacts of agricultural production of

ingredients such as soy (Dalgaard et al. 2008) or refrigeration of ready-made products during transportation and in stores (Schmidt Rivera et al. 2014, Hawken 2017), which have been shown to contribute significantly to a product's carbon footprint and other environmental hazards. This raises the question of how "sustainable" these products are as demand keeps growing and activism against an environmentally destructive meat industry centralizes in the marketplace.

This issue was apparent at the second annual Reducetarian Summit, held by the Reducetarian Foundation in Los Angeles, California in September 2018 with the mission to "improve human health, protect the environment, and spare farm animals from cruelty by reducing societal consumption of animal products" (Reducetarian 2018). In contrast to strict vegetarianism or veganism, reducetarianism encourages mindfully *reducing* the consumption of meat, seafood, dairy, and eggs. While the Reducetarian Foundation's commitment to creating a "more equitable, compassionate, and sustainable food system" (Reducetarian 2018) is commendable and important work, a significant focus of the conference was reducing meat consumption through increasing consumption of processed plant-based products, particularly meat analogs.

(Banners at the Reducetarian Summit in Los Angeles, 2018. Source: Olivia Whitener)

When Kristie Middleton of The Humane Society of the United States was asked during a panel what should be accomplished to address the effects of over-consumption of meat, her wish was for a "cost-commensurate plant-based chicken nugget" to be served in schools across the country. The Summit included multiple talks on branding the plant-based lifestyle, starting plant-based food companies, and investing in plant-based start-ups. Discussions about the future of food focused on products that can be developed, such as lab-grown meat in the talk, "A Technological Revolution: How can we deploy advancements in cellular agriculture in order to create competitive, palatable cultured meat, egg and dairy products?" instead of improving environmentally degrading agricultural practices, for example. Workshops and talks were punctuated by curated networking at the end of each day.

When not attending panels and workshops, the 500+ attendees could entertain themselves by sampling a variety of plant-based foods from jackfruit tacos to raw vegan birthday cake batter. A majority of the samples were individually wrapped in plastic and paper; HIPPEAS, the aforementioned organic chickpea puff company that promotes "goodness for mind, body and soil" (HIPPEAS 2018), provided unlimited snack packs of three individual puffs encased in a sack of plastic. Companies such as Before the Butcher and Sophie's Kitchen filled in the apparent gap left by the absence of meat with substitute products such as burgers and tuna salad that attempted to convince the consumer they had not reduced meat consumption at all. The representatives of Pure Blends, a plant-based butter alternative brand that encourages consumers to "spread better to the world" (Pure Blends 2018) through buying their products, were unable to provide any information about the sourcing of the avocados and coconuts used in their spreads. If a company "believe[s] plant-based eating creates lasting positive impact for a better world" (Pure Blends 2018), should that impact not include every step of production? Where do conveniently

packaged foods made unrecognizable from their original ingredients and shipped across the country fall in a movement that so strongly encourages "knowing where your food comes from"?

Consider the steps taken to bring a product to the marketplace: the growing or extracting of raw material, the manufacturing (most likely in a large factory) to turn it into an appetizing product, and the transportation from stage to stage, to the retail location, and finally to the consumer. Most, if not all, of these processes are dependent on fossil fuels, releasing anthropogenic greenhouse gas emissions and contributing to the global carbon footprint. But the impact does not stop there; products become waste that sits in landfills, releases greenhouse gases, contaminates waterways and soil, poisons non-human life, and even swirls into massive islands of trash in the ocean three times the size of France (The Ocean Cleanup 2018).

Now multiply these consequences by 50,000, which is simply the average number of food products carried by supermarkets (Malito 2017). The selection of products is continuously growing, and production must expand to meet consumer demand. For example, Impossible Foods recently opened a new, large-scale production facility in Oakland that can produce 500,000 pounds of plant-based meat per year (Pershan 2018). In just one year, the locations that sold Impossible Burgers increased 100-fold from 50 to 5000.

Study after study has shown the negative environmental impacts associated with a culture of consumption (Ivanova et al. 2015), both on a local and global scale. The rhetoric employed by many plant-based foods companies that attributes environmental betterment with the purchasing of their product through simple claims such as, "Eat meat. Save earth," "Do your part. Eat up," and "Eat a burger. Save the world" foregrounds consumerism as the way to "make a difference" (Impossible Foods 2018) while backgrounding the environmental externalities of the food system (Gómez-Barris 2017). While it could be argued that any effort to reduce meat

consumption is effective in curbing the environmental degradation of the meat industry, the success of highly processed plant-based foods does not address the fundamental issues within the food system and may result in continuous expansion that contributes to natural resource exploitation and environmental degradation.

III. Labor in the Plant-based Food Movement

"As we pursue and define local so wholeheartedly through the creation of new markets, new products for consumption, and a new consumer consciousness, we tend to overlook how lives are lived in real places."

- Laura B. DeLind 2010, 275

Idealized assumptions about the ethical labor conditions of plant-based foods in contrast to inhumane treatment of workers in the meat industry potentially obscure the lived experiences of those involved in the multitude of steps from crop to final product. Many workers in the food sector immigrated to the United States from Central America and more than half are undocumented or unauthorized to work in the country (Nesheim et al. 2015). This political insecurity leaves workers vulnerable to exploitation and poor working conditions, as well as lacking in health care. In addition, unions represent only a little over 1 percent of all private-sector employees in agriculture and related industries. Crop workers are usually hired seasonally, which leads to chronic levels of unemployment in many farm worker households. For their physically demanding and dangerous labor working with large machinery and potentially harmful chemicals (Nesheim et al. 2015), the average hired crop worker earned less than $10 per hour in 2010, and median weekly earnings were about two-thirds of the average US wage (Martin & Jackson-Smith 2013). Poverty rates for farm workers are estimated to be between 30 and 40 percent, which is among the highest of any occupational category in the United States. Undocumented farm laborers are nearly three times as likely to experience poverty as farm workers with citizenship (Kandel 2008). In addition, about 15 percent of US crop workers

migrate farm to farm to find secure continuous employment, which can disrupt family structure and hinder education for their children (Nesheim et al. 2015).

According to the Food Chain Workers Alliance, only 16.7 percent of workers in the food processing and food manufacturing industry reported earning more than 150 percent of the poverty line, which is considered a "livable wage." 68.2 percent of Latino and 18.2 percent of Black employees in the food processing, distribution, and packing house sector experienced wage theft, as opposed to 4.5 percent of White workers. The food processing sector also exhibits the largest income divides by race, with White workers earning $3.07 more than workers of color (Food Chain Workers Alliance 2012).

Food processing jobs often involve repetitive motions and long periods of standing that can result in musculoskeletal injuries, as well as exposure to noise, extreme heat from cooking machinery, extreme cold in refrigerated areas, and hazardous chemicals (Geiser & Rosenberg 2006). Workers in the warehouses that store large amounts of processed foods have the highest rates of chronic debilitating injuries out of food industry workers due to repetitive motion and heavy lifting (The Free Library 2002), as well as the lack of protective equipment. Workers are also under pressure to keep up with a rapid assembly line.

In 2007, a group of workers at Flaum Appetizing Corp., a kosher food processing and distribution company in Brooklyn which produces Sonny and Joe's brand of hummus – a popular food item among plant-based advocates encouraging chickpeas as an alternative source of protein (Little 2015) – organized to improve their working conditions. One worker, Jose Juan Romero, reported long hours with no overtime pay, no clean water to drink, mistreatment by managers, and laborious work with insufficient help. A few months later, the seventeen workers who filed a federal minimum wage and overtime lawsuit against Flaum were fired. The next

year, after the workers won an order at the National Labor Relations Board for $260,000 in backpay, the owner refused to pay because of the immigration status of the workers. It was not until the workers partnered with several non-profit labor organizations and persuaded over 120 of New York City's grocery chains to stop selling Flaum's products did the company agree to pay $577,000 in compensation and agree to a binding code of conduct which requires workplace protections such as appropriate pay, anti-discrimination, and health and safety safeguards (Food Chain Workers Alliance 2012).

These inequalities are not confined to the United States; the disposability of human workers within the global food market are also apparent in alternative meatless products. In her essay, **"**Race as a 'Feeble Matter' in Veganism: Interrogating whiteness, geopolitical privilege, and consumption philosophy of 'cruelty-free' products," critical race feminist scholar Breeze Harper critiques how even vegan products consumed with ethical intentions perpetuates the "geopolitically racialized" (Harper 2010, 12) hierarchies of human lives.

For example, animal rights organization Vegan Outreach released a "Guide to Cruelty-Free Eating" that advocated purchasing Silk and Soy Delicious chocolate products to "oppose and help end cruelty to animals" (Vegan Outreach 2008). Soy Delicious states that their sugar is vegan and not bone char-refined, thereby protecting animal lives, but does not provide details about ethical production in regards to human laborers in the global South, though sugar production historically and currently involves the exploitation of non-White peoples (Mintz 1986).

Similarly, while cocoa production has been linked to child labor and "inhumane conditions and extreme abuse" that has been described as modern-day slavery (Chanthavong 2002), Silk dairy-free products do not use certified Fair Trade or cruelty-free chocolate. Cocoa

beans and sugar, like other transnational commodity crops tied with labor injustice, are exported around the world, implicating a variety of players from manufacturers to consumers in the injustice of their production (Chanthavong 2002).

How does the ethical consumer account for international populations producing food under conditions of cruelty that help those in wealthy companies fashion their alternative "cruelty-free" lifestyles? Even in attempts for ethical consumption, priorities are tested in the protection of one group versus another, non-human animals versus humans. In this way, human lives are rendered "consumable" in the plant-based market same way that animal lives are in the meat industry. However, this "process of viewing another as consumable… [is] invisible to us because the end product of the process—the object of consumption— is available everywhere" (Adam 2015, 15).

IV. Accessibility of Plant-based Foods

The ideal of the citizen-consumer appears to hold promise for a new form of "globalized democracy" (Dolan 2002) in which political power is distributed to any person who buys food. However, the conflation of political power with economic power raises a critical question: if change is brought about through the selling and purchasing of goods, whose "vote" counts and whose does not? Analyses of green consumers reveal that they are dominated by perhaps an unsurprising demographic: members of the well-educated, white middle class living in wealthy post-industrial urban contexts (DuPuis & Goodman 2005).

Adams (1990, 11) notes that the attention to ethical consumption arises from "increasing general affluence, more choice about life style, and the economic leisure to reflect on some of these processes." When a smaller proportion of income is spent on food, consumers are able to choose based on ethical values such as sustainability or human rights instead of selecting foods

based on the volume for money. Sustainability is promoted as an added value, which allows producers to charge premium prices on items such as plant-based alternatives with the assumption that "green consumers are willing to pay the higher price for the environmentally friendly product" (Pettit & Sheppard 1992, 331). Therefore, the rhetoric that "the market is a democracy where every penny gives the right to vote" (Fetter 1911, 394), is complicated by the actors governing the market and the potential exclusion of marginalized populations without the financial means to make their voices heard. When consumer is equated with political actor, "those with limited income and hence limited consumer power will necessarily have less political influence than their wealthier compatriots" (Jaffe & Barendregt 2014, 6).

It is therefore unsurprising that Rimal (2002) found "household income positively influenced consumers' preferences toward more meatless meals and less red meat," with each $10,000 increase in annual household income increasing the probability that respondents ate more plant-based diets. Instead of upholding citizenship values of basic needs being universally met, practices of ethical consumption "reproduce a wide range of social boundaries" (Fegitz & Pirani 2017, 295) such as class, gender, ethnicity, religion, and sexuality. While environmentally friendly products now appear more accessible than ever, there are economic and cultural limits that reserve them for certain populations.

This discrepancy is apparent in distribution of grocery stores. In 2010, the Food Empowerment Project reported that higher-income areas had twice as many large supermarkets and grocers carrying fresh fruits and vegetables as lower-income communities. These results confirm a 2006 investigation conducted by Moore & Diez Roux which found that low-income and non-White areas tended to have fewer natural food stores and fruit and vegetable markets where alternative foods may be available, as well as proportionately more people without access

to a vehicle to get to better stores. This study also found that wealthy and predominantly White neighborhoods had more supermarkets, which supply a broader choice of foods considered healthy and environmentally sustainable, while low-income neighborhoods had more small grocery stores which offered a limited range of convenience items. This complicates the concept of "food deserts" to denote not simply a lack of grocery outlets, but a lack of affordable, nutritious options.

Ultimately, the consumer-citizen ideology "legitimizes and reproduces inequalities by failing to recognize that the ability to purchase high-quality foods is more likely dependent on income than taste" (Isenhour 2012, 24). The neoliberal emphasis on individual responsibility embeds consumers in what Goodman et al. (2010, 1785) calls an "ethical complex of 'good' food" that marginalizes those without the resources to choose sustainable products as ignorant or indifferent towards environmental responsibility. However, the selection of sustainable goods is not simply a matter of how much one cares or knows about harmful environmental practices. Conscious consumerism's "market-embedded morality" (Shamir 2008, 14) is thus financially reserved for the elite in a way that "create[s] a hierarchy of moral stratification that maps onto class stratification" (Johnston 2008, 256).

As plant-based foods have found success in the market, the problematic federal policies and structural inequalities of the food system continue to impose injustices on marginalized communities. When milk consumption decreased in the late twentieth century due to research on the negative health implications, the USDA created Dairy Management Inc. (DMI) with the goal of increasing demand for US-produced dairy products through partnerships with fast food companies such as Domino's and Taco Bell. The DMI's "dairy checkoff program" is responsible for the launch of Taco Bell's Quesalupa, a taco with five times more cheese than the regular

amount, and Pizza Hut's Grilled Cheese Stuffed Crust Pizza, which features more than one pound of cheese on each pizza. These fast food outlets are disproportionately located in low-income communities and communities of color (Hilmers et al. 2012). In addition, the USDA's Dairy Product Donation Program donates surplus dairy products directly to financially marginalized communities.

Despite the rise in veganism and vegetarianism, national per capita dairy consumption reached a record amount in 2016. At the 2017 annual United States dairy industry meeting, DMI CEO Tom Gallagher stated that cheese consumption is "growing and will continue to grow" (Shoup 2017). The systemic underpinnings of the food system thereby reveal how well-intentioned consumer choices potentially displaces the burden of an unequal food system onto low-income communities of color. Instead of directly challenging the problematic food system, market-based strategies of the plant-based food movement serve to further background and deny the disposability of marginalized communities. In this way, green consumerism has shown to be far from the "radical rethink about consumer power" Adams (1990, 12) proposed three decades ago. Rather than universalized freedom of choice, it is "opportunities to *have* a choice" (Goodman et al. 2010, 1788) that determines democratic participation in the market for "good" foods.

V. Plant-based Foods Within the Dominant Dietary and Patriarchal Paradigm

Vegan and vegetarian diets have been discussed at length within feminist and eco-feminist academic spheres. In a book titled *The Sexual Politics of Meat,* Carol J. Adams illuminates how meat is coded as a male, specifically "White heteromasculine norm-centered middle class" (Singer 2016, 345), domain through cultural representations of grilling and hunting, while vegetables are feminized. It is therefore unsurprising that there are four times as

many female vegetarians in the United States as male (Flail 2006). The challenge of vegetarianism and veganism to the dominant meat-heavy diet could be conceptualized as "resistance against the patriarchal and capitalist exploitative system" (Fegitz & Pirani 2017, 304). The universalization of plant-based foods thereby appears to be a rejection of the "culture and masculinity versus nature and femininity" dichotomy (Fegitz & Pirani 2017, 297).

However, many of the products within the plant-based foods market are marketed in ways that reinforce society's dependence on meat and its masculine connotations. One striking example of this is the Impossible Burger, which aims to replicate "the intense, meaty flavor, aroma and cooking properties of animal meat" (Impossible Foods 2018). One of the most significant technological advances of the Impossible Burger is its ability to "bleed" like animal-based meat using soy leghemoglobin and genetic engineering, making the eating experience even closer to that of meat from animals. The Impossible Foods website introduces the Impossible Burger with the tagline, "Love meat? Eat meat. Impossible™ meat delivers all the flavor, aroma and beefiness of meat from cows. But here's the kicker: It's just plants doing the Impossible" (Impossible Foods). The insistence of the Impossible Burger and other imitation meat products to mimic meat suggests that "vegetables which look and taste like meat are superior to vegetables that have yet to be improved through the miracle of industry" (Flail 2006, 112) and thus do little to challenge the dominant meat-centric diet.

Impossible Foods also promotes the "endless impossibilities" of how the Impossible Burger can be cooked. The options include chili cheese fries ("piled high with meaty goodness"), meatballs ("comfort food has never tasted so good"), and burgers ("The original. The classic"), highlighting conventional meat dishes as indispensable components of the American diet. Impossible Foods further protects the value of meat through evoking nostalgia of "magical

moments together [that] happen around meat," such as "Weekend barbecues. Midnight fast-food runs. Taco Tuesdays. Hot dogs at the ballpark." Highlighting these culturally specific experiences "appeals to maintaining masculinity's presumed natural essence" (Singer 2016, 355) and excludes other identities for whom this is not the norm. This section of the website emphasizes "dominant neoliberal food ethics of individual taste and freedom" (Singer 2016) through statements such as, "Have the Impossible™ Burger any way you want" and "Just the way you like it." The website of Beyond Meat similarly opens with a screen-filling picture of a conventional-looking burger and the "Eat what you love" stamped across the page. In this way, these plant-based food brands offering meat alternatives effectively "testif[y] to the centrality of the concept of meat, not to its dispensability" (Fiddes 1992, 16).

The marketing of meat analogs, or imitation meat, as the ideal vegan product for environmental sustainability and animal welfare not only weakens the radical rejection of the meat industry in the first place, it also often relies upon the same tropes of sexualization and gendered rhetoric as meat products. Vegan Bros is a personal wellness brand and online blog with the goal to "raise up an army of fit, sexy vegan soldiers to spread the delicious, cruelty-free Gospel of peace and compassion to a lost and dying world" (Vegan Bros 2017). Their recently published book, *Vodka is Vegan: A Vegan Bros Manifesto for Better Living and Not Being an A**hole* (2018), combines "fighting for a better world, one plant at a time" and "making vegan sexy." The emphasis on physical transformation into normative body ideals (for men and women) through a vegan diet, punctuated by shirtless images of the two founders, serves as assurance that veganism can be a means toward masculine strength and identity.

Gwyneth Paltrow, a celebrity who publicly endorses a vegan lifestyle and edits a wellness blog called Goop, published a cookbook called *It's All Good: Delicious, Easy Recipes That Will*

Make You Look Good and Feel Great. Save for a few recipes including meat, this predominantly vegan cookbook is similarly marketed on promises of losing weight and looking good. Thus, this form of "sensual commodified veg*an feminism [the asterisk represents both vegan and vegetarian diets]" (Fegitz & Pirani 2017, 298) becomes a business for individual material success rather than ethical and political opposition to an oppressive patriarchal food culture.

It is important for the conscious consumer to consider where their dollar goes when they feed it into the food system. The discussion above exemplifies how "vegetarian critique is not purely a resistive practice and may reproduce intersectional hegemonic discourses" (Singer 2016, 347). The promotion of meat analogs in particular reinforces the individual's dependence on meat, forgoing an opportunity to address systemically and culturally problematic meat production while contributing its own threats to environmental sustainability and social justice. These products claim to satisfy consumers' personal and civic responsibility to the environment without forcing them to sacrifice their pleasure or involvement in oppressive meat-eating culture. Instead of challenging the inherent structures of resource exploitation and inequality within the food system, the market for plant-based foods, particularly imitation meat alternatives, allows the neoliberal consumers to have their burger and eat it too.

VI. Big (Plant-based) Food

Striking uncanny resemblance to the emergence of "industrial organic," the potential profit of the plant-based foods market has enticed some of the worst culprits in factory farming, such as Perdue Farms and Tyson Foods, to establish their own plant-based subsidiaries. On September 12, I received an email from the Humane Society of the United States enthusiastically stating, "Perdue Farms Inc. is joining the plant-based protein game!" Perdue is a major poultry and pork processing company, the nation's third-largest producer of broiler hens behind

Pilgrim's Pride and Tyson Foods. After almost 100 years of meat processing, Perdue is considering adding vegan protein into its product line and looking at vegan start-up businesses to invest in.

Perdue is the latest of several leading meat producers, including Tyson Foods and Cargill Protein, to take on plant-based foods in order to stay competitive in this growing market. In 2016, Tyson Foods bought a five percent ownership stake in plant-based meat company Beyond Meat with an additional investment in 2017, as well as in cultured meat biotech start-up Memphis Meats in 2018. With competitors satisfying consumers' requests for non-meat products, it is in Perdue's best interest for them to play the "game."

Tyson and Perdue also have the incentive of improved public image through supporting environmentally sustainable endeavors. Multiple instances of public exposé have revealed the companies' animal abuse, unhealthy working conditions, immense greenhouse gas emissions, and pollution. Environment America (2016) reported that Tyson Foods Inc. and its subsidiaries dumped 104 million pounds of pollutants into waterways from 2010 to 2014, the second highest volume of toxic discharges reported to the EPA's Toxic Release Inventory, behind AK Steel Holding Corporation. This figure is calculated from pollutants released through manure, fertilizer runoff, and waste from processing plants, and does not include the pollution from raising livestock on factory farms. The nitrate compounds in Tyson's discharges contribute to algal blooms and dead zones, in particular the largest toxic dead zone in US history in the Gulf of Mexico (Gallagher 2017), as well as to health problems for humans exposed to the compounds. In 2014, Tyson Foods paid $530,000 to settle a case in Missouri for discharging wastewater into a creek that killed over 100,000 fish. In 2016, company shareholders voted against the institution

of a water stewardship policy, and Tyson has since failed to improve water risk management (Sustainable Brands 2016).

In 2013, Perdue launched its "We Believe in Responsible Food and Agriculture" sustainability platform that installed solar panels but did nothing to address the hundreds of millions of pounds of untreated chicken waste deposited on the Eastern Shore of Maryland every year (Food and Water Watch 2013). Phosphorus and nitrogen from chicken manure is one of the biggest threats to life in and around the Chesapeake Bay, resulting in dead zones where aquatic organisms cannot survive. Chickens at Perdue operations concentrated on the Eastern Shore of Maryland excrete as much nitrogen as eight million people, which is two million more than the entire population of Maryland. The fields of Maryland counties where Perdue's chicken operations are located are saturated with phosphorus from manure dumping. Even if manure dumping stopped immediately, it would still take decades for the Chesapeake Bay to recover. When the State Department of Agriculture proposed a plan to implement emergency phosphorus regulations that placed restrictions on the amount of chicken manure that could be dumped on farm fields in 2013, it was dismissed after heavy opposition from chicken industry representatives.

Perdue and Tyson have also been criticized for their animal abuse, to the point where animal advocacy organization Mercy for Animals created websites entitled Perdue Tortures Animals (perduetorturesanimals.com) and Tyson Tortures Animals (tysontorturesanimals.com). Whistleblowers and animal rights organizations have released undercover videos of both companies exposing workers kicking, throwing, and stomping chickens. Perdue and Tyson, like others in the factory farming industry, breed chickens to grow unnaturally fast; in 1925, it took 112 days for a chicken to reach 2.5 pounds, in 2015 it took 48 days to reach more than twice that

size. Unable to adapt to these extreme changes, birds are often unable to hold up their own weight, or are born with painful deformities and failing organs that make it difficult to even reach food and water. As a testament to the empty, arbitrary nature of food labeling, "cage-free" birds at these operations are stuffed wing to wing in dark, poorly ventilated warehouses.

In light of these atrocities, monolith meat processing companies considering vegan options appears to be a win for proponents of a plant-based diet. The Good Food Institute (2018) notes that Tyson's launch Green Street, ready-to-eat, grab-and-go, plant-based meals, is "a leading example of what it looks like when the meat industry embraces consumers' desires for more plant-based options."

However, while Tyson's website claims its goal is "giving today's consumers what they want and feeding tomorrow's consumers sustainably for years to come" (Hayes 2018), there has been little initiative taken to address the inhumane conditions in which it continues to produce meat. Tyson proudly claims to process an average of 41 million chickens, 133,000 cows, and 383,000 hogs per week, for a total of 73 million pounds of meat processed per week, and this does not appear to be stopping any time soon. On the contrary, the website states: "We're also stepping up our game on animal proteins by reinvesting millions of dollars in our core businesses… Consumers are eating more animal protein than ever before, and we're committed to getting that protein to them" (2018).

The applause Tyson Foods and Perdue Farms receive for their plant-based initiatives serves to "green" their reputations while they continue the environmental degradation and injustices of their primary operations. It is often much more profitable for companies to superficially convey environmental sustainability instead of adjusting core practices. Justin Whitmore, executive vice president of corporate strategy and chief sustainability officer at Tyson

Foods, remarked that “We don’t want to be disrupted… We want to be part of the disruption” (Live Kindly 2018). By orchestrating that “disruption,” Tyson ensures the continuation of their meat production practices while protecting their hegemony within the food system.

Tyson and Perdue are not alone in their capturing of the plant-based foods market. Morningstar Farms, a plant-based foods company which accounted for more than 60 percent of the alternative meat market in 2014 (Lear 2014), is a subsidiary of Kellogg’s, one of the world’s largest cereal and breakfast food producers. Kellogg’s also owns Kashi, a line cereal and granola products that purports to “nourish people and planet with plant-powered passion” (Kashi 2018). Behind its campaign of recycled cereal boxes, however, Kellogg’s has been criticized for its use of unsustainable palm oil and unfair labor practices (Mitchelson 2018, Greenhouse 2014). Vegan cheese brand Daiya was acquired by Otsuka, a Japanese pharmaceutical brand that tests on animals (Donnelly 2017). In this way, “food has increasingly become the province of very big business” (Adams 1990, 13), allowing companies to continue the environmentally degrading and inhumane practices the movement was intended to reject.

Chapter Four: Where do We Go From Here?

"The master's tools will never dismantle the master's house"

- Audre Lorde 1984, 110

"If we do not understand the causes of existing systems, it seems unlikely that we can devise better systems to replace them."

- *Marvin Harris 1998, 235*

With consideration of the environmental impacts and social inequalities behind the products claiming to help consumers "make a difference" in the world, a walk through the edible cornucopia of a Whole Foods store appears slightly different. What is one to do to bring about a more sustainable, socially responsible food system?

The aim of this thesis is not to reject the principles of plant-based diets, nor to instill disillusionment with the sustainable food movement as a whole. Convenient strategies such as green consumerism and recycling have the potential to inspire more significant political participation and civic activism (Welsch & Kühling 2009). Collective consumer demands have no doubt been effective at inspiring public discourse about the relationship between food and the environment, and have brought concerns about the failures of the food system into public consciousness. Sustainable development and corporate social responsibility (CSR) are now important distinctions for a company's brand, and many companies have released sustainability reports to the public. Certainly, food producers are motivated to supply more of the alternative options people want.

Yet while green consumerism can appear as a lifeboat in a sea of environmental problems, there is a cost to focusing purely on the individual (as consumer) at the expense of the communal, the global, the political. Guckian et al. (2017, 73) of the University of Michigan found that "green consumerism has proven largely ineffective in curbing collective rates of consumption… society's aggregate resource and energy usage continues to climb." A study

found that adopting “green” consumption patterns without reducing the overall level of consumption ultimately does not lead to significant reductions in energy use and carbon dioxide (CO2) emissions (Alfredsson 2004).

Simply put, any form of consumption is directly and indirectly associated with the use of energy and CO2 emissions (Guckian et al. 2017). The proliferation of eco-friendly consumer choices does not guarantee measurable reductions in harmful environmental impact (Jaffe & Barendregt 2014), and instead reinforces the hegemony of the extractive capitalist food system. It is thereby clear that it is not realistic to buy our way to a food revolution.

Instead, change in the food system must come from multiple levels, institutional and local, individual and collective. While corporations should be held accountable for their environmental and social business practices, they are only one spoke in the wheel moving towards a more sustainable food system. At a governmental level, the foods we are surrounded by and the resulting diets we consume are dictated by federal agricultural subsidies, for which agribusiness lobbies heavily. The USDA Farm Bill, which legislates billions of dollars to determine what and how crops are grown, fosters the environmental conditions that the plant-based foods movement claims to challenge in the first place. The United States government spends $38 billion each year to subsidize the meat and dairy industries, compared to 0.04 percent of that ($17 million) to subsidize fruits and vegetables. To reiterate the earlier discussion on DMI, this legislature not only lowers prices to make meat and dairy products (often in the form of fast food) economically logical choices for lower income communities, it also supports the industry regardless of consumer demand. In fact, the USDA released a report January of 2018 that “forecast[ed] increases in year-over-year production” of beef, pork, and broiler meat, “likely lead[ing] to larger quantities of red meat and poultry available to U.S. consumers.”

A large proportion of fruit and vegetable subsidies goes to soy, corn, and wheat, which is used both for livestock feed and for ingredients in the same processed foods that the public is told by the USDA to consume less of. The 1996 Farm Bill saved the world's largest meat producers, such as Tyson and Smithfield, $300 million per year on livestock feed. In the decade after the 1996 Farm Bill, the top four chicken companies saved more than $11 billion and the top four hog giants saved nearly $9 billion on their feed costs (Imhoff 2012). Subsidizing dairy and meat production reduces their prices for the consumer, making them more financially accessible than more nutritious or sustainably produced foods. These subsidies also allow unhealthy items that are the antithesis to the alternative food movement, such as conventional (not artisanal) sodas, to flourish by saving them hundreds of millions of dollars each year on corn used for high fructose corn syrup and other ingredients.

There are currently no income limits on how much a single farming operation can receive in subsidies (Edwards 2018). This allows the wealthiest farmers with household incomes over $150,000, which is three times higher than the median US household income, to receive about half of the USDA's Farm Bill dollars (about $2.5 billion out of $5 billion) (Haspel 2018). Subsidies allow about 15 percent of all farms to generate most of the nation's agricultural output because they specialize in commodity crops (Imhoff 2012), while 60 percent of American farmers are completely excluded from subsidies (Eubanks 2009). California is the leading state in terms of annual agricultural sales, contributing more than 12.5 percent of the total US agricultural market value and nearly half of all fruits, nuts, and vegetables. But more than 90 percent of California farmers do not receive agricultural subsidies, and the ones that do are primarily cotton and rice farmers, not those that grow the rich variety of fruits and vegetables available at farmers' markets (Eubanks 2009). At the same time that the sustainable food

movement spurs an interest in backyard "hobby farms," food production is consolidated among mega-farms while small and mid-sized operations are put out of business. While advocates for sustainability may be "voting with their dollars" for alternative items, their taxpayer dollars are funding the very system they reject.

In addition, efforts must be made to curb the influence of agribusiness and Big Food corporations in regulating and capitalizing off the food system. The "revolving door" that places food industry officials in government positions and former federal employees as lobbyists, consultants, and strategists for agricultural and dietary interests is not an equitable or just way to make decisions in the best interest of the consumer.

Therefore, change at the governmental level is necessary to curtail the environmental degradation of the meat- and monoculture-dominated agricultural system. William S. Eubanks II (2009) argues that one of the most promising policy solutions to the major problems of industrial commodity crop agriculture is subsidizing sustainable agriculture. This reformist approach redirects governments funds away from large commodity crop growers and the meat industry to support more ecologically sound methods of farming without completely abandoning the smaller farms that currently depend on the existing subsidy infrastructure to stay afloat. Shifting subsidies to farmers who implement sustainable farming practices would address some of the issues of inaccessibility by lowering prices of more environmentally friendly foods while raising prices of foods composed of industrially farmed corn and soybeans to more accurately reflect their costs. The meat and dairy industries will also be affected as the prices of livestock feed crops return to market rates.

While this approach holds significant potential, its success depends upon a thoughtful, thorough understanding of agro-ecology in different environments and strict qualifications for

sustainable agriculture. However, holistic environmental care requires a reconsideration of our priorities in regards to sustainability. Sustainability in a capitalistic context most often refers to sustainable development, or protecting natural resources just enough so that future generations may continue to extract them. The EPA's first principle of sustainability is, "Human beings are at the center of concern for sustainable development (EPA 2011, 21). Instead of assumptions that the goal of sustainability measures is to allow for continuous exploitation of the natural environment, the framework of sustainability must be reevaluated with respect to ecologically and socially regenerative measures that are truly as beneficial to different environments and the people who inhabit them as food producers claim they are.

Institutional change is also meaningful at the state, county, and city levels. Legislation such as the Good Food Purchasing Policy developed by the Los Angeles Food Policy Council in 2012, "leverages taxpayer funds to support local producers, environmentally sustainable production practices, good jobs, humane treatment of animals, and healthy food" (Lo & Delwiche 2016). Becoming involved with organizations working for these changes or reaching out to government officials with these concerns are powerful ways the public can make their voices heard. This form of activism focuses not on creating market alternatives, but on directly challenging the practices that create the need for alternatives in the first place.

Institutional actors such as the government, however, are embedded within hierarchical, bureaucratic structures involving complex power dynamics that determine how we eat. Substantial change to the food system also involves collective action from the ground up, such as regenerative community activism through local food networks. In contrast to the "universalizing impulses of alternative food discourse" (Guthman 2008, 387), these exchanges are most effective when they take the needs and identities of the community members into account (Alkon 2008).

Alkon (2014, 28) suggests there are forms of market-based activism that "build toward a focus on inequalities, labor, and social justice." One example is worker-owned cooperatives in which workers collectively manage and share the profits of the enterprise. Returning to the earlier values of the alternative food movement, cooperatives foster community engagement and provide healthier options at prices more representative of residents' economic means. While food cooperatives maintain the "market-as-movement" approach, they represent consumer participation that extends beyond choosing between packaged goods bearing claims of environmental and social responsibility.

Urban agriculture and community gardens have also been encouraged as initiatives of empowerment and liberation through improving the quality of neighborhoods and providing affordable, nutritious, and sustainably produced food to marginalized communities (Tornaghi 2017). However, the labor of urban gardening does not have to be limited to certain populations while others exercise citizenship with their wallets. The social, environmental, and well-being benefits of growing your own food should be encouraged in any community seeking to consume more sustainably.

Instead of "entrepreneurs… leading the way" (Forbes 2017) towards sustainable food, urban agriculture and other forms of personal involvement in growing food close the distance between production and consumption, engaging conscious consumers in the local food system and establishing food security independent of the commodity market. However, these community-based initiatives have been met with criticism of exclusivity and inaccessibility when they are imposed by institutions outside of the neighborhoods without consideration of the local needs (Alkon 2008, Guthman 2008). Therefore, local food projects are most beneficial when they are led by community members and serve the needs of residents. These alternative sites of

food exchange illustrate that the choices presented in the supermarket are not the extent of options a conscious consumer has when participating in the food system. When "voting" in the marketplace, the ballots can be cast towards community regeneration instead of corporate profit.

Ultimately, the approaches to improving the food system are as complex as the problems they seek to overcome. Contrary to what market preaches, there is no "easy" way to ensure environmental sustainability and social justice locally and globally. Plant-based egg and cheese company Spero Foods's website proclaims that their product offers "Finally. Food without compromise" (2018). I argue that there is no food without compromise, and consumers must critically engage with the food system to understand what the implications of consumption choices are.

Neoliberal ideals of minimal sacrifice for maximum reward applaud the potential of one purchase of a product or one meatless meal, in the case of the plant-based foods movement, to overcome environmental devastation or realize the goals of the alternative food revolution. Beyond Meat's Beyond Burger package emphasizes how purchasing their product allows consumers to "eat more, not less, of the traditional dishes you love, while feeling great about the health, sustainability, and animal welfare benefits of plant protein." This rhetoric of minimum effort and instant gratification undermines the meaningful actions that can be taken towards a more sustainable, fair, and interconnected/communal food system.

While green consumerism superficially promises consumer empowerment in changing the food system, realistically it upholds the capitalist logic and institutions that play a significant role in the problem in the first place. On the contrary, "to challenge that paradigm and its foodways is to challenge the powerful and profitable industry that supports and supplies them" (Flail 2006, 149). If conscious consumers seek to act in ways that acknowledge the dynamic

relationships between production and consumption, action does not have to end at the level of the capitalist marketplace. Rather than judging the success of the movement by the market response (for example, a wider selection of plant-based foods), there is more fruitful work to be done than attempt to "shop society's way out of unsustainability" (Brunori et al. 2008).

Those concerned about the sustainable production of their food can learn to grow their own. Those who care about fair labor practices can advocate for workers' rights through organizations such as the Food Chain Workers Alliance rather than buy products marketed as environmentally "green" or Fairtrade. Those who wish to support local farmers and get their food "straight from the source" can do so by directly interacting with farmers or community gardens instead of buying from the "local" section of a grocery store, which in some cases simply means the farms are located near massive distribution centers (Davis 2016).

Every day we make decisions about how we interact with the food system, which do not have to be limited to our trips to the grocery store and our roles as consumers. There may not be food without compromise, but genuinely conscious involvement with the systems of food production, distribution, and consumption can be delicious in itself.

Works Cited

"10 Things I Wish All Americans Knew About The Meat and Dairy Industries." *Meatonomic$* (blog), September 28, 2013. https://meatonomics.com/2013/09/28/10-things-i-wish-all-americans-knew-about-the-meat-dairy-industries/.

"50 Easy Ways to Save the Planet." The Guardian, August 22, 2002. https://www.theguardian.com/environment/2002/aug/22/worldsummit2002.earth21.

"About." Bare Snacks. Accessed November 24, 2018. https://baresnacks.com/pages/about.

Adams, Carol J. *The Sexual Politics of Meat: A Feminist-Vegetarian Critical Theory*. Bloomsbury Revelations. Bloomsbury Academic, 2015.

Adams, Richard. "Green Consumerism and the Food Industry: Early Signs of Big Changes to Come." *British Food Journal* 92, no. 9 (September 1, 1990): 11–14. https://doi.org/10.1108/00070709010142685.

Alfredsson, E. C. "'Green' Consumption—No Solution for Climate Change." *Energy* 29, no. 4 (March 1, 2004): 513–24. https://doi.org/10.1016/j.energy.2003.10.013.

Alkon, Alison Hope. "Food Justice and the Challenge to Neoliberalism." *Gastronomica: The Journal of Critical Food Studies* 14, no. 2 (May 1, 2014): 27–40. https://doi.org/10.1525/gfc.2014.14.2.27.

"All You Can Eat: The 15 Most Well-Funded VC-Backed Food Startups." CB Insights, May 30, 2017. https://www.cbinsights.com/research/food-beverage-startups-most-well-funded-vc-backed/.

Allgrove, April, and Alison Hope Alkon. "Bringing Community Voices to the Table." Food Empowerment Project, 2010. http://www.foodispower.org/wp-content/uploads/FEP_community_voices_report.pdf.

"America's Next Top Polluter Corporate Agribusiness Company Profle Tyson Foods, Inc." Environment America, February 4, 2016. https://environmentamerica.org/reports/ame/america%E2%80%99s-next-top-polluter.

"Animal Production." Food and Agriculture Organization of the United Nations. Accessed November 3, 2018. http://www.fao.org/animal-production/en/.

Archer Daniels Midland. "Soya Foods." Nutrition Homepage. Official Website. October 1, 2005. http://www.admworld.com/euen/nutrition/.

Atalan-Helicke, Nurcan. "Conserving Diversity at the Dinner Table: Plants, Food Security, and Gene Banks." *Origins: Current Events in Historical Perspective* 5, no. 4 (January 2012). http://origins.osu.edu/article/conserving-diversity-dinner-table-plants-food-security-and-gene-banks.

Aubrey, Allison. "Does Subsidizing Crops We're Told To Eat Less Of Fatten Us Up?" NPR, July 18, 2016. https://www.npr.org/sections/thesalt/2016/07/18/486051480/we-subsidize-crops-we-should-eat-less-of-does-this-fatten-us-up.

Barnett, Clive, Paul Cloke, Nick Clarke, and Alice Malpass. "Consuming Ethics: Articulating the Subjects and Spaces of Ethical Consumption." *Antipode* 37, no. 1 (January 2005): 23–45. https://doi.org/10.1111/j.0066-4812.2005.00472.x.

Bearse, Scott, Peter Capozucca, Laura Favret, and Brian Lynch. "Finding the Green in Today's Shoppers: Sustainability Trends and New Shopper Insights." Deloitte Development LLC, 2009. https://www.gmaonline.org/downloads/research-and-reports/greenshopper09.pdf.

Bell, David, and Gill Valentine. *Consuming Geographies : We Are Where We Eat*. Routledge, 1997. https://doi.org/10.4324/9780203349656.

Berardy, Andrew, Christine Costello, and Thomas P. Seager. “Life Cycle Assessment of Soy Protein Isolate.” *ISSST*, January 2015. https://doi.org/DOI: 10.6084/M9.

Blythman, Joanna. “The Quorn Revolution: The Rise of Ultra-Processed Fake Meat.” *The Guardian*, February 12, 2018, sec. Food. https://www.theguardian.com/lifeandstyle/2018/feb/12/quorn-revolution-rise-ultra-processed-fake-meat.

Brunori, Gianluca, Francesca Guidi, and Adanella Rossi. “On the new social relations around and beyond food: Analysing consumers role and action.” Paper presented at the Sustainable Consumption Conference, 2008.

Cho, Renee. “The Truth About Bioplastics.” *State of the Planet* (blog), December 13, 2017. https://blogs.ei.columbia.edu/2017/12/13/the-truth-about-bioplastics/.

Cockrall-King, Jennifer. *Food and the City: Urban Agriculture and the New Food Revolution*. Prometheus Books, 2012.

Conway, Gordon R. & Pretty, Jules N. *Unwelcome Harvest: Agriculture and pollution.* Routledge, 2013.

Cooper, Ben. “The Growing Consumer Pull for Sustainable Food in the US.” Just-Food, March 1, 2018. https://www.just-food.com/analysis/the-growing-consumer-pull-for-sustainable-food-in-the-us_id138779.aspx.

“Dairy and Dairy Alternative Beverage Trends in the U.S., 3rd Edition.” Packaged Facts, April 27, 2015. https://www.packagedfacts.com/Dairy-Alternative-Beverage-8945813/.

Dalgaard, Randi, Jannick Schmidt, Niels Halberg, Per Christensen, Mikkel Thrane, and Walter A. Pengue. “LCA of Soybean Meal.” *The International Journal of Life Cycle Assessment* 13, no. 3 (2008): 240–54.

DeLind, Laura B. “Are Local Food and the Local Food Movement Taking Us Where We Want to Go? Or Are We Hitching Our Wagons to the Wrong Stars?” *Agriculture and Human Values* 28, no. 2 (June 1, 2011): 273–83. https://doi.org/10.1007/s10460-010-9263-0.

———. “Market Niches, ‘Cul de Sacs’, and Social Context: Alternative Systems of Food Production.” *Culture & Agriculture* 13, no. 47 (September 1, 1993): 7–12. https://doi.org/10.1525/cuag.1993.13.47.7.

———. “Transforming Organic Agriculture into Industrial Organic Products: Reconsidering National Organic Standards.” *Human Organization* 59, no. 2 (June 2000): 198–208. https://doi.org/10.17730/humo.59.2.hm8263678687n536.

“Diesel and the Environment - Energy Explained, Your Guide To Understanding Energy.” Energy Information Administration, September 28, 2018. https://www.eia.gov/energyexplained/index.php?page=diesel_environment.

Dolan, Paddy. “The Sustainability of Sustainable Consumption.” *Journal of Macromarketing* 22, no. 2 (2002): 170-181. https://doi:10.1177/0276146702238220.

Donnelly, Tim. “Daiya Vegan Cheese Is Now Owned by a Company That Tests on Animals.” The Outline, August 18, 2017. https://theoutline.com/post/2145/daiya-otsuka-vegan-cheese-controversy.

Edwards, Chris. “Agricultural Subsidies.” Downsizing the Federal Government, April 16, 2018. https://www.downsizinggovernment.org/agriculture/subsidies.

“Ergonomics in the warehouse: warehouse workers face the highest rates of major injury among all supermarket industry workers, yet little has been done to implement programs that minimize the risks.” *The Free Library*, 2002. https://www.thefreelibrary.com/Ergonomics+in+the+warehouse%3a+warehouse+workers+face+the+highest+rates...-a092082589

Eubanks, William S. “A Rotten System: Subsidizing Environmental Degradation and Poor Public Health with Our Nation’s Tax Dollars” 28 (n.d.): 98.
“Examining the Impact of Food Deserts on Public Health in CHICAGO.” Mari Gallagher Research and Consulting Group, July 18, 2006. https://www.marigallagher.com/2006/07/18/examining-the-impact-of-food-deserts-on-public-health-in-chicago-july-18-2006/.
“Farm to Market: A Soybean’s Journey.” Soy Transportation Coalition, n.d. http://www.soytransportation.org/FarmToMarket/FarmToMarketSummary.pdf.
Fegitz, Ella, and Daniela Pirani. “The Sexual Politics of Veggies: Beyoncé’s ‘Commodity Veg*ism.’” *Feminist Media Studies* 18, no. 2 (2018): 294–308. https://doi.org/10.1080/14680777.2017.1358200.
Ferdman, Roberto A. “The Word ‘Natural’ Helps Sell $40 Billion Worth of Food in the U.S. Every Year—and the Label Means Nothing.” Washington Post, June 24, 2014. https://www.washingtonpost.com/news/wonk/wp/2014/06/24/the-word-natural-helps-sell-40-billion-worth-of-food-in-the-u-s-every-year-and-the-label-means-nothing/.
Fetter, Frank A. *The Principles of Economics*. The Century Company, 1911.
Fiddes, Nick. *Meat: A Natural Symbol*. 1st ed. Routledge, 1992.
Flail, Gregory James. “The Sexual Politics of Meat Substitutes.” Georgia State University, June 9, 2006. https://scholarworks.gsu.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1008&context=english_diss.
Fort, Ellen. “Impossible Foods Plans World Domination With Oakland Production Facility.” Eater SF, March 22, 2017. https://sf.eater.com/2017/3/22/15029766/impossible-foods-oakland-expansion-kronnerburger.
Fox, Katrina. “Here’s Why You Should Turn Your Business Vegan In 2018.” Forbes, December 27, 2017. https://www.forbes.com/sites/katrinafox/2017/12/27/heres-why-you-should-turn-your-business-vegan-in-2018/.
Freeman, Andrea. “The Unbearable Whiteness of Milk: Food Oppression and the USDA.” SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, 2013. https://papers.ssrn.com/abstract=2338749.
Freidberg, Susanne. “Perspective and Power in the Ethical Foodscape.” *Environment and Planning A: Economy and Space* 42, no. 8 (August 1, 2010): 1868–74. https://doi.org/10.1068/a43217.
———. “The Ethical Complex of Corporate Food Power.” *Environment and Planning D: Society and Space* 22, no. 4 (August 2004): 513–31. https://doi.org/10.1068/d384.
———. “The Contradictions of Clean: Supermarket Ethical Trade and African Horticulture.” *International Institute for Environment and Development*, January 1, 2003. https://www.jstor.org/stable/resrep01745.
Friedman, Lisa, Kendra Pierre-Louis, and Somini Sengupta. “The Meat Question, by the Numbers.” *The New York Times*, October 25, 2018, sec. Climate. https://www.nytimes.com/2018/01/25/climate/cows-global-warming.html.
Friedman, Milton & Friedman, Rose. *Free to Choose: A Personal Statement.* Mariner Books, 1990.
Furlong, Hannah. “Tyson Foods Dumps More Pollution Into Waterways Each Year Than ExxonMobil.” Sustainable Brands, February 12, 2016. http://www.sustainablebrands.com/news_and_views/behavior_change/hannah_furlong/tyson_foods_dumps_more_pollution_waterways_each_year_e.
Gabriel, Yiannis & Lang, Tim. “A brief history of consumer activism.” ResearchGate, January 2005. https://www.researchgate.net/publication/288272919_A_brief_history_of_consumer_activism.

Gallagher, Shana. “Tyson Foods Linked to Largest Toxic Dead Zone in U.S. History.” *EcoWatch*, October 31, 2017. https://www.ecowatch.com/tyson-foods-toxic-dead-zone-2504305201.html

Geiser, Kenneth, & Rosenberg, Beth. “The social context of occupational and environmental health,” In *Occupational and environmental health: Recognizing and preventing disease and injury*. Lippincott Williams & Wilkins, 2006.

Goodman, Michael K, Damian Maye, and Lewis Holloway. “Ethical Foodscapes?: Premises, Promises, and Possibilities.” *Environment and Planning A* 42, no. 8 (August 2010): 1782–96. https://doi.org/10.1068/a43290.

Gordon, James. “Food Rebellion: Contemporary Food Movements as a Reflection of Our Agrarian Past.” *Pomona Senior Theses*, 2016, 95.

“Green Product Trends: More Launches, More Sales.” Text. GreenBiz, April 23, 2009. https://www.greenbiz.com/news/2009/04/23/green-product-trends-more-launches-more-sales.

Greenhouse, Steven. “Labor Battle at Kellogg Plant in Memphis Drags On.” *The New York Times*, December 20, 2017, sec. Business. https://www.nytimes.com/2014/02/11/business/kellogg-workers-in-4th-month-of-lockout-in-memphis.html.

Guckian, Meaghan, Raymond De Young, and Spencer Harbo. “Beyond Green Consumerism: Uncovering the Motivations of Green Citizenship.” *Michigan Journal of Sustainability* 5, no. 1 (2017). http://dx.doi.org/10.3998/mjs.12333712.0005.105.

Guthman, Julie. *Agrarian Dreams: The Paradox of Organic Farming in California*. University of California Press, 2004.

———. “Fast Food/Organic Food: Reflexive Tastes and the Making of ‘Yuppie Chow’: Social & Cultural Geography: Vol 4, No 1,” 2003. https://www.tandfonline.com/doi/abs/10.1080/1464936032000049306.

———. “‘If They Only Knew’: Color Blindness and Universalism in California Alternative Food Institutions.” *The Professional Geographer* 60, no. 3 (August 2008): 387–97. https://doi.org/10.1080/00330120802013679.

Haley, Mildred. “Livestock, Dairy, and Poultry Outlook,” 2018, 22.

Harper, Amie “Breeze.” “The Future Is Vegan…(And Still A White Supremacist Racial Caste-Capitalist System).” *Sistah Vegan* (blog), September 17, 2018. http://www.sistahvegan.com/2018/09/17/the-future-is-vegan-and-still-a-white-supremacist-racial-caste-capitalist-system/.

Harris, Marvin. *Good to Eat: Riddles of Food and Culture*. Waveland Press, 1998.

Haspel, Tamar. “Perspective | Why Do Taxpayers Subsidize Rich Farmers?” Washington Post, March 15, 2018. https://www.washingtonpost.com/lifestyle/food/why-do-taxpayers-subsidize-rich-farmers/2018/03/15/50e89906-27b6-11e8-b79d-f3d931db7f68_story.html.

Hawken, Paul. *Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming*. Penguin Books, 2017.

Hayes, Tom. “Why We Are Investing in Alternative Proteins,” January 29, 2018. https://www.tysonfoods.com/the-feed-blog/why-we-are-investing-alternative-proteins.

Herzog, Stephen. “Tyson to Pay Half a Million in Fish Kill Settlement.” Springfield News-Leader, January 20, 2015. https://www.news-leader.com/story/news/local/ozarks/2015/01/20/tyson-pay-half-million-fish-kill-settlement/22048151/.

Heynen, Nik, Hilda E. Kurtz, and Amy Trauger. “Food Justice, Hunger and the City.” *Geography Compass* 6, no. 5 (May 1, 2012): 304–11. https://doi.org/10.1111/j.1749-8198.2012.00486.x.

Hilmers, Angela, David C. Hilmers, and Jayna Dave. "Neighborhood Disparities in Access to Healthy Foods and Their Effects on Environmental Justice." *American Journal of Public Health* 102, no. 9 (September 2012): 1644–54. https://doi.org/10.2105/AJPH.2012.300865.
Hilton, Matthew. *Consumerism in Twentieth-Century Britain: The Search for a Historical Movement*. Cambridge University Press, 2003.
"Hippeas." Accessed November 24, 2018. http://hippeas.com/.
"Hippeas." Accessed December 3, 2018. http://uk.hippeas.com/.
"Home." Vegan Bros. Accessed November 27, 2018. http://veganbros.com/.
Horne, James E, and Maura McDermott. "The Next Green Revolution." *EVALUATIONS . . .*, n.d., 337.
Horrigan, Leo, Lawrence, Robert S., and Walker, Polly. "How Sustainable Agriculture Can Address the Environmental and Human Health Harms of Industrial Agriculture." *Environmental Health Perspective* 110 (2002): 445–456.
"How Many Products Does Amazon Sell Worldwide - January 2018." *ScrapeHero* (blog), January 15, 2018. https://www.scrapehero.com/how-many-products-amazon-sell-worldwide-january-2018/.
Imhoff, Daniel. "Overhauling the Farm Bill: The Real Beneficiaries of Subsidies." The Atlantic, March 21, 2012. https://www.theatlantic.com/health/archive/2012/03/overhauling-the-farm-bill-the-real-beneficiaries-of-subsidies/254422/.
"Infographic: A useful tool to find out who owns organic food." *Food Revolution Network*, January 28, 2016. https://foodrevolution.org/blog/organic-food-infographic/.
Isenhour, Cindy. "Can Consumer Demand Deliver Sustainable Food?: Recent Research in Sustainable Consumption Policy & Practice," n.d., 50.
"It's Clear: Transparency Is Winning the U.S. Retail Market." Nielsen, August 21, 2017. https://www.nielsen.com/us/en/insights/reports/2017/transparency-is-winning-the-us-retail-market.html.
Ivanova, Diana, Konstantin Stadler, Kjartan Steen-Olsen, Richard Wood, Gibran Vita, Arnold Tukker, and Edgar G. Hertwich. "Environmental Impact Assessment of Household Consumption." *Journal of Industrial Ecology* 20, no. 3 (December 18, 2015). https://doi.org/10.1111/jiec.12371.
Iyer, Easwar & Banerjee, Bobby. "Anatomy of Green Advertising." *Association for Consumer Research* 20 (1993): 494-501. http://acrwebsite.org/volumes/7499/volumes/v20/NA-20.
Jaffe, Rivke, and Bart Barendregt. *Green Consumption: The Global Rise of Eco-Chic*. London: Bloomsbury Academic, 2014.
Johnston, Josée. "Counterhegemony or Bourgeious Piggery? Food Politics and the Case of Foodshare." *The Fight Over Food: Producers, Consumers, and Activists Challenge the Global Food System*, ed. W. Wright and G. Middendorf. Penn State University Press, 2007.
———. "The Citizen-Consumer Hybrid: Ideological Tensions and the Case of Whole Foods Market." *Theory and Society* 37, no. 3 (June 2008): 229–70. https://doi.org/10.1007/s11186-007-9058-5.
Johnston, Josée, Michelle Szabo, and Alexandra Rodney. "Good Food, Good People: Understanding the Cultural Repertoire of Ethical Eating." *Journal of Consumer Culture* 11, no. 3 (November 2011): 293–318. https://doi.org/10.1177/1469540511417996.
Jolley, Chuck. "Six Greatest Ag Challenges for 2018." Feedstuffs, December 6, 2017. https://www.feedstuffs.com/commentary/six-greatest-ag-challenges-2018.
Kandel, William. "Profile of Hired Farmworkers, A 2008 Update." ERS Report Summary, July 2008. https://www.ers.usda.gov/webdocs/publications/46038/12055_err60_reportsummary_1_.pdf?v=0.

Kearns, Joseph P, Galen J Rokey, and Gordon R Huber. “Extrusion of Texturized Proteins,” n.d., 18.
Kewalramani, Devika, and Richard J. Sobelsohn. “‘Greenwashing’: Deceptive Business Claims of ‘Eco-Friendliness.’” Forbes, March 20, 2012. https://www.forbes.com/sites/realspin/2012/03/20/greenwashing-deceptive-business-claims-of-eco-friendliness/.
Lamothe, Cindy. “These 43 Eco-Friendly Products Will Help You Save The Planet.” *HealthyWay* (blog), August 21, 2018. https://www.healthyway.com/content/these-43-eco-friendly-products-will-help-you-save-the-planet/.
Lear, Jane. “Jane Says: Even Vegans Will Enjoy These ‘Meats.’” TakePart, May 21, 2014. http://www.takepart.com/article/2014/05/21/vegan-meats.
Letten, Matt, and Phil Letten. *Vodka Is Vegan: A Vegan Bros Manifesto for Better Living and Not Being an A**hole*. Penguin, 2018.
Little, Lindsey. “10 Vegan Foods Packed with Protein.” One Green Planet, October 21, 2013. http://www.onegreenplanet.org/vegan-food/10-vegan-foods-packed-with-protein.
“Livestock and the Environment.” Food and Agriculture Organization of the United Nations. Accessed November 3, 2018. http://www.fao.org/livestock-environment/en/.
Lo, Joann, and Alexa Delwiche. “The Good Food Purchasing Policy: A Tool to Intertwine Worker Justice with a Sustainable Food System.” *Journal of Agriculture, Food Systems, and Community Development* 6, no. 2 (2016): 185–94. https://doi.org/10.5304/jafscd.2016.062.016.
Loewe, Emma. “10 Celebrities With Green Campaigns We Can Get Behind.” Mindbodygreen, January 31, 2016. http://www.mindbodygreen.com/0-23543/10-celebrities-with-green-campaigns-we-can-get-behind.html.
Lorde, Audre. *Sister Outsider: Essays and Speeches*. Crossing Press, 1984.
Mack, Adam. “The Politics of Good Taste: Whole Foods Markets and Sensory Design.” *The Senses and Society* 7, no. 1 (March 2012): 87–94. https://doi.org/10.2752/174589312X13173255802166.
Malito, Alessandra. “Grocery stores carry 40,000 more items than they did in the 1990s.” MarketWatch, June 17, 2017. https://www.marketwatch.com/story/grocery-stores-carry-40000-more-items-than-they-did-in-the-1990s-2017-06-07.
Marsh, Kenneth S., Betty Bugusu, and Toni Tarver. “Food Packaging and Its Environmental Impact.” *Food Technology Magazine* 61, no. 4 (April 2007): 46–50.
Martin, Philip & Jackson-Smith, Douglas. “Immigration and Farm Labor in the U.S.” Policy Brief. National Agricultural & Rural Development Policy Center, May 2013. http://www.nardep.info/uploads/Brief_FarmWorker.pdf.
Merkel, Michele. “Perdue’s ‘Corporate Sustainability Platform’: Putting Lipstick on a Chicken.” Food & Water Watch, September 11, 2013. https://www.foodandwaterwatch.org/news/perdue%E2%80%99s-%E2%80%9Ccorporate-sustainability-platform%E2%80%9D-putting-lipstick-chicken.
Micheletti, Michele. *Political Virtue and Shopping - Individuals, Consumerism, and Collective Action*. Palgrave Macmillan, 2003. https://www.palgrave.com/gp/book/9781403961334.
Mitchelson, Alana. “PepsiCo, Kellogg’s Slammed for Concealing Palm Oil Secrets.” The New Daily, March 21, 2018. https://thenewdaily.com.au/money/finance-news/2018/03/21/palm-oil-pepsi-kelloggs/.
Molla, Rani. “For the Wealthiest Americans, Amazon Prime Has Become the Norm.” Recode, June 8, 2017. https://www.recode.net/2017/6/8/15759354/amazon-prime-low-income-discount-piper-jaffray-demographics.

Moore, Latetia V., and Ana V. Diez Roux. “Associations of Neighborhood Characteristics With the Location and Type of Food Stores.” *American Journal of Public Health* 96, no. 2 (February 2006): 325–31. https://doi.org/10.2105/AJPH.2004.058040.
Morath, Sarah J. “The Farm Bill: A Wicked Problem Seeking a Systematic Solution,” n.d., 37.
National Research Council. *Sustainability and the U.S. EPA.* National Academies Press (US), 2011. https://doi.org/10.17226/13152.
“Natural Food Labels Survey.” Consumer Reports National Research Center, 2015. https://www.consumerreports.org/content/dam/cro/magazine-articles/2016/March/Consumer_Reports_Natural_Food_Labels_Survey_2015.pdf.
Nealon, Sean. “Soybean Oil Causes More Obesity Than Coconut Oil and Fructose.” UCR Today, July 22, 2015. https://ucrtoday.ucr.edu/30416.
Nesheim, Malden C., Maria Oria, and Peggy Tsai Yih. *Social and Economic Effects of the U.S. Food System*. National Academies Press (US), 2015. https://www.ncbi.nlm.nih.gov/books/NBK305168/.
Nestle, Marion. “The Infamous ‘Revolving Door:’ Two Recent Examples.” *Food Politics by Marion Nestle* (blog), September 29, 2014. https://www.foodpolitics.com/2014/09/the-infamous-revolving-door-two-recent-examples/.
“Nestlé USA Agrees to Acquire Sweet Earth.” Nestlé, September 7, 2017. https://www.nestleusa.com/media/pressreleases/nestle-sweet-earth-foods.
Nunez, Lucia. “Local Food Networks and the Power of Community.” *Scripps Senior Theses*, January 1, 2015. https://scholarship.claremont.edu/scripps_theses/615.
Ottman, Jacquelyn. *Green Marketing: Challenges and Opportunities for New Marketing Age.* NTC Business Books, 1993.
Peattie, Ken, and Andrew Crane. “Green Marketing: Legend, Myth, Farce or Prophesy?” *Qualitative Market Research; Bradford* 8, no. 4 (2005): 357–70.
Pengue, Walter A. “Increasing Roundup Ready Soybean Export from Argentina,” January 2006. https://www.researchgate.net/publication/284510906_Increasing_Roundup_Ready_soybean_export_from_Argentina.
“Pesticide Residue Monitoring Program Fiscal Year 2016 Pesticide Report.” U.S. Food and Drug Administration, 2016. https://www.fda.gov/downloads/Food/FoodborneIllnessContaminants/Pesticides/UCM618373.pdf.
Pevreall, Katie. “Slaughterhouse Workers: The Forgotten Victims of the Meat Industry.” *LIVEKINDLY* (blog), July 12, 2017. https://www.livekindly.co/slaughterhouse-workers-victims-meat-industry/.
Pilzer, Paul Zane. “The Wellness Revolution,” n.d., 4.
Plumwood, Val. *Feminism and the Mastery of Nature*. London; New York: Routledge, 2002.
Pollan, Michael. “Behind the Organic-Industrial Complex,” n.d., 18.
———. “Farmer in Chief.” *The New York Times*, October 21, 2008, sec. Magazine. https://www.nytimes.com/2008/10/26/magazine/26letters-t-1.html.
———. *Food Rules: An Eater’s Manual*. 1st ed. Penguin, 2009. https://www.amazon.com/Food-Rules-Eaters-Michael-Pollan/dp/014311638X.
Prothero, Andrea, Pierre McDonagh, and Susan Dobscha. “Is Green the New Black? Reflections on a Green Commodity Discourse.” *Journal of Macromarketing* 30, no. 2 (June 2010): 147–59. https://doi.org/10.1177/0276146710361922.

Rabschnuk, Alison. “Tyson Launches 100% Plant-Based Brand.” The Good Food Institute, February 26, 2018. https://www.gfi.org/tyson-launches-100-plant-based-brand.
Raupp Joachim. “Yield, Product quality and soil life after long-term organic or mineral fertilization,” In *Agricultural Productio nand Nutrition: Proceedings of an International Conference* (1997): 91–102.
Rimal, A.P. “Factors Affecting Meat Preferences among American Consumers.” ResearchGate, January 2002. https://www.researchgate.net/publication/288624256_Factors_affecting_meat_preferences_among_American_consumers.
Robinson, Claire. “The Impossible Burger: Boon or Risk to Health and Environment?” GMO Science, May 16, 2018. https://www.gmoscience.org/impossible-burger-boon-risk-health-environment/.
Rogers, Richard A. “Beasts, Burgers, and Hummers: Meat and the Crisis of Masculinity in Contemporary Television Advertisements.” *Environmental Communication* 2, no. 3 (November 2008): 281–301. https://doi.org/10.1080/17524030802390250.
Saphore, Jean-Daniel M., Hilary Nixon, Oladele A. Ogunseitan, and Andrew A. Shapiro. “California Households’ Willingness to Pay for ‘Green’ Electronics.” *Journal of Environmental Planning and Management* 50, no. 1 (2007): 113–33. https://doi.org/10.1080/09640560601048549.
“Saving Wildlife Starts with a Click. See How You and Dawn Dish Soap Can Make a Difference.” Dawn. Accessed November 24, 2018. https://dawn-dish.com/en-us/dawn-saves-wildlife.
Schmidt Rivera, Ximena C., Espinoza Orias, Namy, and Azapagic, Adisa. “Life cycle environmental impacts of convenience food: Comparison of ready and home-made meals.” *Journal of Cleaner Production* 73 (June 2014): 294-309. https://doi.org/10.1016/j.jclepro.2014.01.008.
Shamir, Ronen. “The age of responsibilization: on market-embedded morality.” *Economy and Society* 37, no. 1 (2008): 1-19. https://doi.org/10.1080/03085140701760833
Shanker, Deena, and Lydia Mulvany. “Perdue Explores Non-Meat Options as Plant Protein Appetite Grows.” *Bloomberg*, September 5, 2018. https://www.bloomberg.com/news/articles/2018-09-05/perdue-explores-non-meat-options-as-plant-protein-appetite-grows.
Sheppard, Jerry Paul, and Dean Pettit. “It’s Not Easy Being Green: The Limits of Green Consumerism in Light of the Logic of Collective Action,” n.d., 23.
Shoup, Mary Ellen. “DMI CEO: Americans Ate a Record Amount of Cheese Last Year Driven by Foodservice Sector.” Dairy Reporter, November 7, 2017. https://www.dairyreporter.com/Article/2017/11/07/DMI-CEO-Americans-ate-a-record-amount-of-cheese-last-year-driven-by-foodservice-sector.
Simcikas, Saulius. “Is the Percentage of Vegetarians and Vegans in the U.S. Increasing?” *Animal Charity Evaluators* (blog), August 16, 2018. https://animalcharityevaluators.org/blog/is-the-percentage-of-vegetarians-and-vegans-in-the-u-s-increasing/.
Simon, Michele. “Plant Based Foods Sales Experience 8.1 Percent Growth Over Past Year.” PRWeb, September 13, 2017. https://www.prweb.com/releases/2017/09/prweb14683840.htm.
Singer, Ross. “Neoliberal Backgrounding, the Meatless Monday Campaign, and the Rhetorical Intersections of Food, Nature, and Cultural Identity.” *Communication, Culture & Critique* 10, no. 2 (2016): 344–64. https://doi.org/10.1111/cccr.12155.
Smetana, Sergiy, Alexander Mathys, Achim Knoch, and Volker Heinz. “Meat Alternatives: Life Cycle Assessment of Most Known Meat Substitutes.” *The International Journal of Life Cycle Assessment* 20, no. 9 (September 1, 2015): 1254–67. https://doi.org/10.1007/s11367-015-0931-6.

Smith, Kat. “America’s 3rd Largest Poultry Producer Considers Launching Vegan Options.” *LIVEKINDLY* (blog), September 6, 2018. https://www.livekindly.co/perdue-farms-exploring-vegan-protein/.

———. “Consumers Are Buying 10 Times More Vegan Food Than Last Year.” *LIVEKINDLY* (blog), August 1, 2018. https://www.livekindly.co/vegan-food-sales-3-3-billion-2017/.

Sneeringer, Stacy. “Does Animal Feeding Operation Pollution Hurt Public Health? A National Longitudinal Study of Health Externalities Identified by Geographic Shifts in Livestock Production.” *American Journal of Agricultural Economics* 91, no. 1 (February 1, 2009): 124–37. https://doi.org/10.1111/j.1467-8276.2008.01161.x.

Soper, Kate. “Rethinking the ‘Good Life’: The Consumer as Citizen.” *Capitalism Nature Socialism* 15, no. 3 (May 23, 2006): 111–16. https://doi.org/10.1080/10455750420002472 93.

“Spero Foods.” Spero Foods. Accessed November 24, 2018. https://www.sperofoods.co.

Stănescu, Vasile. “‘Green’ Eggs and Ham? The Myth of Sustainable Meat and the Danger of the Local.” *Journal for Critical Animal Studies* 8, no. 1/2 (2010). http://www.criticalanimalstudies.org/wp-content/uploads/2009/09/2-JCAS-Vol-VIII-Issue-I-and-II-2010-Essay-GREEN-EGGS-AND-HAM-pp-8-32.pdf.

Straughan, Robert D., and James A. Roberts. “Environmental Segmentation Alternatives: A Look at Green Consumer Behavior in the New Millennium.” *Journal of Consumer Marketing* 16, no. 6 (December 1999): 558–75.

“Study: Effectively Marketing Sustainable Goods Could Represent $1T Market Opportunity.” Sustainable Brands, January 5, 2017. http://www.sustainablebrands.com/news_and_views/stakeholder_trends_insights/sustainable_brands/study_effectively_marketing_sustainabl.

“Sustainable Life at Home.” IKEA. Accessed November 24, 2018. https://www.ikea.com/ms/en_US/this-is-ikea/people-and-planet/sustainable-life-at-home/index.html.

Szaky, Tom. “Bioplastics and the Truth About Biodegradable Plastic.” *Huffington Post* (blog), January 11, 2016. https://www.huffingtonpost.com/tom-szaky/bioplastics-and-the-truth_b_8954844.html.

Tabone, Michaelangelo D., James J. Cregg, Eric J. Beckman, and Amy E. Landis. “Sustainability Metrics: Life Cycle Assessment and Green Design in Polymers.” *Environmental Science & Technology*, 2010. http://www.news.pitt.edu/sites/default/files/documents/TaboneLandis_etal.pdf.

“Technology of Production of Edible Flours and Protein Products from Soybeans. Chapter 6.” Food and Agriculture Organization of the United Nations. Accessed November 4, 2018. http://www.fao.org/docrep/t0532e/t0532e07.htm.

“The Future of Meat.” Reducetarian Foundation. Accessed November 15, 2018. https://www.youtube.com/watch?reload=9&v=66RmFV568Ow.

“The Great Pacific Garbage Patch.” The Ocean Cleanup. Accessed November 16, 2018. https://www.theoceancleanup.com/great-pacific-garbage-patch/.

“The Hands That Feed Us: Challenges and Opportunities for Workers Along the Food Chain.” Food Chain Workers Alliance, June 6, 2012. https://foodchainworkers.org/wp-content/uploads/2012/06/Hands-That-Feed-Us-Report.pdf.

Thomas, Susan, and Anastasia Yarbrough. “Women of Color in Critical Animal Studies.” *Journal for Critical Animal Studies* 8, no. 3 (2010): 71.

Tomczak, Jay. “Implications of Fossil Fuel Dependence for the Food System.” Resilience, June 10, 2006. https://www.resilience.org/stories/2006-06-11/implications-fossil-fuel-dependence-food-system/.
Tornaghi, Chiara. “Urban Agriculture in the Food-Disabling City: (Re)Defining Urban Food Justice, Reimagining a Politics of Empowerment: (Re)Defining Urban Food Justice.” *Antipode* 49, no. 3 (June 2017): 781–801. https://doi.org/10.1111/anti.12291.
“Vegan Cheese Market - Global Scenario, Market Size, Outlook, Trend and Forecast, 2015 – 2024.” Variant Market Research, Bharat Book Bureau, November 11, 2017. https://www.bharatbook.com/marketreports/vegan-cheese-mozzarella-parmesan-cheddar/961214.
Ward, Susan. “What Is Green Marketing and How Do You Do It Right?” The Balance Small Business, November 17, 2018. https://www.thebalancesmb.com/green-marketing-2948347.
Webber, Jemima. “Richard Branson’s New Cruise Ship Increases Vegan Options for Sustainability.” *LIVEKINDLY* (blog), November 15, 2018. https://www.livekindly.co/richard-bransons-new-cruise-ship-increases-vegan-options-for-sustainability/.
Weber, C.L., and H.S. Matthews. “Food-Miles and the Relative Climate Impacts of Food Choices in the United States. - PubMed - NCBI.” *Environmental Science & Technology* 42, no. 10 (May 15, 2008): 3508–13.
Welbel, Maia. “Roots of a Movement: Community Action and the Impact of Urban Agriculture in Chicago.” *Pomona Senior Theses*, January 1, 2017. https://scholarship.claremont.edu/pomona_theses/177.
Welsch, Heinz & Kühling, Jan. “Determinants of pro-environmental consumption: The role of reference groups and routine behavior.” *Ecological Economics* 69, no. 1 (2009): 166-176.
Westhoek, Henk. “The Impact of Livestock on Biodiversity.” *Netherlands Environmental Assessment Agency*, 2010, 35.
“What We Believe.” Kashi. Accessed November 16, 2018. https://www.kashi.com/what-we-believe.
“Who Owns Organic.” Cornucopia Institute. Accessed November 1, 2018. https://www.cornucopia.org/who-owns-organic/.
Whoriskey, Peter. “Your Favorite Organic Brand Is Actually Owned by a Multinational Food Company.” Washington Post, May 6, 2015. https://www.washingtonpost.com/news/wonk/wp/2015/05/06/your-favorite-organic-brand-is-actually-owned-by-a-multinational-food-company/.
“Who’s Buying Clean Label Products?” Nielsen, September 11, 2017. https://www.nielsen.com/us/en/insights/news/2017/whos-buying-clean-label-products.html.
“Why We Do It.” The Reducetarian Foundation. Accessed November 3, 2018. https://reducetarian.org/why/.