Sprawling Fields and Food Deserts:
An ontological exploration of food and farming systems in Ohio

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ABSTRACT

Ohio is one of the largest agricultural producers in the United States and yet Ohioans experience food insecurity at a rate two percent higher than the national average. An analysis of Ohio's agricultural sector in relation to the current global food system suggests that the neoliberal imaginary orders social and ecological relations at both the international and domestic levels. This ordering perpetuates and justifies the continued exploitation of both labor and land and is based on ontological separation of human and ecological systems. This imaginary has given rise to the framework of food security, which has become the singular framework under which solutions to food and climate challenges are outlined by both local policy makers and major development and agricultural organizations. This effectively limits the possible solutions to only those solutions that fit within this imaginary. In considering the continued prevalence of food insecurity in both national and international contexts, it is necessary to explore other avenues for proposing solutions to the current food challenges, which will only grow as the impacts of climate change worsen. Food sovereignty, more specifically urban food sovereignty, offers an alternative ontological framework that expands the realm of possible solutions to food insecurity as a feature of the food sovereignty movement's recognition of multiple ways of being.

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GENERAL AUDIENCE ABSTRACT

Ohio is one of the largest agricultural producers in the United States and yet, Ohioans experience food insecurity at a rate two percent higher than the national average. An analysis of Ohio's agricultural development in relation to the rise of the current global food system illustrates the ideological connections between the two systems, and the dependencies of these systems on the continued exploitation of both land and labor. Thus, these systems and the food security framework that has arisen from the same ideology or imaginary, can only provide limited solutions to food insecurity at the national or international level. The solutions that have been proposed and implemented under the security framework maintain dependency and vulnerability of insecure populations. As the impacts from climate change worsen and threaten to disrupt food systems, there is the need to move away from the food security framework towards a framework of food sovereignty and the incorporation of urban spaces into the solutions proposed.

To my dearest mother, who spent countless hours with me, exploring our Ohio landscapes.

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Chapter I

Sprawling Fields and Food Deserts: Features of Ohio's Foodscapes

Home to more than 77,000 farms, Ohio flourishes because of the strong agricultural industry, which employs one in six Ohioans. The food and agriculture industry provides more than $79 billion to the state's economy, making agriculture a critical industry to the State of Ohio. (Ohio Development Services Agency)

Since ALDI closed its doors earlier this month, community activists and residents have been scrambling to work with other local grocers and [Dayton, Ohio] city officials to fill a gap in food availability. Grocers across the country are pulling out of some urban areas, widening the gap of access to healthy foods for low-income residents. (Driscoll, 2018, "As grocers build in suburbs")

"They took the only major grocery store we had on this side of town away," she said bitterly. "Now we're forced to go to the corner store. Don't nobody want to buy no meat and (expletive) from there."
The Westside Supermarket on Germantown Pike in west Dayton [Ohio] abuts the city's most impoverished area. The census tract's median household income is $16,028. More than half of the households are on food stamps. More than a quarter of the residents are children living in poverty. (Sweigart, "Rich Market, Poor Market")

What does it mean to say that "Ohio is flourishing"? As the first epigraph at the start of this section indicates, Ohio's flourishing, from the economic development perspective, is deeply connected to its role as a major contributor to the agricultural industry in the United States and, more specifically to the economic success of the state's agricultural sector. If Ohio is 'flourishing' due to it's agricultural efforts and contributions, then what is one to make of the two epigraphs that follow, taken from stories run in the Dayton Daily News, which are seemingly contrary to any notion of 'flourishing' specifically in terms of food accessibility? How might one understand Ohio's 'flourishing' in relation to statistics, which indicate that rates of

individual food insecurity are as high as 15-19% in thirty one counties in Ohio and place Ohio 9th nationally for highest state-wide rates of food insecurity (Feeding America, 2017)?

I consider these epigraphs and interpret them as indications of a discontinuity between the way the world is imagined by individuals in power and on-the-ground realities. This series of passages indicates a fundamental separation between producers, consumers, and the food they rely upon to sustain their livelihoods (in multiple ways, especially for producers). This is a separation driven by the co-constitution of the current food system with capitalism and, more recently, neoliberalism. Within this system, food is rendered exclusively as a commodity to be sold to individuals, who are expected (as with any other commodity) to purchase food goods from their area grocery stores, restaurants, markets, or other sale-locations. The co-constitution of the current system of food production (and subsequently food distribution and consumption) with the capitalist, neoliberal economic system links the ability of people to feed themselves and their families to their economic status, while maintaining and promoting a narrative that assumes hard work equals financial success and, more generally, life success. However, as these epigraphs indicate, this economic development imaginary is divorced from the on-the-ground reality of food insecurity faced by many Ohioans.

Imaginary[1] can be an incredibly powerful way to order and maintain social relations. Within the current structuring of the food and economic systems, is not only that one's survival (one must eat to survive!) is contingent upon one's ability to work (and here it is important to note that work can be and has been valued or devalued), but there is a distinct process of spatial,

[1] I use the term 'imaginary' to signify the way in which society creates, maintains, and/or reproduces the institutions and norms that structure and order society, by "first creating shared ideas or meanings about the reality of [them]." Further, these modes of understanding the world are often pre-reflexive and, thus, can go unquestioned as constructed patterning of socil and political existence (Milkoreit, 2017, p. 2).

temporal, and ontological separation of 1) food, meaning the plants and animals and the process of growing plants and raising animals, from the larger ecological systems in which they are embedded, 2) food, in the same sense as used above, from the individual who eventually consumes it, and 3) people who produce food from people who eat what is produced. I argue this threefold process of separation is a result of the way in which the hegemonic imaginary interprets and guides action in relation to the wider world. Confronting the potential implications of this imaginary, specifically this threefold process of separation, provides useful grounds for considering the relationship between climate change and social inequality through a focus on food systems.

As such, the argument I make, at its basis, is an ontological argument and is concerned with the ways in which we as humans approach what it means to be in the world and interact with the world around us. The critique I offer is one that attempts to ask what is assumed, unquestioningly, about the workings of the world within the current social, political, and ecological ordering. Specifically, I ask whether or not the way dominant political actors conceptualize the world, and our place as humans within it, is the *only* way of conceiving of the world. If it is not, what other possibilities are there?

The ontological separations previously outlined are both grounded and reinforced by a neoliberal imaginary, which naturalizes the economic system of capitalism and capitalist economic relations, rendering them apolitical and capable mediators of social, political, and ecological relations. This imaginary has given rise to the framework of food security, which has become the singular framework under which solutions to food and climate challenges are outlined by both local policy makers and major development and agricultural organizations. The singularity of food security as a problem solving framework within the toolkit of major

development and security organizations effectively limits the possible solutions to only those solutions that fit within the dominant imaginary that guides food security.

An ontological exploration of the current global food system offers a lens by which food, and the practices of producing and consuming food, can be understood as a means by which to mediate social and political relations. I argue that one important feature of current social and political relations is the persistent separation of the rural and urban, which have, overtime, been established as either sites of mass production of export monocultures produced by devalued labor (rural) or sites of mass consumption to fuel urban labor and (valued) development. This rural/urban separation is one that must be considered when exploring alternative solutions to current food and climate challenges.

It should be noted that this analysis is in no way an attempt to flatten all human beings into a homogenous grouping that can be understood as a unified total of one mind or way of thinking, understanding, and being. I will argue that, although there remains a vast array of difference among humans in worldviews, understandings, knowledges, and thus ways of interacting with the world, there is a specific narrative or conception of the world (a hegemonic imaginary) that is developed, reinforced, and perpetuated in accordance with the ideology driving neoliberal capitalism and is intended to direct policy, action, and citizen behavior both in the United States and, although it is not the primary focus of this paper, state-state relations. Although there are multiple dimensions through which this narrative is maintained, I am particularly concerned with the dimension of food production and consumption.

Neoliberal ideology is grounded in the notion that a free market should be what guides major decisions in the social and political worlds. The market is assumed to be pre-political in its functioning and, thus, can act as an unbiased mediator, ensuring each citizen their fair share.

Central to this ideology is the belief in competition as inherently virtuous and as the best way to stimulate growth and progress, the belief in a natural hierarchy of humans and their abilities, and the need to shrink the public sphere in favor of privatization (George, 1999). Thus, neoliberalism is defined by "minimalist welfare state, taxation and business regulation programs; flexible labor markets and decentralized capital- labor relations unencumbered by strong unions and collective bargaining; and the absence of barriers to international capital mobility" (Pedersen as cited in Mudge, 2008, p. 705-706). At its ideological core, neoliberalism is "the elevation of the market- understood as a nonpolitical, non-cultural, machine-like entity- over all other modes of organization" (Mudge, 2008, p. 705). This includes both "normative principles" that promote the free-market and "cognitive principles" assuming the inherent 'correctness,' so to speak, of neoclassical economics (Pedersen as cited in Mudge, 2008, p. 706).

The neoliberalization of agriculture is the result of a history of geopolitical moves, in which a system of global agriculture developed alongside British and U.S. hegemony. Phil McMichael traces the trajectory of these developments stating, "In the second half of the nineteenth century, the British-centered world market encouraged the incubation of industrial agriculture in settler states geared to supplying cheap foodstuffs for a proletarianizing Europe. Through devices of the U.S.-aid program of the mid-twentieth century, surplus foods and green revolution technologies from the First World entered the urban markets and the agrarian sectors of the Third World respectively" (2005, p. 274). Although the phases that resulted in the current global food system were geared towards different political ends and, thus, substantively different in their constitution, McMichael rightly points out that these eras shared features of "the progressive industrialization and specialization of agricultures" and the "project of state-

building, proceeding from the settler colonies to the ex-colonies, as European empires collapsed and the development era took shape" (2005, p. 274).

U.S. farming has played a role in the development of the current food system in terms of the production of cheap agricultural products, the overproduction of agricultural commodities, and farm protection policies. These strategies resulted in an "aid-based food order," based on the political formation of the state and centered on the U.S. desire to contain the Soviet empire and reinforce the narrative of development as achievable only by means of U.S. modeled production and consumption (2005, p. 275). One of the results of moving surplus food goods into a global market is the intensified separation of food from the larger ecological systems in which food is embedded, food from the individual who eventually consumes it, and people who produce food from people who eventually consume that food. This separation renders food seemingly apolitical- divorced from the conditions that were necessary in producing that food, which is often unquestioningly purchased, plastic wrapped and prewashed, frozen and precooked, invisibilizing the land and labor that goes into food production on a global scale. Additionally, the ability of consumers to purchase their food goods in markets allows for an often forceful reorientation of labor, away from the agricultural sector and into other labor markets. This sets the foundation for the food system in place at the present, in which "The political decomposition of citizenship and of national sovereignty, via the neo-liberal 'globalization project,' reverse the political gains ('welfare' and 'development' states) associated with the period of U.S. hegemony, facilitating an unprecedented conversion of agriculture across the world to supply a relatively affluent global consumer class" (McMichael, 2005, 277). It is here that I situate my analysis of the neoliberal imaginary and its continued role in ordering social and political relations vis-à-vis food and agriculture.

In the following pages, I aim to illustrate how an understanding of the global food system, and its relationship to both capitalism's rise alongside the expansion of cheap food globally, and the neoliberal ideology that currently structures capitalism, provides a meaningful framework to understand both human-human and human-nature relations in the United States. Specifically, as pointed to in the epigraphs, I explore the impacts of the global food system on communities in Ohio, a state whose geography and climate is particularly well suited for large-scale crop cultivation. The sprawling agricultural expanse of Ohio's fields abuts communities, both rural and urban, with some of the highest rates of food insecurity in the nation. These features of Ohio's food-scapes must be examined historically as they relate to trends in global economic and agricultural development, trends that reinforce hegemonic imaginaries of human–nature relations and limit the imagined possibilities for addressing increasing food insecurity and vulnerability in the face of a changing climate.

Histories of Ohio's agricultural sector document the process of colonial settlers occupying, clearing, and farming the land to produce wheat, corn, oat, buckwheat, flax and potatoes, primarily beginning around 1810 (Ohio State Board of Agriculture, 1904, p. 9). During the same time, Ohio's land was being rapidly segmented into counties (The Growth and Development of Ohio's Counties, n.d.) and the desire for "a 'cheaper way to market for the surplus produce'" gave rise to the construction of Ohio canals beginning in 1820 (Ohio State Board of Agriculture, 1904, p. 11). These canals "were the great controlling factors of increasing commerce, manufactures, and population. The newly found markets for farm products added fifty per centum to their prices, thus enlarging the field of agriculture and bringing wealth to the State by its extension" (ibid, p. 11-12). The modification of the landscape through the creation of canal ways resulted in significant increases in exported food products from Ohio to neighboring

areas, and this was furthered by the introduction of machinery like the corn cultivator (1824), McCormick's reaper (1831), and Hussey's mower (1833) (ibid, p. 12).

Beginning in 1833, the Ohio General Assembly began passing laws to further establish, encourage, and grow the agricultural sector in Ohio and the Ohio State Board of Agriculture was established (ibid, p. 22). This led to the creation of farmers institutes, state fairs, and agricultural societies, which were meant to "rais[e] the standard of agriculture, in improving livestock of all classes, farm products, fruits, methods of cultivation, increasing production, etc., etc." (ibid, p. 28). The institutionalization of agricultural sciences in Ohio and the desire to have farmers educated on both the practical and scientific aspects of farming in structured, educational settings began in the 1870s with the Department of Agriculture stating, "He [the student farmer] is taught to analyze the soil and study its physical properties; the best manner of tillage and the most improved methods of drainage and irrigation; the management of livestock, etc., etc." (ibid, p. 30). Thus, the practice of farming in Ohio, in many ways, entered into a systematic program of study and refinement, stemming from the desire to increase production "and bring wealth to the State by its extension" (ibid, p. 11-12).

It is notable that, as the focus turned towards increasing productivity and thus wealth within the agricultural sector, within the publication by the Department of Agriculture, there is a focus on the local benefits of these agricultural developments, which encouraged "a better and higher manhood and womanhood among ourselves, to enhance the comforts and attractions of our homes and strengthen our attachments to our pursuits, to foster mutual understanding and co-operation, to maintain inviolate our laws, and to emulate each other in labor to hasten the good time coming, etc." (ibid, 1904, p. 31). Additionally, according to Robert Leslie Jones, although crops grown in the state now are mostly the same crops that were grown in the 1830s, a notable

characteristic of Ohio agriculture before the 1850s was attentiveness to minor crops including "rice, cotton, hemp, flax, clover seed, white beans, castor beans, hops, madder, mustard, broom corn, cow cabbage, sugar beets, Rohan potatoes, and tobacco" (n.d., p. 127). As Jones goes on to document, these minor crops were continued or phased out based on their profitability in relation to competition with other regions (such as Kentucky and Missouri) (ibid).

As of 1848, Ohio was the largest producer of corn and was second in wheat production and the development of road systems and connected waterways allowed for both local and non-local sale of agricultural products (Agriculture and Farming in Ohio, n.d.). As the economy in Ohio continued to grow, urban development and industry, rooted in the agricultural production of the state (for example: tobacco processing in Dayton and pork processing in Cincinnati), promoted investment in businesses. Paired with increasing competition in the agricultural sector from producers in the western United States, these developments tended to force small farms out of business in favor of larger operations which could afford the expensive machinery that helped maintain profitability (ibid). These historical accounts of Ohio's agricultural sector document the development of Ohio's food system within the capitalist economy, in which the "establishment of national agricultural sectors within the emerging settler states (notably USA, Canada, and Australia), *modeled* twentieth-century 'development' as an articulated dynamic between national agricultural and industrial sectors" (McMichael, 2009, p. 141).

Following this period of development in which "Ohio agriculture was formed to please commercial markets, largely in urban centers like Baltimore, New York, New Orleans, and St. Louis, rather than local markets" (Meter, 2011, p. 8), there was the subsequent extension of producer- consumer linkages that came with the rise of neoliberalism in the 1970s-1990s. During this time, agriculture as a national economic sector was transformed into a world economic

sector (McMichael, 2005, p. 269). The defining features of this period in terms of food systems, are the "re-routed flows of (surplus) food from the United States to its informal empire of postcolonial states on strategic perimeters of the cold war" and the elevation of "transnational linkages between national farm sectors, which were subdivided into a series of specialized agricultures linked by global supply chains" (McMichael, 2009, p. 11). This trend was acknowledged in "a 1982 study by Ohio farmer Jon Shafer" who "concluded that the agricultural economy of Ohio had developed in ways that were similar to those of a colony. As a producer of raw commodities that were sold into global markets, the state was not effectively feeding itself, and moreover had very little power over its own commerce" (Meter, 2011, p. 8).

In the Midwestern United States, where Ohio is located, rural development was a high priority following the post-World War II period. Although industrialization in the rural Midwest began earlier than this period[2], during the post-World War II era the Midwest experienced rapid growth in manufacturing and industrialization in both rural and urban counties, though at a higher rate in rural counties (Anderson, 2014). This shift was grounded in agro-industrial and extractive-based manufacturing that had developed in the Midwest prior to this era.

Henry Ford's influence on the development of this region is unmistakable. Ford "anticipated some of the postwar thinking about rural communities" believing that "rural residents, especially surplus farm laborers, could help to decrease production costs" in the automotive industry, specifically in the "village industries" Ford established for automotive component production in Michigan (Anderson, 2014, n.p.). Thus, vulnerable farmers in rural

[2] By the 1900, the process of agro-industrialization had developed the flour milling, meatpacking, and farm implement sectors into some of the largest in the United States. Additional industrial sectors like railroad construction and bituminous coal mining pre-dated the post-World War II era in the Midwest. It should also be noted that the coal industry in the Midwest was the site of worker unionizing through the New Deal-era (Anderson, 2014).

areas were provided with alternative means of livelihood, which at the time provided higher pay than farm work.

Aided by wartime contracts from the government, the Midwest's manufacturing sector grew substantially during the 1950s and employment in rural manufacturing was at its height in 1974. A host of right-to-work laws in the Midwest during this time contributed to this growth in rural manufacturing, rendering rural communities sites of both low labor costs and low worker resistance (Anderson, 2014). Additionally, the spatial restructuring of the Midwestern landscape into one that is easily and efficiently traversable via railways and highways enabled this shift in manufacturing from urban to rural locations (Anderson, 2014). During the 1950s and 1960s, inducement programs, most common in midwestern states were "local industrial bond financing and statewide and local development credit corporations" (Anderson, 2014, n.p.) although these incentives did not provide any guarantees that business would remain in these locations.

The federal government promoted rural development programs in the post-World War II era, which had a heavy focus on agriculture and led to the development of the Office of Rural Area Development (later the Rural Community Development Service) in the U.S. Department of Agriculture (Anderson, 2014, n.p.). Thus, growth in manufacturing paralleled changes in agriculture, as agribusinesses began to quickly replace more traditional farming and technological advances reduced the need for human labor, effectively devaluing farm labor and valuing industrial employment and factory work and consolidating farms into larger swaths of land. This built on the consolidation that had taken place during the War, when farms were converted into large grain production operations that spurred reliance on fertilizers and herbicides and made monocultures more viable (Anderson, 2014). Even among those who

"remained on family farms in the Midwest viewed the land as financial capital. Farming increasingly became a way of earning a living rather than a way of life" (Anderson, 2014, n.p.).

Although the 1970s brought about a "rural renaissance" during which land prices dropped and numbers of young farmers increased, the 1980s collapse of commodity prices and land values, bankrupting farmers and further consolidating farms. These trends, when paired with the rise in neoliberal policies of agricultural trade liberalization and reductions in social support spending, rendered economically vulnerable individuals and communities increasingly vulnerable to food insecurity and hunger (Anderson, 2014, n.p.).

Ohio continues to be a major producer of corn, soy, winter wheat, hay, oats, and cattle (USDA, Ohio Rankings) and a major exporter of agricultural commodities. In 2017, Ohio's top exports were soybeans (1,295 million USD), corn (342 million USD), "other plant products" (330 million USD), "feeds and other grain" (282 million USD), soybean meal (236 million USD), pork (213 million USD), vegetable oils (178 million USD), dairy products (145 million USD), grain products (136 million USD), and wheat (120 million USD) (USDA, Value of 2017 State Exports). As of 2017, Ohio ranked 12th in the country for agricultural exports. More specifically, Ohio was 7th in both soybean and soybean meal exports and 9th in corn exports (United States Trade Representative). Ohio's agricultural system has developed in accordance with global agricultural markets, diverting significant amounts of land, labor, and money to monocrop fields and pasture for a market that is heavily reliant on an import and export economy. In 2018, Ohio's exports to major world areas were valued at $39.0 billion worth of goods to the Asia-Pacific Economic Cooperation (APEC), $12.3 billion to Asia, $8.8 billion to the European Union, $3.1 billion to South/Central America and the Caribbean, and $275 million to Sub-Saharan Africa (United States Trade Representative).

In a current report on food production and agriculture in Ohio, produced by The Ohio State University, Ohio's agricultural sector is characterized by increasing efficiency, which has led to decreasing employment in agriculture and food production as well as decreasing commodity prices (Ohio State University, 2017, p. 6). The report states, "Since 1994, employment has decreased by 23.5% in the farm input sector, and 38% in agricultural production (farming), 16.9% in food processing and 47.1% in food wholesaling/retailing" (Ohio State University, 2017, p. 6). On the other hand, Ohio's employment in the restaurant and bar sector has grown by 37.4% since 1994 (Ohio State University, 2017, p. 8). This seems to be indicative of a shift in labor needs- away from the land in the rural spaces of agricultural production, into urban spaces where there is greater demand for restaurants and bars.

In general, this mirrors trends across the United States. These trends indicate both decreases in farmland and increases in productivity. According to a publication by Jiang and Xu, "The long term success of US agriculture depends on what farms could survive and grow under the pressure of farmland loss [to development]," thus, "The economic viability of farms is largely determined by the efficiency of converting the agricultural input into output" which varies significantly based on region (2014, p. 70). Jiang and Xu offer an analysis on the spatial variations in input-output relationships within the state of Ohio, separated into county-level units of measurement. Farming viability is often a measure used to direct farming and agricultural policies in the United States and is most often equates viability with profitability (Jiang & Xu, 2014, p. 70). On the one hand, land resource (not simply space but also soil health and nutrient content, pest control, et cetera) constraints can be overcome through biochemical technologies such as chemical fertilizers, pesticides, and new crop varieties. On the other, labor constraints, in terms of cost and efficiency of production, can be overcome through the development of and

adoption of more efficient mechanical technologies (i.e. combines and tractors) that reduce the intensity of human labor required in producing maximal outputs (Jiang & Xu, 2014, p. 70).

These changes in Ohio's agricultural sector renders some farmers increasingly vulnerable to changes in both the economic system and changes in climate. As farms become dependent on chemical inputs and machinery in order to keep up with rates of productivity that will reap the greatest profits, some farmers are forced to confront the tradeoffs between product yield and prices and farm related costs including "cost of inputs, depreciation of investment, and monetary loss caused by malign market conditions and natural disasters" (Vrolijik et al. 2009, as quoted in Jiang & Xu, 2014, p. 70). While some farmers will benefit from increased productivity through chemical inputs and machinery, greater investment can mean greater risks, especially when confronted by the added volatility of a changing climate and its impact on farming. The capitalist drive short term gains of larger profits paired with "[t]he prevailing assumption of most policy makers is that bigger and fewer farmers achieving higher yields with new technologies, chemical fertilizers, pesticides, and genetic engineering is the only solution to feed the world" (Ohio Ecological Food and Farm Association, 2019, p. 5) captures the logic of farm consolidation and large-scale industrial agriculture.

The mechanization and industrialization of farming practices has effects on farmers, the food that is produced, and wider ecological systems. The turn towards industrial agricultural practices like high-input farming, machinery reliance, pesticide use, high-yield seeds, and intensive production is beneficial for farming operations that can afford the initial transition and the associated costs. However, large-scale industrial farms are dependent on land manipulation and management. As these farms are generally characterized by large swaths of mono-crop fields, the resulting land changes have had negative impacts on ecosystem health including

decreased habitat for other plants and animals, decreasing crop diversity, increased reliance on fossil fuels to power machinery and to transport agricultural products, increased greenhouse gas (GHG) emissions, further and more intensive land manipulation like irrigation, and harmful runoff from chemical inputs, to name a few (Lin, et al, 2011).

These practices have been shown to feed into the effects of climate change. For example, Lin, et al state "Agricultural intensification and monocultures frequently lead to declines in the diversity of the soil biota and can have profound effects on the biological regulation of decomposition and nutrient availability in soil, leading to a greater need for mechanization and external inputs" (2011, p. 6). Thus, the previously stated claim "[t]he prevailing assumption of most policy makers" that "bigger and fewer farmers achieving higher yields with new technologies, chemical fertilizers, pesticides, and genetic engineering is the only solution to feed the world" (Ohio Ecological Food and Farm Association, 2019, p. 5) is one that must be critically examined, as it deepens path dependencies on the very practices that render farming and food systems increasingly vulnerable to climate change. Furthermore, considering the perpetuation of food insecurity and hunger at a global level under the current global food system, even after numerous strategies and solutions to eradicate food insecurity and hunger, it is difficult to see how continuing to geo-engineer solutions to climate pressures will successfully feed the world in any equitable way.

For Ohio farmers, a changing climate has primarily meant increases in annual rainfall, threatening crop viability in novel ways (Parrott, 2019). Here, there is evidence of a specific tension within the neoliberal global food system and its inability to confront the impacts of climate change on the agricultural sector: Ohio's agricultural system is simultaneously implicated as a contributor to anthropogenic climate change and increasingly vulnerable to the

effects of anthropogenic climate change. As farms in the United States have increasingly specialized and as efforts have been made to reduce the land-labor constraints in the name of productivity (Jiang & Xu, 2014), there is the simultaneous decrease in the ability of the industrialized, highly specialized farm as a unit to mitigate the pressures of climate change as it effectively worsens the conditions that require mitigation practices in the first place.

Ohio is home to many small and mid-sized farms, which might be a hopeful feature of Ohio's food-scapes, as it may be an indicator of diversity within farm holdings and farming practices. But it cannot be assumed that decreasing farm size alone will sufficiently mitigate the pressures of climate change or provide food for those who are lacking, as the current food systems in Ohio arose in conjunction with capitalist logics of accumulation by dispossession[3], profit motivation, and labor exploitation as well as the incorporation of agriculture into the neoliberal development project. As such, even though arguments have been made regarding smaller farm size and more ecologically-centered land stewardship, farm size does not adequately account for the ecological harms and social inequalities of the current global food system, in which Ohio is embedded. What Friedmann calls the 'colonial-diasporic food regime' was built on a narrative that 'justified' dispossession to allow for the profit of some via the exploitation of others. Subsequently, the reiteration of this food regime with a neoliberal twist was bolstered by a narrative of aid and benevolence worked to "[neutralize] what were a set of implicit power relationships" (McMichael, 2009, p. 144).

[3] This concept is defined by Phil McMichael (2005) as "both an originating and self-propelling dynamic, where capital expands through the release of assets, whether new or over-valued" (p. 270). This is a feature necessary for the capitalist pursuit of endless growth, as it seizes assets at little to no cost to then rework them for more profitable use.

What, then, must change to account for the tension illustrated by the epigraphs at the start of this section? How might populations not only take meaningful action towards mitigating food systems' impact on climate change while working to ensure equitable and consistent access to food products? According to 2019 data, Ohio's food insecurity rate of 14.5% remains 2% higher than the national rate. Recall that in 1982 an Ohio farmer, Jon Shafer" "concluded that the agricultural economy of Ohio had developed… As a producer of raw commodities that were sold into global markets," and as a result, "the state was not effectively feeding itself" (Meter, 2011, p. 8). Food systems are a point of intersection for two of the major challenges we are currently face: how to confront the impending devastation of climate change and how to ensure communities have access to food. Often, though by no means always, rural spaces are highlighted as the sites in which to confront both of these challenges. Climate change might be mitigated through preservation and protection, reforestation, or crop diversification on farms. Hunger and food insecurity might be mitigated through intensified production on large-scale farms, which will allow for more food to be distributed, land that has yet to be developed into cities, towns, or suburbs, might be taken and transformed into sites for more intensive food production. Although this is an oversimplification of strategies proposed in response to these challenges, what I wish to highlight is the continuation of an imaginary that designates certain spaces for specific purposes and the breakdown of this spatial rendering in the seemingly contradictory solutions to the challenges of climate change and hunger (Both preserve the land to mitigate climate change *and* continue to develop the land for agricultural purposes?). My aim is to illustrate the need for a reworking of these spatial designations through a serious consideration of the potential role of the urban in facing current challenges related to climate and food. This is

not to say I argue for one to be considered over the other. Rather, I argue that both spaces are sites for potential solutions and must be treated as such.

In the following sections, I aim to make the case for the need to consider urban spaces in discussions on the intersections of climate change, a feature of ecological exploitation; the inaccessibility of food to those whose labor is exploited for cheap wages; and the current global food system. Central to my argument is an understanding of imaginary, particularly the dominance of the neoliberal, economic development imaginary, as a tool for ordering and maintaining structures of exploitation, domination, and dependence that privilege some at the expense of many. I argue that the neoliberal imaginary grounds the security framework that is used to propose solutions to crises at the international level and national (for the purposes of this paper I only discuss the United States). There is a specific ontology- an understanding of what it means to be in the world- put forth by this imaginary that effectively limits what is considered to be possible or impossible in terms of solutions to current challenges.

As such, Chapter II offers a review of the theoretical approaches I find particularly useful for unpacking the grounding ontology of the global food system and the food security framework. In Chapter III, I use these theoretical frameworks to analyze a recent publication by the Food and Agriculture Organization (FAO) of the United Nations (UN), the 2019 report, *The State of Food Security and Nutrition in the World,* as this document is exemplary of the food security framework I work to critique. I contrast the food security framework to food sovereignty movements and the practices food sovereignty movements promote, arguing that the notion of food sovereignty is an example of an alternative imaginary- one that offers a different ontology (and acknowledges the plurality of ontologies that exist within the world) and opens the field of possible solutions to the current food and climate crisis.

In Chapter IV, I return to Ohio, focusing on community-based projects in both rural Ohio and urban Ohio where groups of people are working together to come up with solutions the challenges the security framework has been unable to, and arguably cannot, solve. In doing so, I work to build an argument for the consideration of urban spaces as necessary in efforts to move towards food sovereign practices. Finally, in the Conclusion, I reflect on the implications of this approach, the questions this approach leaves open, and the ways in which one might offer generative material for further consideration.

Chapter II:

Theoretical Approaches to Understanding the Global Food System

[T]he development of a global food system has occurred in tandem with the system of states and the global capitalist economy. None of these features of the contemporary world can be explained independently of the others. Furthermore, the global food system can be seen as intersected with a large range of other systems, such as the biosphere or the individual human…

We not only need food to stay alive, the food we eat also contributes to creating who we are…

The global food production system is therefore one that intersects with a wide range of other systems, including our individual digestive systems, the colonial (and post-colonial) system, the system of states, the environment, and relations with other species. (Cudworth & Hobden, 2011, p. 97)

In the previous section, I outlined a threefold process of spatial, temporal, and ontological separation of 1) food, meaning the plants and animals and the process of growing plants and raising animals, from the larger ecological systems in which they are imbedded, 2) food, in the same sense as used above, from the individual who eventually consumes it, and 3) people who produce food from people who eat what is produced. I argue this threefold process of separation is a result of the way in which the hegemonic imaginary interprets and guides action in relation to the wider world. The concerns that I raised in the previous section with regard to the separations prompted by the incorporation of the agricultural and food systems into the neoliberal, capitalist economic system are ontological questions, as they ask what is being assumed or unquestioned about the way neoliberalism specifically, conceives of the world works and what our role as human is within it. Furthermore, and perhaps most importantly, this type of

inquiry seeks to point out various ways in which this imaginary is reproduced, often unconsciously, in every-day practices. These ontological queries are meant to address human-nature relations as mediated through food practices- from production to consumption- and the framework in which the food practices of an individual, community, city, or nation are constituted.

As Karen Barad urges us to consider, there are exclusions that are made when an ontology is put forth as an account of the world and the place of humans within it and thus, there is a "political potential [to] deconstructive analysis [which] lies not in simply recognizing the inevitability of exclusions but in insisting on accountability for the particular exclusions that are enacted and in taking up the responsibility to perpetually contest and rework the boundaries (Barad, 2007, p. 205). In considering the power of the neoliberal imaginary that works to both order the world and that guides so much decision making in politics, both nationally and internationally, it should also be recognized that there is difficulty in working through how to disrupt that imaginary in a way that is both meaningful to those who are invested in changing business-as-usual and productive in the sense that it does, in fact, generate substantive change. An ontological exploration of the complex interactions between the current state of the global food, economic, and political systems offers an opportunity to "challenge the horizon of possibilities" (Santos, 2014, p. 20) by considering who (both human and non-human) is excluded from the imaginary, what possibilities are excluded on the basis of their impossibility.

In the following pages I will, beginning with Karl Marx, elaborate upon several works that are relevant to this line of questioning. I find Marx's concept of the metabolic rift (as developed by John Bellamy Foster) a useful starting point, as it is a useful motif for the separations that I have outlined thus far. The arguments address the material, epistemological,

and ontological ruptures generated by the co-constitution of food systems and the neoliberal, capitalist economic system currently structuring socio-economic and political relations at the national and international spheres. Generally, the thinkers I engage with in this section present tools that can be used to consider human-nature relations as they are constituted today and ask questions about the interwoven systems that structure these relations. At their basis, these questions are ontologically grounded, which is the point to which the remainder of this theoretical exploration will turn, while continuing to pay particular attention to how the agricultural sector mediates these relations.

The increasing separation of people from the land, a feature of declining rates of farming in Ohio, arguably renders food systems to be more vulnerable to changing climate, as farmers are generally the first to notice small changes that influence the viability and survival of their crops, such as the changes in rainfall that have been impacting Ohio growers in recent years. Based on the literature available on the relationship between systems of knowledge and resource/land management, it is difficult to see how increasing mechanization, automation, and specialization of food systems helps to lessen the contributions of the global food system to the changes in climate we currently, and will continue to, experience and to decrease the vulnerability of the food system to rapidly changing climate. As individuals (farmers in this case) are removed from the land and encouraged to engage their labor in other ways in order to purchase efficiently produced food products sold in supermarkets, the process of separation is intensified. Phil McMichael, John Bellamy Foster, and Jason Moore are three theorists who explore the notion of an increasing land-labor divide under the capitalist economic system. Foster elaborates upon Marx's concept of the metabolic rift which addresses the intensified separation between labor and the land as laborers moved to urban areas in search of work.

Closely following the work of Justus von Liebig, an agricultural chemist from Germany who was writing during the growth of the fertilizer industry during the second agricultural revolution (1999, p. 373), Marx developed a critique of capitalist agriculture throughout *Capital*. Foster begins his analysis of Marx's metabolic rift from the starting point of the second agricultural revolution, arguing that, using Liebig's work, Marx had developed "a systematic critique of capitalist 'exploitation' of the soil (1999, p. 378-379) which is necessarily related to the capitalist exploitation of the worker. Thus, Marx provided a link between soil depletion and capitalism. There are several concepts presented in Foster's argument that are particularly important to an analysis of food systems and climate change. First is the importance of detachment, which leads to the notion of an ontological separation between human and nature; second, the intersection of the worker-land relationship and, thus, the intersection of the worker-land exploitation; third, the problematic process of valuation under capitalism.

Foster importantly discusses Marx's ideas regarding the implications of the separation, or detachment, of the worker from the land through urban labor consolidation in non-agricultural sectors. This forcibly relinquished management of the land to the logic of capital, in which labor is expendable in the relentless pursuit of profit. The consolidation of labor in urban areas requires food to be shipped far distances, effectively robbing the soil of the nutrients that would otherwise be returned to the earth. Foster states "[f]ollowing Liebig, Marx argued that long-distance trade in food and clothing made the problem of the alienation of the constituent elements of the soil that much more of an 'irreparable rift'" (1999, p. 380). This dispossession of the land and the locating of agricultural processes within the control of capital has led to a material separation of nutrients from the land in addition to an ontological separation between humans and "the natural conditions of their existence," leading to the "antagonism between town and country" (1999, p.

383). The labor process, which Marx describes as a process between man and nature and the social-ecological metabolism, are what link humans to nature, in a complex relationship between humans and the land. The connections between humans and the land illustrate an ontological intersection between the being of the human and the being of nature. Though not explicitly articulated by either Marx or Foster, this intersection of being seems to be the starting point for Marx's intersection of the exploitation of land and the exploitation of the worker.

Additionally, there is the problem of valuation under capitalism, which is addressed towards the end of Foster's work. A common critique of Marx is that "he denied the role of nature in the creation of wealth by developing a labor theory of value that saw all value as derived from labor" thus rendering nature as "lacking any intrinsic value of its own" (1999, p. 387). Foster refutes this idea stating that rather, "Marx agreed with liberal economics that under the law of value of capitalism nature was accorded no value" (1999, p. 387) and that this "limited conception of wealth embodied in capitalist commodity relations" was pushed for the by "a system built around exchange value" (1999, p. 387).

Jason Moore follows Foster's understanding of the metabolic rift as a useful and necessary tool in understanding the "serious ecological problems (many would say crisis) that will lead to serious social problems (some would say social crisis) and quite possibly the extinction of part or all of humanity" (2000, p. 123). However, unlike Foster, Moore extends the beginnings of the metabolic rift from Foster's starting point at the second agricultural revolution to the rise of capitalism in the 16th century (2000, p. 124).

This starting point not only extends the timeline of the metabolic rift, necessarily deepening the rift and its implications through each successive phase in capitalist development which Moore refers to as *systemic cycles of agro-ecological transformation.* Thus, Moore draws

attention to two processes: the renewal of accumulation through successive, historical, capitalist restructuring and development and the evolution and continuation of the exploitation of nature from the "simultaneous waves of capital's global expansion" (2000, p. 124).

Moore argues that the tension between rural and urban was fostered from the "remaking" of the countryside through the "direct investment of capital and world market formation," ultimately leading to the commodification of production and the "ensnarement" of agrarian social classes in this commodification process (2000, p. 125). Furthermore, there are two spheres of capital accumulation- in the world market and in the agrarian regions- which invariably led to the transformation of agriculture into "merely a branch of industry**"** (Marx, as quoted in Moore, 2000, p. 126). This, in turn, led to the restructuring of labor divisions on the international level. Moore quotes Marx, stating this new division of labor "converts one part of the globe into a chiefly agricultural field of production for supplying the other part, which remains a pre-eminently industrial field" (as cited in Moore, 2000, p. 126).

This illustrates an important divergence of Moore from Foster in that the scope of the metabolic rift is extended to the international sphere, thus, deepening the metabolic rift in a way that incorporates a greater dimension of intersectional power. In fact, Moore argues that the global nature of the current environmental crisis sets this particular environmental crisis apart from other historical accounts.

Moore presents an analysis of the relationship between nature and capitalism at the international scale beginning from the notion of system cycles of accumulation, which refer to the successive restructurings of capitalism. Moore argues that though this is a useful tool to understand capitalism, often in these accounts of transition, the "centrality of agro-ecological transformation" (2000, p. 137) is underdeveloped or missed. Moore states, "[t]he impact of the

metabolic rift has been exacerbated by the tendency of capitalist agriculture 'toward the radical simplification of the natural ecological order'" (Worster, as quoted in Moore, 2000, p. 137).

Moore examines not only the disconnect between town and country, but a further disconnection between country and country through regional labor specialization exacerbated by both monocropping and world markets (2000, p. 138). The extension of the metabolic rift into the international sphere was predicated on the inability of local ecosystems to regenerate under the practice of intensive monocropping. This led to the "renewed search for fresh land, often found outside the existing boundaries of the capitalist world-economy. As goes the search for fresh land, so goes the quest for new labor" (2000, p. 138). This not only draws the exploitation of the land into the global realm, but also draws the exploitation of the laborer into the global realm, extending Marx's notion of the intersections of exploitation (furthered by Foster).

There are several ontological assumptions that Foster and Moore aim to illuminate in their extension of Marx's theory. These ontological assumptions are the basis for the creation of strategies that have been insufficient in addressing issues related to the complex relationship between climate change and food systems. These ontological assumptions are as follows; 1) that humans are separate from the environment, rendering the world as a thing to possess and used in generating greater profits for some. More specifically, the systems and non-human beings are viewed an innate composition of material whose constituent parts can be isolated, separated, and manipulated and, as such, the world can be shaped and constructed to fit the desires of profit-seeking humans; 2) that, as these constituent parts are separable, they can be understood in themselves, rather than as part of a whole; 3) that value and worth are grounded solely in what will benefit humans, perpetuating an anthropocentric process of valuation and denying the environment any *inherent* value. Furthermore, it is important to note that what counts as

beneficial or in the interest of humanity is not an apolitical process, but is grounded in constructed imaginaries of what constitutes a good life and how one might achieve the good life.

Mindi Schneider and Philip McMichael explore a similar vein of research, paying attention to the ways in which the concept of the metabolic rift can be extended beyond Marx's original conception. The work of Schneider and McMichael furthers an analysis of the ontological assumptions fostered by capitalism and the neoliberal imaginary, which give rise to ineffective solutions to both the climate and food crises.

Schneider and McMichael extend in a more complex fashion Marx's notion of the metabolic rift. Schneider and McMichael's use of the metabolic rift follows in the footsteps of others who have contextualized this concept within the "international peasant mobilization" in an attempt to "restore forms of agriculture that are environmentally and socially sustainable" (2010, p. 461). Schneider and McMichael state, "it [the metabolic rift] has become [a focal point] because it refers to a double separation: of agriculture from its biological foundations, and of humans from nature" (2010, p. 461). Their work offers an exploration of a post-capitalist political ecology as a means of overcoming this double separation.

There are two ways in which Schneider and McMichael seek to deepen the concept of the metabolic rift. First, to extend the notion beyond soil chemistry, a limitation they mostly attribute to the agricultural knowledge available during the time both Liebig and Marx were writing. Schneider and McMichael attempt to elaborate upon the metabolic rift, moving beyond the centrality of farming practices to include a wider range of ecological and social relations. Second, they seek to understand the metabolic rift as a historic concept with epistemological consequences by asking how such a rift affects knowledge production and reproduction, with specific regard to farming (2010, p. 462).

Schneider and McMichael offer an analysis of the differing perspectives of Foster and Moore examining the differences in their respective starting points and concluding that "[w]hile these different conceptions underline the significance of the human/nature relationships and their transformations, they also share a limited understanding of the material dimensions of the metabolic rift…" (2010, p. 466). Schneider and McMichael argue that there are important shortcomings (material critiques), which can be used to "refine how the concept [referring to the metabolic rift] is deployed in analyses of different socio-environmental problems and different historical moments" (2010, p. 466). Furthermore, they seek to present the metabolic rift as an ecological concept, a social concept, and a historical concept.

In terms of soil fertility, Schneider and McMichael make the case that Marx's account fails to acknowledge the biological and physical properties of soil, focusing solely on the chemical properties that constitute fertile soil. Marx regarded the chemical properties only within the feedback of nutrients from the soil, to humans, and back to the soil (2010, p. 468), which limits his analysis significantly. Considering the advances in soil science, there four ways in which soil dynamics are understood differently now from the time of Marx; 1) there is a broader conception of what constitutes soil health, 2) there are multiple factors influencing characteristics of soil, 3) there is an understanding of soil as an ecosystem, which is nested within larger agroecosystems, and 4) as soil and soil fertility are understood as processes, historical context is necessary (2010, p. 468). Where Marx, Foster, and Moore fall short in their limited scope of analysis, Schneider and McMichael offer the beginnings of a much more comprehensive, dynamic, and holistic understanding of the metabolic rift through a complexified account of soil components.

In addition to a more comprehensive approach to what constitutes soil health, and thus, agricultural productivity, Schneider and McMichael address Marx's abstraction of his ideas from "actual practices of human labour and the local contexts within which those practices are embedded" (2010, p. 470). The argument here is simply that Marx's focus on the single pathway of soil fertility, without regard to space and time, is "empirically indefensible" and "reductionist" (2010, p. 471). This abstraction, limits the understanding of labor processes in a way that does not allow for the ecological understanding of agricultural practices due to the extreme focus on the capitalist aspects of agriculture. This results in an ignorance of the complexity of the actual practice of agriculture (2010, p. 473).

In contrast to Marx's abstraction, Schneider and McMichael employ an analysis of English high farming, which is a localized practice that is sensitive to ecological processes, thus the process, by many, was considered to be ecologically sustainable. Here, however, Schneider and McMichael introduce an important critique by Friedmann, who suggests that, although English high farming was ecologically sustainable, it was not socially sustainable as it led to the eviction of villagers, forced labor, and exploitation of workers (2010, p. 274).

Considering these critiques, Schneider and McMichael suggest that there needs to be a reframing of the "materials and mechanisms involved in the metabolic rift" (2010, p. 274) in order to sharpen the focus on the human-nature dialectic. Furthermore, they rightly argue that the metabolic rift should be examined contextually, with acknowledgement of the embedded nature of agricultural systems within the greater environmental system. The idea of contextual specificity is extended into the notion of embodied knowledge in relation to Geertz's local knowledge and Haraway's situated knowledge. In this way, the metabolic rift is taken to an epistemological level, where Schneider and McMichael argue there is a rift in knowledge that

exists in conjunction with the material rift proposed by Marx and illustrated by Foster and Moore.

Beginning with the physical separation of laborers from the land through consolidation in towns, "[the people] took with them not only their ability to recycle soil nutrients (as in Marx's argument), but they also took culturally, historically, and geographically specific knowledges about farming practices and local ecosystems (among other things)" (2010, p. 477). Not only did the separation of knowledge from the land result in a violent epistemological break, it externalized the environment from the capitalist system allowing for the commodification of agriculture and environmental resources.

Under market-based structures, the production, knowledge, and institutions produced as a result of the metabolic rift and the ensuing epistemological break are "increasingly subordinated to value relations**"** (2010, p. 478). Though Marx offered a critique of the valuation process under capitalism, which leads to the commodification of agriculture, his critique "risks a one-sided representation of the social-nature relationship" as he grounds capitalist social reproduction and its representation in "demystifying 'value'" based on an understanding of "nature as 'man's body' and labour as nature" (2010, p. 478). As such, Marx abstracts both value and nature, which discounts ecological relations and renders these relations and processes as extrinsic to social existence (2010, p. 479). Thus, Marx privileges the social elements of material production over the natural elements of material production.

This, Schneider and McMichael argue, results in two problems; that accounts of capitalist developments have largely excluded ecology and that this process of abstraction (which embeds ecological relations in labor practices) "discounts those locally situated knowledges and practices that are grounded in people's accumulated experiences and understandings of local ecological

conditions" (2010, p. 479). The resulting ontology is one that limits the analytical lens in ways that inhibit our understanding of the social-ecological origins and consequences of capitalism. Perhaps most importantly to their argument, Schneider and McMichael draw an important connection between the consequence of the capitalist valuation of labor and the natural world to the systematic reduction and invisibilization of cultures that are actively engaging and reproducing natural and ecological processes and cycles (2010, p. 479).

The externalization of nature, under the obfuscation of the ecological dimensions of economics disconnects the environment from the social, subsequently reproduced as a disconnection between rural (associated with nature and the environment) and urban (associated with society and culture) spaces, in which case the economic valuation of the environment (often a market-based cost/benefit analysis) allows for the continued exploitation and domination of the natural world and of natural resources through their commodification.

Through the extension of the material rift to an epistemological and ontological rift, Schneider and McMichael offer an important contribution to understandings of food systems and climate change. As climate change progresses, shifts in temperature, rainfall patterns, and humidity will likely impact "food availability, food accessibility, food utilization, and food system stability" (Popoola, Dawodu, Yusuf, 2018, p. 61) and the only way to adequately address these issues is to contextualize, localize, and embody systems of agricultural and ecological knowledge. Issues arise, however, when one considers the ontological divide spanning between those subscribing to a neoliberal, capitalist-driven imaginary of "global production chains managed by transnational corporations" and those who subscribe to an ontology grounded in understanding and working with "the self-organizing material living processes of the planet" (2010, p. 481).

This body of work provides the theoretical backing for the threefold separation that I outlined previously. First, the building analyses of soil composition and the accounts of urban labor consolidation under capitalism provides a basis for understanding the implications of the separation of food from the larger ecological systems in which the production of food is embedded. The ontology that arises from the capitalist imaginary justifies the exploitation of the soil ecosystems, and assumes crop production is separable from the workings of these larger ecosystems, insofar as the crop itself can thrive. Thus, a hegemonic system of knowledge, grounded in the Scientific Revolution, is reproduced in relation to this ontology and is directed at increasing efficiency, pest resilience, et cetera. This understanding of knowledge that is scientifically grounded is important to note as it is assumed to be "objective, value-free, and context-free knowledge of the external world" (Merchant, 1980, p. 290). Subsequently, this ontology treats laborers (humans) as exploitable, (re)movable, interchangeable, without connection to or knowledge of the land (the epistemological rift elaborated previously). This is particularly important in terms of ordering of relations, as the knowledge and ability to produce ones own food (whether individually or as a community) provides one with greater ability to control the ordering of their relations.

Second, the separation of food and the processes that go into growing or raising food from the consumer presents implications in terms of knowledge and understandings of human-nature relations. Food products are rendered merely a commodity, abstracted from the process of growing or raising the food, and nothing more, which invisibilizes the ecological exploitation required for maximum output and disguises the derivative social harms that disproportionately affect poor communities, especially communities of color (for example, public water contamination and animal waste pollution).

Finally, the distancing of linkages between producer and consumer has resulted in the need for both transport of food, often very far away from the site of production, and spaces in which to sell the food products. This not only has ecological consequences in terms of the energy it takes to move food goods to far off markets, but the extended linkages between producers and consumers works to invisibilize the exploitation of labor required to produce food at the lowest possible price. Jan Douwe Van der Ploeg describes the distancing of producer from consumer as a process that alters notions of time and space.

According to Ploeg, there are three unequal but interrelated constellations of global agriculture: peasant agriculture, entrepreneurial agriculture, and capitalist agriculture with the primary differences lying in the ways in which relations between the social and the material are patterned. Within these patterns, Ploeg identifies two that are primary. The first are short, decentralized circuits, which are characteristic of peasant farming. Second are patterns of large, highly centralized, industrialized agricultural practices at the world scale, which Ploeg calls 'Empire'. Ploeg states "industrialization represents a definitive disconnection of the production and consumption of food from the particularities (and boundaries) of time and space. Spaces of production and consumption (understood as specific localities) no longer matter. Nor do the interrelations between the two" (Ploeg, p. 6, 2008).

The realm of Empire is defined by the emergence of a "new, powerful mode of ordering that implies a far-reaching re-patterning of both the social and natural worlds" (Van der Ploeg, p. 233). The intensity and speed at which goods, ideas, and capital are transferred globally are key in understanding the rule of Empire as this feature contributes to what both Van der Ploeg and Friedmann consider to be the erasure of the local as self-governing and self-organizing local constellations which are reassembled to ensure controllability and exploitability as profit margins

are driven fundamentally by cheap labor. The phenomenon of Empire is exemplified economically, as small, independent businesses are increasingly replaced with large holdings.

In addition, the distancing of linkages between producer and consumer give rise to *"inward* expansion of Empire- that is, on how it penetrates, and materializes at the level of, fields, animals, food production, trade, people's livelihoods and the ways in which their practices are ordered" (Ploeg, p. 235, 2008). In today's food empire, the very definition of food has shifted due to technological changes, which has redefined food in terms of consumer preference, edibility, and longevity, but also in terms of food's spatial and temporal characteristics. This, states Ploeg, "carries far reaching politico-economic changes and impacts" (p. 237, 2008). "Nature, food and agriculture, but also health and freshness, are redefined, materially reordered and reshaped, and, consequently, subjected to the specific rationale of various food empires" (Ploeg, p. 238, 2008).

Following Ploeg's analysis of the shifting definitions of food, I propose that there is a similar process of redefinition of 'farms' in terms of the spatial characteristics written into their definition. In part, this has to do with Empire's repatterning of the social and natural worlds. Carolyn Merchant, a key theorist in the development of ecofeminist theory, provides a useful discussion on the distinctions drawn between nature and culture and the specific and important implications this dualistic distinction has on social ordering. Merchant's anlaysis of the nature/culture dualism contributes to the analyses of Foster, Moore and McMichael, through a nuanced discussion of the tension between the rural/urban in its other iterations. Merchant's analysis of this distinction drawn between culture and nature, which become both masculinized and feminized and urbanized and ruralized respectively, can be applied to modern agro-industrial agricultural practices, which can subsequently be connected to Ploeg's analysis of Empire. This

series of linkages helps to extend this theoretical framework through which modern agricultural practices, and the socio-ecological impacts of these practices, can be understood in a way that addresses how perceptions of reality, and roles within that reality are formed, maintained, and possibly reworked.

Although Merchant specifically calls to attention the conceptual connections historically drawn between women and nature, she extends her analysis to include the feminized 'other.' In this sense, Merchant draws important connections between historical associations of the uncivilized/female/nature with the need to be tamed, managed, and controlled by the civilized/male/culture (1980). The nature-culture dualism, for Merchant, is the key distinction to understanding "Western civilization's advance at the expense of nature" (1980, 143) and mirrors the rural-urban divide where the former is exploited as merely a support for the latter's flourishing.

This ordering, according to Merchant, is reinforced by a system of knowledge deriving from the Scientific Revolution in which scientific knowledge and rationality are assumed to be "objective, value-free, and context-free knowledge of the external world" (Merchant, 1980, p. 290). Merchant states

> This view assumes that nature can be divided into parts and that the parts can be rearranged to create other species of being. "Facts" or information bits can be extracted from the environmental context and rearranged according to a set of rules based on logical and mathematical operations. The results can then be tested and verified by resubmitting them to nature, the ultimate judge of their validity. Mathematical formalism

> provides the criterion for rationality and certainty, nature the criterion for empirical validity and acceptance or rejection of the theory. (1989, p. 290)

In this passage, Merchant illustrates, more generally, human-environment relations as they are often articulated today, in which ecosystems are thought of as a series of mechanical process, in which the components can be targeted, refined, and made better and more predictable. Input dependent agriculture is an example of this, as it is a specific process in which soil composition can be altered with chemicals to increase productivity and, thus, be made better according to capitalist logics.

Understandings of the world that seek to reduce, simplify, predict, manage, and control natural processes have been a focus of many critical scholars who push back against increasing reliance on 'the rational mind' and reason in problem solving efforts, as the very understanding of rationality and reason as superior forms of knowledge has been constructed according to a very specific positionality in the world. This positionality is one that amplifies the voices of some while muting the voices of others.

The notion of epistemological erasure and the drive to homogenize thinking and knowledge embedded within the rationality projects of the Scientific Revolution and the current neoliberal narrative result in a flat and one-dimensional understanding of the world. Within this understanding of the world is the assumption that the "current paradigm provides answers for all the relevant questions" (Santos, 2014, p. 20). In fact, the world and the ways of knowing, interpreting, and acting within the world are complex, dynamic, and are utterly incommensurable with the notion that there is one, objective, and inherently correct way of knowing, interpreting, and acting within the world (an Archimedean point or god's eye view, if you will).

The work of Erika Cudworth and Stephen Hobden provides a valuable synthesis of theories that focus on knowledge production and the violence caused by the erasure of "other" ways of knowing and theories that focus on critiques of the global food system. Cudworth and Hobden argue for a metatheoretical reworking of approaches to international relations. This reworking is grounded in complexity thinking, a framework that, similar to Merchant's rejection of the Scientific Revolution's rendering of nature, rejects the "Enlightenment project of overcoming the hazards of nature" (Cudworth, Hobden, 2011, p. 1), which is the ultimate goal of most security frameworks. Instead, their complexity-based analysis seeks to expand upon the importance of roles, needs and interactions of all species that inhabit earth and to elaborate upon the co-constitution of these roles, needs, and interactions. Thus, the work of Cudworth and Hobden is a project that seeks to go beyond *only* the human in an effort to move towards an international relations that highlights not only inter-human relations on the global scale, but inter-species relations as well. Cudworth and Hobden's theory of complex ecologism helps to unpack how dominant approachs to security frames understandings of what is possible at the level of international problem-solving. Cudworth and Hobden present a means by which to consider the complexity of global inequality by reworking the ontological foundations of the Enlightenment project, which gave rise to the neoliberal imaginary that grounds security. In doing so, they create the space for addressing the material realities of security projects' shortcomings. Key in this is the understanding that international relations must work within the complexity of the socio-natural world rather than work to flatten and simplify this complexity into something more 'manageable.'

Two of the central features of Cudworth and Hobden's argument are the proposed moves away from state-centric security policies and dualistic distinctions, both of which are reinforced

under security discourses. Although the focus of critique for Cudworth and Hobden is slightly different than the focus of the previous theorists (Marx, Foster, Moore, Schneider, McMichael, and Ploeg are primarily concerned with class and labor; Merchant with gender and nature), their argument furthers the ontological critiques offered by the others by continuing to question what is assumed about human-ecological relations under the current dominant ideological framework. State-centric approaches to security assume a boundedness of the state in that the state becomes an object, which can be secured from elements, agents, and environments outside of its boundaries. Paralleling the neoliberal imaginary of the individual within the market, state-centric approaches to security subsequently affirm the belief that the due diligence of each individual state, guided by the rational principles of what constitutes statehood, will result in the state having their needs met. These assumptions pose difficulties for addressing phenomena that are not subject to the boundaries of the state such as environmental degradation, pollution, loss of biodiversity, and globally rising temperatures, to name a few. Globalization further complicates this state-centric approach in terms of economic and food security. With states either controlling the dependence, or being dependent on other states for their resources, the requirements for 'security' become rather ambiguous.

Perhaps most pertinent for analyses of food security, is the question of what state-centered security approaches foreclose upon, vis-à-vis unquestioned assumptions, as relevant and meaningful options to address food insecurity. This mirrors Boaventura de Sousa Santos' argument of a sort of blindness that is fostered under epistemic regimes that assume there is one 'correct' (read rational, grounded in reason) approach to identifying problems and proposing solutions for those problems. Santos, drawing from Thorstein Veblen's critique of classical economics' dependence on a "circular relation between facts and theory" (2014, p. 136) states

"either facts corroborate such a concept of normality and the propensity to predefined ends and are thus established as relevant, or they do not, in which case they are discarded as abnormal, marginal, or irrelevant" (2014, p. 136).

Additionally, dualistic distinctions are reinforced in security frameworks. Cudworth and Hobden state

> There is an ontological issue which the environmental security literature highlights most profoundly. Dualism underestimates the complex interlinkages in the biosphere by focusing on the security of one referent rather than allowing an analysis which permits the examination of the complex and overlapping processes that constitute environmental problems. The term 'environment' itself is a catch-all category which homogenizes the diversity of non-human life and encompasses a multiplicity of incredibly varied non-human plant and animal species. (118)

Cudworth and Hobden trace the co-constitution of the current global food system, the global economic system, and the global political system pointing out that there has been much discussion on the dualistic distinction drawn between the global North as the source of manufactured goods and the global South as the source of agricultural products, with 'development' defined as the transition of the latter to the former. Following McMichael, Cudworth and Hobden point to the dependence of the global North's development on the exploitation of the global South's labor and natural resources (2014, p. 99). As such, it becomes clear that the seemingly 'natural' transition from one to the other is a path that has been

constructed by the global North for the global North to justify the past and continued exploitation of both humans and the environment.

Cudworth and Hobden's ontological approach to international relations and security studies provides a foundation for one to consider the implications of the global food system in relation to other systems. In doing so, this approach provides the means by which one can analyze the 'gaps' that appear in food policy implementation under security-based ontological frameworks. In doing so, Cudworth and Hobden offer the reader the tools to examine the intersections between food systems, ecological systems, and socio-political systems.

In sum, this body of literature offers an analysis of the ways in which the global food system is predicated on dualistic understandings of nature/culture, rural/urban, and producer/consumer and the ways in which these dualisms order current human-human and human-nature relations. These theorists pose questions about the interwoven systems that structure these relations, drawing attention to different points of intersection between ecosystem health, climate, labor and class relations, capitalist logics, and social ordering, while continuing to pay particular attention to how the agricultural sector mediates these relations. There are several features of these arguments that I will point out before turning to the next chapters.

First, is the notion of separation. Building upon Marx's material separation of nutrients from the soil through the removal of laborers from the land, Foster and Moore provide an analysis of the ways in which the development of the global food system has ordered both urban-rural and rural-rural relations through a process of labor and land exploitation. Ploeg elaborates upon this notion of separation, arguing that the distancing of producers from consumers from the particularities of time and space, obfuscates the interrelations between the processes of production and consumption and the exploitation of both labor and land that is required to derive

maximum profits. Furthermore, Cudworth and Hobden offer an analysis of the ontological separation of the state as a bounded entity, which can be secured from elements, agents, and environments outside of its boundaries.

Second, though very much related, is the notion of epistemic hegemony and its relation to the neoliberal imaginary that gained traction in the 1970s. Schneider and McMichael further the claims of Foster and Moore, arguing that an understanding of the separation of laborer from land leads not only to a material (nutrient) rift which ontologically separates 'being' of human from the 'being' of ecosystems, but also an epistemic rift. Merchant's analysis complexifies this argument, noting that the hegemony of scientific knowledge as "objective, value-free, and context-free knowledge of the external world" (1908, p. 209) results in the assumption that there is a singular approach to the best (and only) way of constructing solutions to social and ecological problems. Understanding the implications of epistemic hegemony is central to an understanding of the relationship between food systems, social exploitation, and ecological exploitation as knowledge production is directly related to defining collective problems and devising solutions for problems that are identified as such. To this regard, Santos provides a poignant analysis of the blindness that is fostered under epistemic regimes that assume there is one 'correct' approach to identifying problems and proposing solutions, limiting the "horizon of possibilities" (Santos, 2014, p. 20).

Thus, these two features frame the implications of the threefold separation driven by the structuring of the global food system. The ontological questioning these theories highlight the complex interactions between the current state of the global food, economic, and political systems and offer the framework by which "the horizon of possibilities" (Santos, 2014, p. 20) can be challenged. Doing so necessarily considers who (both human and non-human) is excluded

from the hegemonic imaginary and what possibilities are excluded on the basis of their impossibility.

Chapter III

Food Security and Food Sovereignty

How *reality* is understood matters. There are risks entailed in putting forward an ontology: making metaphysical assumptions explicit exposes the exclusions on which any given conception of reality is based. But the political potential of deconstructive analysis lies not in simply recognizing the inevitability of exclusions but in insisting on accountability for the particular exclusions that are enacted and in taking up the responsibility to perpetually contest and rework the boundaries. (Barad, 2007, p. 205)

The theoretical overview of the previous chapter offers a framework through which the global food system and international approaches to food security can be viewed. What this framework offers is a systematic questioning, that invites one to pay attention to the phenomenon that are defined as problems and the solutions that are proposed to these problems, in relation to the neoliberal imaginary. In considering 1) the capitalist tendency towards limitless growth and cycles of accumulation predicated on the exploitation of labor and land and 2) epistemic hegemony and the relation of scientific, systematic, rational knowledge in relation to the neoliberal imaginary, one might analyze proposed solutions to current political problems on the basis of their ontological grounding. In the analysis that follows, I hope to show that the neoliberal imaginary, and its ontological assumptions, is evident in the solutions to food global food insecurity proposed by major international development and agricultural organizations (i.e. The World Bank, the FAO of the United Nations).

In order to both demonstrate the limitations of the neoliberal imaginary, and foreground alternative ways of apprehending "problems," I will specifically apply the framework articulated above to a recent publication by the Food and Agriculture Organization (FAO) of the United

Nations (UN), the 2019 report, *The State of Food Security and Nutrition in the World,* primarily because the documents published by major international organizations like the UN, The World Bank, The World Trade Organization, and The United States Department of Agriculture to name a few, are centered on food security, which arises from both identifying and proposing solutions to problems within the neoliberal imaginary.

Standardized measures of food insecurity remain consistent across publications of major international organizations that targeting food insecurity or hunger eradication. The United States Department of Agriculture pulls from the Life Sciences Research Office, identifying food insecurity as "the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways" (USDA, "Measurement," 2019). The FAO identifies food insecurity as a lack of "secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life" (Napoli, FAO, 2010-11). Hunger and (mal)nutrition have been at the forefront of international discourse for quite some time. Documents on international security and development highlight food access as a necessary foundation for improving international security and promoting sustainable development goals. The goal to eradicate hunger has found a consistent place within dialogue in the international sphere and a commonly noted aspect of that goal is to establish and uphold what the FAO calls the "right to food."

The Food and Agriculture Organization's electronic publication, "The State of Food Security and Nutrition in the World: 2019" begins with several bold, brightly colored, banners calling attention to the current state of hunger and malnutrition, juxtaposed against a moving background of a teeming market in what is presumably a developing urban area. The banners declare the following in all capital letters: "For decades, the number of hungry people had been

declining- this isn't true anymore," "more than 820 million peole do not have enough to eat," "at the same time, no region is exempt from the epidemic of overweight and obesity," "ending hunger and all forms of malnutrition by 2030 is an immense challenge," "with real political commitment, bolder actions and the right investments, zero hunger is still acheivable" (FAO, The State of Food Security and Nutrition," 2019).

The introductory banners of this document frame the issue of hunger and food insecurity in a specific way and there are two aspects of this framing that should be noted. First, is the assumption that the declining rates of hungry people world-wide was being successfully (at least to a degree) addressed (thus the decline in numbers), which implies that the system *was* working, and now needs to be tweaked or fixed to continue on its path of eradicating hunger. It is not *radical change* that is needed, but rather just *bold actions* and the *right* investments. The second assumption is that there is an inherent "good" in progress and growth. As the neoliberal, capitalist path of countries in the West/global North is the best system in promoting progress and growth, issues of hunger and malnutrition are relegated to countries outside of the West, where they have yet to achieve the same economic, political, social 'progress' of the global North. At its core, one can view this as a means of continuing to render countries and peoples in the global South as dependent on aid from the global North. In doing so, there is an occlusion of the systemic reasons for the continuation of food insecurity and hunger at a global level, rendering the current state of hunger, malnutrition, and food insecurity as a natural phenomenon simply needing the proper infrastructure to cope with it. Furthermore, this is infrastructure that the global North can help the global South establish. The systemic reasons for the continuation of food insecurity and hunger are based in the previous analyses of the neoliberal, capitalism food system, in which, following McMichael, Cudworth and Hobden point to the dependence of the

global North's development on the exploitation of the global South's labor and natural resources (2014, p. 99). The seemingly 'natural' transition from producer of labor and natural resources to consumer of goods is a path that has been constructed by the global North to justify the past and continued exploitation of both humans and the environment through the incorporation of the global South into pre-established ordering of food commodity chains (McMichael, 2009, p. 141).

In reading this 2019 publication from the UN, there are several features that stand out. These features are both consistently pointed to in international discourse and publications on global food insecurity and hunger and are key in understanding the ontological groundings of the neoliberal imaginary's approaches to defining hunger and food insecurity as a problem and proposing solutions to reduce hunger and food insecurity at the global level. First, hunger is the primary referent object. Second, malnutrition, including obesity, is the secondary referent object. Third, there is an acknowledgement that these issues stem, not from a global lack of food in general, but from the continuation of poverty, which is the key to eradicating hunger, malnutrition, and food insecurity. Fourth, as poverty is central to perpetuating hunger, malnutrition, and food insecurity, *development* is the strategy by which to eliminate poverty and, thus, eliminate hunger. Finally, approaches to development (as the solution) are universalized as a "one-size-fits-all" framework.

These features may be familiar to readers, as global hunger has been brought under a spotlight of media attention and policy attention especially since 2006, when there was a "dramatic displacement of food crops for fuel crops" prompting the FAO to issue warnings about potential food shortages, and 2007 when the inflation of food prices drastically increased the number of hungry individuals worldwide (Holt-Giménez, 2008). However, what I wish to propose is a reading of these key features of "The State of Food Security and Nutrition in the

World: 2019" through the framework developed in the first half of this paper as there are specific ontological assumptions made in the FAO's defining of the problem and the solutions proposed on the basis of this.

'Security,' primarily economic security, is the end goal for the majority of national and international projects to address hunger and malnutrition. 'Food security' becomes the end goal and 'food insecurity' the object to secure from. A brief, but helpful, passage from David Kennedy's book *Of War and Law*, synthesizes what is meant behind the term 'security' more generally. Kennedy states "Reason against unreason, principle against passion, the sanity of our commercial present against the irrationality of an imaginary past. In this picture, we defend civilization itself against what came before, what stands outside, and what, if we are not vigilant, may well come after" (2006, p. 2). In this passage, Kennedy captures important ontological assumptions of security frameworks. Not only is there a specific ontological claim that the world is something "outside" that can "get us" but there is a similar villainization of "what came before" (the past), as something inherently bad, reinforcing the narrative of linear development, progress, and growth as naturally and apolitically "good."

The food security framework, specifically, is measured in "quantitative/monetized terms of market transactions" and abstracts 'security' from any cultural context and is located solely within the international market. Thus, with the rise of neoliberal policy, came a specific understanding of food security within the world market, rather than a function of the nation-state (McMichael, 2005). This shift is captured in a statement from the U.S. Secretary, John Block, in 1996: "the idea that developing countries should feed themselves is an anachronism from a bygone era. They could better ensure their food security by relying on U.S. agricultural products, which are available in most cases at lower cost" (quoted in McMichael, 2005, p. 282). Food

security reinforces notions of linear development, progress, and growth through the assumption of economic development as both natural and apolitical, and additionally assumes a 'knowability' of the world, predicated on a fundamental separation of the entities that make up the world.

As Merchant, Cudworth and Hobden, and Zanotti point out, there is a danger in the worldview promoted during the Scientific Revolution and Enlightenment, especially considering that the foundations of this worldview have maintained a healthy life within the neoliberal imaginary of today's world. Though Cudworth and Hobden draw on Complexity Theory for their argument, which differs from Zanotti's use of Quantum Theory to problematize similar features of politics in today's world, each offers a framework for questioning the status-quo in an effort to devise solutions to systemic issues. Both argue for the need for politics to embrace the co-evolution or co-constitution of human and non-human beings; the intimate connections and entanglements between matter, the meaning ascribed to matter, and the systems that are constructed as a result; the uncertainty and unpredictability of the human condition within the world; and contextualized approaches to practice-oriented problem solving. The approach to politics set forth by Zanotti, Cudworth, and Hobden, which is mirrored in many ways by Merchant, provides a fundamentally different ontology than the security ontology outlined in the UN publication above and reproduced in politics both internationally and nationally. The former embraces an ontology of connectedness, attentiveness and responsibility in the face of uncertainty, sensitivity to the particulars of time and space. In contrast, the latter embraces an ontology of linear progress and knowability via linear causality and reason (A will necessarily lead to B), in a world of bounded, separable, and isolated entities.

"Ontological starting points shape the way we imagine how the world is and how we fit in it, the way 'things' relate to one another, what we consider valid knowledge and how we may be able to bring about change" (Zanotti, 2019, p. 1). In addressing the ontological assumptions that are embedded within this FAO document, my intent is to offer a way in which proposals to ongoing food insecurity and vulnerability can be evaluated based on their ability to "challenge the horizon of possibilities" (Santos, 2014, p. 20) through an acknowledgment of the exclusions that are made in the neoliberal imaginary. This, perhaps, offers a means of identifying potential pathways that move away from a global food system characterized by dispossession, import/export dependence, vulnerability, and chronic hunger and insecurity.

The conceptual framework of food sovereignty offers an alternative approach to the food security paradigm born from the neoliberal imaginary. Food sovereignty is a concept that was developed by Via Campesinia, an international peasant's movement, and brought to the World Food Summit in 1996 as an alternative to neoliberal policies and neoliberal food security (Via Campesina, 2003). La Via Campesina defines food sovereignty as :

> The peoples', Countries' or States Unions' RIGHT to define their agricultural and food policy, without any dumping vis-à-vis third countries. Food sovereignty includes:
>
> 1. Prioritizing local agricultural production in order to feed the people, access of peasants and landless people to land, water, seeds, and credit. Hence the need for land reforms, for fighting against GMOs (Genetically Modified Organisms), for free access to seeds, and for safeguarding water as a public good to be sustainably distributed.

2. The right of farmers, peasants to produce food and the right of consumers to be able to decide what they consume, and how and by whom it is produced.
3. The right of Countries to protect themselves from too low priced agricultural and food imports.
4. Agricultural prices linked to production costs: they can be achieved if the Countries or Unions of States are entitled to impose taxes on excessively cheap imports if they commit themselves in favor our a sustainable farm production, and if they control production on the inner market so as to avoid structural surpluses.
5. The populations taking part in the agricultural policy choices.
6. The recognition of women farmers' rights, who play a major role in agricultural production and in food. (Via Campesina, 2003).

Taken at face value, food sovereignty, as a framework for approaching the ongoing ecological devastation and perpetual food insecurity brought on by the current structuring of the global food system, proposes a strikingly different ontology than the security frameworks outlined in the previous section. The six pillars of food sovereignty offer an alternative lens through which the world, and humans' interactions with the world, can be understood. Perhaps most importantly, the framework of food sovereignty refutes the naturalization of economic principles as apolitical mediators of both human-to-human and human-to-nature relations. This effectively disrupts a common form of rationalization within the realm of political decision-making, in which the market (functioning in accordance with principles of rational thought and reason) will identify the best solution for the problem at hand.

These six principles are grounded in the need for direct engagement of the people- whether producers, distributors, or consumers- with the ecological processes in which varying practices of growing food are located. This call to localize food is not necessarily a call for household food sovereignty (although in some cases this might be both manageable and preferable). Rather, the relocalization of food production and distribution is a call to shorten the links between producers and consumers and between consumers and the foods they consume.

This can be thought of as a relational model of thinking and echoes the sentiments of the theorists considered in the previous section. What a relational model of thinking posits is the belief that "land, water, and seeds are not perceived as resources to be exploited (acted on) by humans, but as entities that coevolve (develop) with humans" and as such, "land is seen as a space of linkages, where all the beings grow and acquire their forms through establishing links with others" (Martinez Flores, 2015, p. 12-13). However, it is important to note that, even as a relational ontology runs through these six pillars of food sovereignty (and the literature engaging with food sovereignty), there is an additional discourse based around "rights" which frames non-human entities (plants, water, land, seeds) as natural resources to which humans have a right (Martinez Flores, 2015).

Although there are multiple understandings of the world within food sovereignty discourse, these understandings are not in opposition to one another and, in fact, highlight an important point regarding ontology and the use of ontology as a framework for questioning and engaging with political problems; in considering ontological analysis as a useful tool, I do not wish to propose one 'right' or 'correct' way of understanding the world. One of the more powerful (in my opinion) veins of food sovereignty scholarship recognizes the existence of multiple ontologies grounded in different spatial and temporal contexts. This is in direct

opposition to the neoliberal imaginary, which seeks to propose solutions, which are directed by specific goals, that are both ahistorical and apolitical, thus applicable to any and all contexts, contingent upon their proper implementation.

In fact, the acceptance of a plurality of experiences, contexts, and practices simultaneously existing and interacting with one another is a necessary acceptance in the face of a rapidly changing climate and increasing vulnerability in ecological, food, economic, and political systems as a result. Just as species diversity is a feature of ecosystem health and adaptability, so too is knowledge and practice diversity as a feature of adaptive abilities within humans.

Chapter IV

A Return to Ohio's Foodscapes

Seventy-five percent of the nation's food-insecure counties reside in rural setting. According to Feeding Americal, 2.4 million U.S. rural households lack sufficient access to nutritious and affordable food. Like Appalachian Ohio, many of these regions are rich in natural assets or farmland that benefit industrial powers elsewhere. (Rasul, 2019)

"We should write an obituary for the garden, because it's dead and it did not die of natural causes," Helm said. The park's eviction paves the way for $30 million or more in potential redevelopment projects, officials said. (Frolik, 2017)

The contradictory nature of Ohio's "flourishing" and the high prevalence of food insecurity among those living in the state illustrates an important contradiction within the global food system and the policies enacted to "eradicate global hunger" nationally and internationally. The neoliberal imaginary in its reliance on an objective, abstracted market as the means by which goods and services are distributed in a fair way has failed to produce solutions for hunger, food insecurity, malnutrition, especially in the face of a changing climate. What the neoliberal imaginary has been successful in doing is increasing the vulnerability of populations worldwide. The integration of food systems into the global economic system, dominated by transnational companies whose focus is on obtaining the greatest profit margin, as per the neoliberal capitalist imaginary, is predicated on the exploitation of land and labor. In response, La Via Campesina and other advocates for more direct control over the ability to obtain food, have emphasized supporting and renewing regional systems, which would work to 1) reconnect food (plants and animals and the process of growing plants and raising animals) back to the larger ecological systems in which they are imbedded, 2) reconnect food and the processes that go into growing or raising food to the individual who eventually consumes it, and 3) reconnect the people who

produce food to those who eat what is produced. As demonstrated in the previous chapter, national and international political actors have relied on strategies to address food insecurity that are deeply embedded with the neoliberal imaginary, predicated on the ontological separation of humans from what is "out there" and notions of linear progress and endless growth, which necessarily assume that where we as humans are at in terms of our political, economic, and social structures is the best we have had which allows for a "why fix what, in many cases and for many people, works?" mentality. These strategies include more subsidies, more funding for and access to food aid, free trade, and better [read more efficient] agricultural technologies. Thus what is to be done?

In this section, I will illustrate how one might pay attention to practices, behaviors, and policies that do work to destabilize the ontological assumptions embedded within the neoliberal, capitalist imaginary. I will use the framework of food sovereignty as illustrative alternative ontology that constitutes human-nature relationship in a way that is contextually specific, attentive to aspects of this relationship other than profit margins, and grounded in collaborative, shared efforts between producers and consumers.

More specifically, I will examine the political actions of community members in both Dayton, Ohio and rural Ohio based on their embeddedness within the wider system of the export-import based, agribusiness focused, and dependency oriented food system. In doing so, one can ask what space, or rather what components, are important for grassroots, community-based food initiatives to acquire the longevity necessary to push back against prevalent pockets of food insecurity and hunger.

In 1979, the Ohio Ecological Food and Farm Association (OEFFA) was established as an organization meant to cultivate sustainable, organic, community-based agricultural practices.

The OEFFA 2020 conference brought together farmers, consumers, academics, and government officials all concerned with the worsening impact of climate change on the agricultural system of Ohio, a system that is integrated within the increasingly vulnerable global food system. What this conference provided, alongside many other things, was evidence for the increasing need to question the structure of the global food system and more localized questions about specific practices, policies, and methods of addressing the vulnerability of both farmers and consumers nationwide. This conference, taking on the topic "A Climate For Change," offered a diverse array of workshops focused on developing and teaching strategies for climate adaptation. From lectures entitled "The Capitalism in Our Food" to "High Tammin Forages for Managing Intestinal Parasites in Sheep" and "Partnering with Ohio's Growing Craft Beer Industry," this conference was a representative of the power of connecting the knowledges and practices of people as they experience the varying impacts of climate change within their respective sectors. The concern of participants seems to mirror trends in community-based agricultural initiatives within Ohio.

Ohio has, in recent years, been the site of several community-based projects that attempt to decrease the vulnerability of Ohioans in relation to food production and consumption. Many of these efforts have been labeled as practices that are geared toward food sovereignty as a means of relieving food insecurity in Ohio. Most notably, at least in terms of media coverage, have been efforts in Rural Appalachian Ohio, where many people lack regular access to food due to low income and limited transportation. Rural food insecurity is striking considering the expansive sprawl of farmland enveloping many of these communities, but as a feature of the capitalism in our food (to borrow from Holt-Giménez), these areas, "rich in natural assets or farmland" are used to glean benefits for industrial powers rather than local consumers (Rasul,

2019). As perhaps the most striking contradiction of the current food system is that farmers, the closest link to the food that is consumed, are often the ones who are most vulnerable within this system. Holt-Giménez illustrates this in a discussion of the food crisis of 2007-2008 stating:

> The food crisis sent grain prices on the global market skyrocketing, farmers growing the grain won't see much of this windfall for long. Why? As George Naylor of the National Family Farm Coalition (NFFC) puts it, 'Farmers don't trade in grain; grain companies trade in grain.' The spectacular increase in the price of corn (from $2 to as high as $8 a bushel) was quickly followed by an increase in the price of farm inputs. Profit margins are rapidly thinning for both conventional and organic farmers. In general, farmers report that their costs are increasing faster than prices for their goods. Farmers receive less than twenty cents of the food dollar, out of which they must pay for production costs that have increased by 45% since 2002. The prices of most fertilizers have tripled over the last 18 months. (Holt-Giménez, 2008).

These sentiments, over a decade later, were at the root of many of the discussions I was party to during the 2020 OEFFA conference. Many of these discussions were pragmatic in nature, focusing on questions such as: what are the best techniques to prevent soil erosion from the increasing rainfall caused by climate change so crops (and livelihoods) are not lost? How do farms obtain organic certification? Is the cost of producing certified organic crops balanced out by the increased sale price of the goods (likely not, as the final profit goes to the farmer only in direct exchanges)? How can farms and other food sector businesses (restaurants, breweries, et cetera) partner to build strong connections between producers? The conference was illustrative of

a community space in which individuals involved in the food system in some way could come together and share best practices, new experiments, new theories, new approaches, stories of struggle, and stories of success with one another.

In rural Ohio, there have been efforts to rebuild the connections that are often stretched thin within the current food system and to provide access to food for low-income communities who lack any or consistent transportation to local food banks. Three years ago, the Hocking Local Schools district's superintendent, George Wood, conceived of a project to help promote access to healthy foods for students and their families. The result? A revamped school bus, delivering food throughout the "massive rural district covering more than 190 square miles" in an effort to "ease transportation burdens by getting as close to them as possible" (Rasul, 2019). The organizaiton, Rural Action, lists several projects that are working to build a regional food economy in Appalachian Ohio. These projects include creating centralized hubs that support producers in the region, helping to spread the word about the value of regional food systems, and delivering fresh food to those who would otherwise have limited or no access (Rural Action, 2019).

The Appalachian region of Ohio is marked by several economic, political, and social features. "With the decline of American coal and a hemorrhaging of industrial employment in the region, the 20th century began a period of extensive emigration, with 'hillbilly highways' carrying millions of souls in search of opportunity elsewhere. Some families stayed, as did their poverty, making the economic realities of a portion of today's citizens a complicated force with a firm grip that is much more difficult to escape" (Rasul, 2019). Perhaps most important to note, and what this passage touches on, is that the food insecurity faced by residents of the 32 counties that make up rural Appalachian Ohio does not exist as a problem that can be isolated and

analyzed and solved as such. Thus, when one considers the smattering of billboards advertising drug addiction treatment services along the one of the major highways in this area, one must also consider the lack of access to jobs, the lack of access to food, the isolating and alienating features of capitalism, and the extraction-abandonment of the coal industry in this area.

In spaces where capitalist industry has profited and moved on, communities have been left to cope with the abandonment of the means by which the "American Dream," a narrative with many iterations but the same grounding in the ideal that hard work pays off, was supposed to be attainable. Communities in rural Appalachia have been left to make ends meet in order to simply make it by. What this has resulted in, as has been the case with other rural areas in the United States, is the necessity for community based support structures that work to provide access to what individuals and households lack, but also provide a sense of connection with others sharing similar struggles and with others who have the means to help. In particular, the Appalachian Center for Economic Networks (ACEnet) has provided valuable support to Appalachia Ohioans struggling with food insecurity, supporting farmer initiatives to process surplus foods and distribute to those in need (W.K.Kellogg Foundation, n.d., p. 6-7). As such, these initiatives are important in their ability to reconnect the separations that form in relation to the ontological separation that results from the neoliberal imaginary. Where food security, and the idea that access to food, as an abstracted commodity, is best mediated by the global market, breaks down is in its inability to address the food insecurity of those whose labor is necessarily devalued in the capitalist economic system. Rural Appalachian Ohio and the community-based food initiatives forming in this region can be examined using the concepts of separation outlined in the previous chapters.

These projects seem to identify these areas of separation between producers, consumers, and food as key in addressing food insecurity in the region. The focus on developing regionally based food economies reflects the need to shorten the distances between those (humans and non-humans) who are involved in food systems creating stronger linkages between consumers who know their producers, producers who know their consumers (and consumer's needs rather than agribusiness needs), and consumers and their food. These projects offer a framework for regional food system development that works to integrate agriculture into the spatial and temporal needs of the surrounding ecosystems. This provides more direct access to food for these insecure communities and might also contribute to reducing the ecological burdens of trans-national food transportation, limiting wasteful packaging, reducing food loss during transportation. Furthermore, these moves to "regionalize" Appalachian Ohio's food system, have the potential to grow and maintain regional ecological knowledge, which should be viewed as a strength considering the volatility and unknown of climate change. The very basis of regional or local, community-based food systems push back against the ontological assumptions of the neoliberal imaginary as these projects are specifically predicated on the *in*separability of producers, consumers, and food.

However, there are several difficulties, or areas of concern that I would like to point to. First is the dependence on volunteer work to maintain these community-based food initiatives. Although it may be necessary in the initial phases of project design, the dependence of volunteers might render these systems vulnerable to constraints of time and energy on behalf of volunteers if they are having to work elsewhere in addition to running the aforementioned projects. Second, is that these projects, at least at this phase of development, are centered on rural spaces, which have often already been developed or modified for agricultural purposes. Thus, it

seems intuitive to consider rural spaces as the primary sites for the beginnings of food sovereign practices. However, in considering the body of literature covered in Chapter II, it is important to consider what assumptions might be embedded within this focus on the rural as the primary site of agriculture. I suggest that, although rural spaces are absolutely necessary to consider as potential sites of food sovereignty, in *only* considering rural spaces, the rural/urban-producer/consumer divide embedded within the neoliberal imaginary and as necessary for its producer, consumer, food separations and obfuscation, is not challenged and strategies to address urban food insecurity are limited.

Where there has been some success in developing and maintaining community based food initiatives that are reflective of the pillars of food sovereignty in Rural Appalachian Ohio, there seems to be more difficulty getting projects stabilized in the urban spaces of Dayton, Ohio. Dayton shares many similarities with rural Appalachian Ohio, other than the obvious differences in landscape features. These similarities are necessary to note as they help to bridge the divide between the rural/natural and the urban/cultural. In bounding these locations epistemically and ontologically- treating them as isolated spheres with inherently different attributes- the deep connections between the two spaces as they function within the wider economic, social, and political are obfuscated. Dayton's economic decline due to the recession of the manufacturing industry parallels Appalachia Ohio's economic decline in the aftermath of receding coal industry. Although food insecurity is measured differently for rural and urban spaces, both areas of Ohio have above average rates of food insecurity. Finally, like Appalachian Ohio, Dayton has had high rates of drug use. In 2017, the city had one of the highest rates of opioid deaths in the nation and had the highest rates of opioid deaths in the state (Goodnough, 2018). Just as food insecurity in Appalachian Ohio cannot be considered in isolation from other political, social, and

economic issues, food insecurity in Dayton cannot be considered in isolation from the abandonment of the manufacturing industry, the proximity of Dayton to the Wright Patterson Air Force Base and the extremely wealth of neighboring cities and suburbs, and the isolating and alienating features of capitalism.

Rates of food insecurity are particularly high in Dayton, with major supermarkets that provide access to low-cost food products moving to more profitable suburban areas, leaving Dayton residents with a selection of corner and convenience stores or fast food restaurants to choose from. As such, West Dayton is considered a food desert. The USDA considers an area to be a food desert if it is both low-income and low-access with low-income defined as "a poverty rate of 20 percent or greater, or a median family income at or below 80 percent of the statewide or metropolitan area median family income" and low-access defined as an area with "at least 500 persons and/or at least 33 percent of the population lives more than 1 mile from a supermarket or low grocery store (10 miles, in the case of rural census tracts)" (USDA, Mapping Food Deserts).

Once a site of machinery manufacturing, Dayton was struck by the same industrial decline that affected many other Rust Belt Cities in the mid-1900s. Dayton experienced a significant economic decline beginning in 1930, spurred on by a host of factors including housing policies that led to a highly segregated city, lowered cost of living outside of the city, and high reliance on the auto industry (Milsap, 2018). In recent years Dayton has somewhat stabilized, but tends to have low full-time employment and suffers from "declining earnings, home values, and population" and, as still suffers significant economic challenges (Mislap, 2018).

Much of my interest in Dayton, and Ohio more generally, is grounded in personal experience. My parents relocated from our rural family farm in New Carlisle, Ohio to Dayton in

2012, but even before they relocated, Dayton featured as the closest urban space to visit, and we did frequently. There are marks of industrial decline everywhere throughout the city; Massive warehouses stand empty and boarded up, as reminders of the big industry that has since retreated. Vacant lots teeming with weeds, unused railroad tracks, and empty silos all sit at the heart of downtown. Every time I return to visit, I am struck by the emptiness of the streets, particularly at night when those who work downtown have returned to their respective homes in one of the neighboring suburbs.

Even so, there are moments when, walking through Dayton, I notice projects that have taken root in many of these spaces of industrial decline and have transformed them into a place with renewed purpose. This is indicative of a process of revitalization and renewal in Dayton, transforming the space that was abandoned during the industrial decline of Dayton. This process (or processes) has taken a variety forms that often are in tension with one another. For example, right after my parents moved into their apartment in Dayton, a community garden, The Garden Station, was established only a few blocks away. The Garden Station was a project headed by Lisa Helm. Helm also runs Dayton Urban Grown, an urban farm co-operative primarily focused on workshops and trainings for community members. After one year of operation, the (rented) land on which Garden Station was situated- roughly ten times the size of the Dayton Urban Grown Farm site- was transferred to a Kentucky developer, who had purchased several neighboring buildings (Frolik, 2017) and revamped them as loft apartments, a brewery, and a yoga studio. The lot that the Garden Station occupied was, and seemingly still is, intended for additional parking for these businesses. On my most recent visit to Dayton in January 2020, the lot that was once home to the Garden Station was sitting untouched, slightly more overgrown than the last time I had visited.

Urban farming is a practice that has taken hold in other Ohio cities, in particular Cleveland, Cincinnati, and Columbus, and other Rust Belt cities such as Detroit and Pittsburgh. However, a quick Google search for news coverage on urban farming projects in Dayton reveal projects started a few years ago (there seems to have been an increase in urban agricultural projects around 2015-2016) that have seemingly since disappeared, at least from the radar of local news outlets and social media platforms like Facebook and Twitter. Perhaps one of the largest scale urban agricultural initiatives in the Dayton area, The Urban Renewal Farm (TURF) was a project backed by The Ohio State University Extension program and was started in 2014 as a site for community based food production in a city that suffers from nationally high levels of food insecurity. As of 2019, this volunteer-run urban agricultural project had ceased most activity, leaving a deactivated Go Fund Me account and a stagnant Facebook page (circa 2017) as indicators of the ongoing struggle to offer alternative means of obtaining food for those in Ohio who regularly face food insecurity.

There are several questions to consider here in light of these reflections. First, I will return once again to my initial line of questioning: what does it mean to say that Ohio is "flourishing" in terms of its agricultural production while food insecurity remains a significant issue for many Ohioans? Secondly, why have urban community-based initiatives to mitigate food insecurity, such as the Garden Station, failed to take hold? Why (if at all) is it important for these urban-based, community initiatives to take hold?

This complexity and the co-constitution of the global economic and global food systems requires a variety of problem-solving approaches, to return to the importance of diversified knowledges and ontologies. This is evidenced by the inability of the neoliberal imaginary's

failure to do anything but offer policies constructed from the same vein of thinking that gave rise to the problems in the first place.

The rise of urban farming practices offers additional sites for production and more direct access for urban, food insecure populations. Additionally, urban areas offer a unique space in which connections can be forged, support given, conversations had, and struggles and successes shared. Finally, the incorporation of farming practices into urban spaces signifies an important destabilization in the spatial boundaries that have worked to isolate the rural from the urban, the product from the process, and the individual who grows or raises food from the individual who consumes the food.

Chapter V

Urban Spaces and Food Sovereignty

> Weak answers… are those answers that do not challenge the horizon of possibilities. They assume that the current paradigm provides answers for all the relevant questions. They therefore fail to abate the perplexity caused by the strong questions and may, in fact, increase it. Indeed, they discard and stigmatize this perplexity as the symptom of an irrational refusal to travel according to historically tested maps. But since perplexity derives in the first place fro questioning such maps the weak answers are an invitation to immobility. (Santos, 2014, p. 20)

> Each generation, especially one living in a time like the present, is under the responsibility of overhauling its inherited stock of moral principles and reconsidering them in relation to contemporary conditions and needs… The obligation is to discover *what* principles *are* relevant to our own social estate. Since this social condition is a fact, the principles which are related to it are real and significant even though they be not adapted to some other set and style of social institutions, culture, and scientific knowledge. (Dewey, 1932, p. 283)

Why should we examine international food policy as a means of understanding smaller scale, on the ground, food realities? Why is an ontological approach helpful in this pursuit? In the previous four chapters, I have attempted to illustrate the linkages between the current global food system and on-the-ground food realities in Ohio. As stated in the introductory paragraphs, the use of the term "flourishing" to describe Ohio is posed in contradiction to accounts from Ohioans who detail the impacts of grocery store closures on their ability to access food. What is one to make of these contradictory accounts?

As a state, the development of Ohio's agricultural sector was underwritten by capitalist logics of accumulation by dispossession, maximizing profit, and unlimited growth as well as the neoliberal ideology which universalized a model of development project that was grounded in the narrative that economic development (as modeled by the twentieth century development of the United States, Canada, and Australia) was a necessary condition for statehood (McMichael,

2009, p. 141). Ohio's role as a major exporter of Agricultural products can be understood in relation to these global trends in several ways.

The theoretical framework presented in Chapter II illustrates two key features of the characteristics of the global food system that appear in the body of literature I examine. First, is the notion of separation, which illustrates the threefold distancing I present in the introduction: between the food produced and the larger ecological systems in which it is produced; between the food produced and the individuals or communities who consume it; and between the laborers who produce the food and those who consume it. As stated, a primary feature of capitalism is the maximization of profit, which has and continues to lead to violent dispossession in order to obtain 'new' land and cheap labor. This is a double process of exploitation: of the land and of the labor. Thus, the threefold separation effectively divorces product (food) from the realities in which it is produced. Food rendered as a commodity invisibilizes the exploitative practices that go into producing the goods that are sold to benefit the owners of production.

The second feature of the global food system is its relation to and reproduction of hegemonic systems of knowledge. According to Carolyn Merchant, this dominance was formed out of the Scientific Revolution, in which scientific knowledge came to assume status as "objective, value-free, and context-free knowledge" of a world 'out-there,' separate from humans but fully knowable through reason and the scientific process. Although some differ in terms of where they ground the rise of this form of hegemonic knowledge, McMichael, Santos, Zanotti, Cudworth & Hobden all offer reflections on the implications of this epistemic hegemony. Specifically, what all theorists agree upon is that the designation of one vein of knowledge as 'valid,' at least more valid than other forms of knowledge, effectively limits our ability to act. Simply, the pool of knowledge from which solutions can be drawn is severely limited.

Additionally, this feature of the global food system limits what is even defined as a problem in the first place. To this latter point Santos states, “What is relevant? The relevance of a given object of analysis lies not in the object itself but in the objectives of the analysis. Different objectives produce different criteria of relevance” (2014, p. 141). In relation to the global food system, a statement from OEFFA roughly captures Santos’ argument: “[t]he prevailing assumption of most policy makers is that bigger and fewer farms achieving higher yields with new technologies, chemical fertilizers, pesticides, and genetic engineering is the only solution to feed the world” (2019, p. 5).

Drawing from theories of situated knowledge and local knowledge, Schneider and McMichael argue that knowledge is contextually specific and, as such, the dispossession of land from the laborer results in an epistemic rift, divorcing specific agricultural and ecological knowledges from the land that gave rise to them. This is problematic in that the capitalist logics driving accumulation by dispossession are reinforced by neoliberal imaginaries predicated on hegemonic systems of knowledge, which promote assumptions of universality regardless of context, and effectively render whatever actions taken as “right” or at the very least justifiable.

The two features reinforce one another as the features of separation often disguise the evidence of a deeply exploitative economic system rendered apolitical as an abstracted mediator of social and environmental relations. In turn, systems of hegemonic knowledge are not presented as such, but are rather framed as a natural homogenization of theories and ideas as they have been developed along a linear timeline of growth and progress.

These features are embedded within a hegemonic (neoliberal, economic development) imaginary that naturalizes current social, economic, and political ordering and gives rise to specific ontological assumptions regarding understandings of what it means to be in the world.

Derived from the literature covered in Chapter II, I argue the hegemonic imaginary puts forth an ontology that 1) assumes that human and non-human entities are bounded and separate from one another (Schneider and McMichael's externalization of nature); 2) as such, the world viewed as objectively knowable and governable in terms of these bounded and separate entities; and 3) assumes a linear timeline of progress and, thus, views progress and growth as inherently good. Reinforced by the hegemonic imaginary, these ontological assumptions coalesce in food security strategies that are implemented by major development and agricultural organizations like The World Bank and the FAO.

However, as the scholars in Chapter II indicate, the atomistic, separable, and objectively knowable conception of the world is grounded in the Newtonian world view, which has not only been overhauled within the natural sciences, but has been convincingly contested by critical scholars. Additionally, the failure of strategies to adequately address hunger on a global level require new approaches to mitigating hunger and food insecurity.

The proposed alternative explored in this paper is the food sovereignty framework. Food sovereignty is a movement to establish rights and control over food systems. This, I argue, promotes a different ontology, or rather ontologies, grounded in an understanding of interwoven, relational existence of all beings and ecological systems. As such, food sovereignty understands knowledge as situated, specific to the spaces and times in which it exists. These ontological features of relationality and contextual specificity necessitate community-based food practices and producer ownership of food systems as the most equitable and environmentally responsible.

The food sovereignty movement originated from La Via Campesina, a peasant movement and often food sovereignty literature focuses on the rural spaces, as these spaces are continuously threatened by dispossession of land for development purposes. In many cases, those who work

the land, and are often the most economically and socially disadvantaged by the global food system, are working under. The concept of food sovereignty was brought to the World Food Summit in 1996 and has since taken hold across the globe, including in rural Appalachian Ohio.

Several community-based projects in rural Ohio are working to bolster community members' access to food. Initiatives like the School Bus Project and Community Food Initiatives are supported by local farmers and encourage meaningful collaboration between community members in efforts to share, distribute, buy (from local producers), teach, sell, and grow their own food. These efforts help to reintegrate food, ecosystems, producers, and consumers, which promotes closer relations between these features of the food system and situates agricultural and land knowledge within the community.

There have also been increases in community-based food initiatives that have surfaced in the urban areas of the Rust Belt of which Ohio is a part. Detroit, perhaps serves as the most notable example, where the abandonment of big industry and the gaps that opened as a result gave rise to urban farming practices and, notably, a reclamation of agriculture by black communities who have historically been associates solely with agricultural exploitation. In Dayton, the Garden Station and The Urban Renewal Farm (TURF) were two projects that were able to maintain urban gardening spaces to help mitigate food insecurity in Dayton, but both have since closed.

It is difficult to say why TURF ceased operation in Dayton, especially as it was backed by The Ohio State University. For the Garden Station, however, the answer is clear- leasing land and hanging on to it in a city undergoing revitalization is no small feat. Although the Garden Station is only one example and, thus, cannot truly be used to make general statements, but after living in Dayton and seeing first hand the rapid revitalization of the city, I will take a moment to

speculate. I have tried to highlight in all cases covered in this conclusion (again the number is far too few to offer a meaningful generalization), the shared features of industrial decline or receding capital giving way to community-based initiatives as means of confronting the loss of livelihoods in one way or another.

There is one interesting difference about Dayton, however. The proximity to Wright Patt Airforce Base and three major hospitals provides the area with a stable population perhaps rendering the city as a viable opportunity for developers, which might render once abandoned spaces viable once again for a profitable enterprise, far more profitable than a non-profit community garden occupying an abandoned lot.

Even so, there is a case to be made for the incorporation of the primary aim of this paper: to explore how the imaginary can be an incredibly powerful way to order and maintain social relations and how to challenge the assumptions embedded within this imaginary to re-order socio-ecological relations. I argue that the threefold separation within the global food system and the hegemony of scientific knowledge reinforce the economic development imaginary. This imaginary naturalizes the continued dispossession and exploitation of land and labor, and fostered dependencies of exploited states on wealthy economies, as a natural progression along the linear path to statehood. As such, the imaginary works to maintain exploitative land and labor orders for the continued benefit of those who own the means of production.

As I have attempted to illustrate, the food and climate challenges we face today have been defined by the singular form of ‘valid’ knowledge within the single ‘valid’ conception of the world. Subsequently the solutions proposed under the food security framework have brought no significant decrease in food insecurity at the global or national (U.S.) level.

Monica White offers a reflection on the importance of considering, what she calls a single story, stating the dominant understanding of 'farmer' as land owner (often white and male), has worked to pattern social and environmental ordering in a way that benefits large, industrial, agricultural projects and the continued exploitation of those whose labor is invisibilized in this narrative. White speaks of the danger of a singe story, which is precisely how we have come to understand farming and agriculture. White discusses the singularity of the popular narrative that paints agriculture as "simply an oppressive yoke around the neck of black people," (White, p. 142, 2018). This constitutes a powerful erasure of black experiences of liberation and freedom that are directly tied to food production, knowledge of the land, and the communal space of the field, which represented a site of resistance for the collective gathering it promoted.

As a strategy for relocating food systems within community relations, White argues for prefigurative politics, which "refers to the construction of alternative political systems that are democratic and include processes of self reflection. Also referred to as 'everyday utopias' place-based alternative practices, and alternative experiments in everyday living, prefigurative politics involves several progressive components, including free spaces and democratic representation" (2018, p. 9). Inclusion of urban spaces in food sovereignty discourse will both integrate yet another body of ecologically situated knowledge and understanding into the implementation of strategies to mitigate food insecurity at the local level. Urban spaces are not going away, but they can act as sites for even minor crop production, to help with immediate food needs. Additionally, spaces like the Dayton Urban Grow (the education-based partner site of The Garden Station) provide spaces in which people can come together and share knowledge and practices, even if space is limited to minor productive capabilities. In this way, urban food sovereignty initiatives can provide the spaces for generative community building, strategizing, and networking to

shorten distances between food-ecosystems-producer-consumer. Furthermore, advocacy to implement protections of green community spaces in urban areas can help to mitigate loss of space to development. Paired together, these strategies could very well challenge “the horizon of possibilities” (Santos, 2014, p.20).

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