

FOSTERING THE LOCAL: FACILITATING A SHIFT AWAY FROM A GLOBAL AGRI-
FOOD INDUSTRY

by

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Abstract:

Food is a vital to human life. Not only does food provide the body the energy to survive, it also shapes human societies. Communities historically have formed around areas with sufficient water and nutrient filled soil capable of growing the products that sustain life. As societies developed in different regions, the type of food produced in the area inherently became ingrained in the society's identity. Today, this system of community involvement and place-based farming has become dominated by an industrialized, global system. Large industrial farms that require massive amounts of capital and chemical inputs and are completely dependent on finite resources such as fossil fuel are controlled by multinational corporations and dominate the global agriculture system. The industrialized system eliminates the possibility of competitors in small-scale farming operations, exacerbates social and economic inequalities, increases prevalence of diet related health issues and heightens environmental degradation. The limited nature of the current agriculture system inevitably is unsustainable and is in desperate need of reform; there is a rising need to downscale and decentralize agricultural production methods in order to avoid impending future disasters that are inherent to a fossil fuel dependent system. This paper will examine the localized food economy as a potential alternative agricultural system and present the case studies of Waterloo, Canada and Tucson, Arizona. It will conclude with a proposal to facilitate a shift to a reflexively localized food economy in Raleigh, North Carolina. This paper will show the critical need to explore alternative systems that can reduce structural inequalities, environmental degradation and detrimental health effects caused by today's dominant food system and how collaboration between farmers, researchers, community groups and local governments can facilitate an inclusive shift from the current global, productivist agricultural model to a sustainable, socially conscious and resilient local food economy.

Key words: local food, food policy, reflexive localism, assemblage thinking, food justice, food sovereignty

1. Introduction

Food is vital to human life. Not only does food provide the body the energy to survive, it also shapes human societies. Communities historically have formed around areas with sufficient water and nutrient-filled soil that was capable of growing the products that sustain life. As societies developed in a given region, the type of food produced in the area inherently became ingrained in the society's identity. Until the past two centuries, place-based diets defined groups of people; people used farming methods that would allow them to continue living and cultivating there, they developed manners of production that required only the necessary amount of inputs and adjusted lifestyles in order to thrive using only what they were able to produce as a collective society (Edelman).

Today, place-based diets are no longer the dominant way of life. Large industrial farms requiring massive amounts of capital and chemical inputs controlled by multinational corporations dominate the global agriculture system. Industrial agriculture has certainly increased food yields, helped overcome barriers of nature in situations such as drought, low soil quality and pest issues to a certain extent. However, it is a system completely dependent upon fossil fuels—a finite natural resource. Some scientists claim earth has reached peak oil, meaning the maximum extraction of petroleum has been reached and from now on, extraction levels will only decline. The fact that fossil fuels are in fact limited means the current agriculture system inevitably is unsustainable and in desperate need of reform; there is a rising need to downscale and decentralize agricultural production methods in order to avoid impending future disasters that are inherent to a fossil fuel dependent system. The striking recognition of the inevitable shortcomings of the dominant agriculture system has

sparked a resurgence of place-based diets. Food movements around the world have begun to call for a change, bringing attention to a deeply flawed system.

In this paper, my goal is to show that there is a critical need to explore alternative systems that can reduce the structural inequalities, environmental degradation and detrimental health effects caused by today's dominant food system. First, I will briefly lay out the history of the rise of the industrial agriculture system, explain how it has manifested in North America and discuss the negative effects of its neoliberal structure focused on free market capitalism. Then I will examine an alternative food system: the localized food economy. I will provide a definition of this alternative system, describe its benefits and drawbacks, and then present a revised framework around which this paper will focus. I will present two case studies: one involves the city of Waterloo in Ontario, Canada; and the other looks at Tucson, Arizona in the United States. I chose these two cities because they are of similar size, they have close urban-to-rural ratios and they both have managed to develop vibrant local food economies while existing within economies of dominant corporate agribusiness. These characteristics are comparable to my hometown of Raleigh, North Carolina. I conclude this paper with a proposal to facilitate a shift to a reflexively localized food economy in Raleigh.

2. The Problem

2.1 The Rise of Industrial Agriculture

Following the creation of new manufacturing processes that occurred during the Industrial Revolution, industrialized agricultural practices were increasingly adopted in North America. The United States government initiated programs such as land grant agricultural

colleges in the mid 1800's to promote further research into the technical and scientific aspects of agricultural production. The food production system that evolved was characterized by "production methods that involved heavy capital inputs and included the adoption of new varieties of hybrid seeds, chemical fertilizers, and pesticides, monocropping, infrastructure for irrigation, and mechanization for planting and harvesting" (Clapp 26).

This transition to industrial agriculture was reinforced by policies adopted in the 1930's in reaction to the economic disasters caused by the Great Depression. The United States' New Deal policies established a set of protective measures for the domestic agricultural system beginning in the 1920's that included price support, subsidies and production limits. Other countries followed the American protectionist model. In Canada, the Canadian Wheat Board created a monopoly in the wheat sector by buying agricultural products from farmers as well as selling exports abroad. Clapp explains "government control over the domestic and international market effectively operated as a form of price support by buying grain at an agreed price and as a form of export subsidy by selling externally at a different price" (Clapp 27). As a result, farmers were incentivized to continue to produce crops even when there was no market for the crop, leading to many instances of surplus in items such as wheat.

Excess production of such crops increased following the end of World War II in 1945 as technology progressed, eventually becoming an economic problem for governments that held them because storage costs were high. Rather than scale back production, countries began to export their excess food in order to remove it from their domestic markets (Clapp). This exportation was done as both traditional trade and food aid; due to levels of surplus,

importing American and Canadian crops such as wheat was extremely cheap for importing countries. This established trade relationships with countries around the world and introduced industrially produced crops into the global market.

A neoliberal economic framework took hold in United States during the 1970's and 1980's, further promoting deregulation and market based productivist ideologies. This evolved into a system that Allison Perrett characterizes as "late capitalism". She explains that late capitalism is characterized by "neoliberal economics, globalized markets, economic concentration, the integration of political and economic structures and extreme alienation arising from commodity fetishism and the rational process" (Perrett 8). Late capitalism has allowed the global agri-food system to become and remain dominant. Vertical integration of production combined with the support of supra-national organizations such as the WTO, IMF and World Bank has transformed the global agri-food system and caused it to become increasingly specialized. This has directed focus towards larger farms as they are better suited financially to maintain the infrastructure required for large scale centralized wholesaling and retailing (Perrett).

2.2. Characteristics of Industrial Agriculture

The current global agri-food system is one based on a productivist paradigm, a concept described by Nora McKeon as a focus on increased efficiency in production processes, high yield and low food prices. The idea of productivism gained momentum following WWII, using production levels as a measurement of welfare and therefore shifting value to high yield systems. By valuing quantities of production over all other concerns, nature's generative powers were reduced to inputs of productive labor, taking away the sense

that the land, labor or its products are anything more than commodities (McKeon). Systems that are able to produce high uniform yields of food at low costs for the producers became the accepted strategy to combat food insecurity and rural poverty, making traditional agriculture methods appear inefficient and backwards (McKeon). By the end of the 20th century, the United States as well as Canada and the European Union had fully integrated this paradigm into policy; Lawrence Summers, United States Secretary of Treasury from 1999-2001, stated both sides of the political spectrum saw the “task of economic policy is to grow the economy as rapidly, sustainably and inclusively as possible” (McKibben 9).

2.3 Policies that Support Industrial Agriculture

Efficiency of the level required for a highly productive agriculture industry has been possible only by maintaining an obsession for constantly lowering material costs of production. This has resulted in overconsumption of cheap natural materials such as water and fossil fuels, reduction in worker wages, consolidation of farms and reliance on the use of mass production style machines. The push for efficiency has motivated companies to vertically integrate in order to further exclude possible competition and production costs (McKibben). As productivist, late capitalist economics developed, anti-trust laws became less strict, providing a lenient environment in which firms consolidate without consequence. A push for less regulation regarding environmental damage and chemical use also further lowered production costs for agriculture companies. Without having to invest in ways to limit agriculture pollution or develop methods without chemical enhancement, companies are able to externalize many of the environmental and health costs regulation that otherwise would have forced them to internalize.

In addition to consolidation and deregulation, industrialized countries have adopted other policies to further promote this massive scale of agricultural growth. In times of economic crisis, such as in the 1930's, when food prices were too low and not enough people were buying farmer's products, both Canada and the United States adopted protectionist policies such as subsidies, support programs and tax breaks. These policies still exist, even though the industry as a whole is making profits well beyond what is necessary to sustain the industry. Despite this growth, government continues to provide incentives to produce certain crops that can be exported or processed into widely used ingredients such as high fructose corn syrup. The Canadian federal government spent as much as \$922 billion on agriculture subsidies in 2009 and the United States Department of Agriculture (Milke iv) gives around \$25 billion in annual subsidies as dictated by the 2014 Farm Bill ("Projected Spending Under the 2014 Farm Bill").

While price supports and payments from federal governments can still help small farmers trying to start ventures or maintain family farms in a globalized economy dependent on market price and competition, the reality of subsidy allocation is that it mainly benefits large farms. Large farms are better equipped to model the productivist paradigm that industrialized countries deem valuable. They have the capital to consolidate in order to keep processing, wholesaling and distributing within their business and expand their presence across a globalized marketplace. In Canada, the number of farms decreased while the average farm size increased from 728 to 778 acres between 2006 and 2011 ("Snapshot of Canadian Agriculture: Chapter 1"). The United States also has experienced a decrease in total farms, 2.1% between 2007 and 2012 occurring mainly in the mid-size farm category, and the average size increasing from 418 to 432 acres ("USDA ERS"). Statistics in the United States

show the largest 15% of farm businesses receive 85% of government agricultural subsidies resulting in the majority of nation's farmers not receiving any direct support for their products (Edwards).

These large farmers typically produce soy, corn or wheat—products that can be used in processed goods, as animal feed and in developing biofuels. The support for these products results in a large majority of land being used to farm crops not meant to be consumed by humans or crops that will be transformed into something with little nutritional quality. The 2006 Canadian Census of Agriculture identifies this trend by saying, “one of the highlights to be sure is the drive by a number of countries, but most notably the United States, to expand fuel production from agricultural commodities” (Archived: 2006 Census of Agriculture”). Decreasing amounts of excess US grains on the food market will in turn make prices increase. This type of crop use benefits grain farmers but it is problematic for livestock producers as it makes feed more expensive.

2.4 Breakdown of Current Crop Production

Canada refers to itself as a “field crop country”, meaning the country's corn, wheat, soybeans and hay are used to feed animals (“Archived: 2006 Census of Agriculture”). These crops comprise 54.6% of the total farm area and make up 30% of all farms in the country (“Snapshot of Canadian Agriculture: Chapter 1.”). In the United States, corn clearly is the largest crop produced, making up 95% of all feed grain produced (“USDA ERS”). Corn crops take up a large percentage of Midwest farmland. Corn production is used for ethanol and animal feed. Only one third of corn is produced for domestic consumption, only after it has been transformed into high-fructose corn syrup (HFCS), glucose and dextrose, starch,

corn oil, beverage alcohol, industrial alcohol, flakes for cereal, corn flour, corn grits, corn meal, or brewers grits for beer production (“USDA ERS”).

Global diets are becoming increasingly meat based and there is increasing need to grow more grain to feed the animals raised to meet the need for more meat. While beef and hog are deemed part of the “backbone” of Canadian agriculture, the United States has less regulation regarding environmental effects and livestock living conditions. The 2006 Canadian Census of Agriculture addresses this difference, saying, “many hog operations have chosen to specialize in a particular stage of the production cycle. In the West, exporting pigs to the United States to take advantage of lower feed costs and greater slaughter capacity south of the border [have] continued to be prevalent at census time” (“Archived: 2006 Census of Agriculture”). This shows that despite beef being considered a primary product of Canada, the allure of low costs that come from less regulation in the United States’ agriculture sector has been given priority over a production process occurring solely within Canada itself.

As a result of consolidation and agriculture policies discussed above, these massive amounts of grain and livestock are controlled by only a few agri-corporations. In 2011, 80% of grain trade was controlled by 5 transnational companies that managed both the growth and production processes (Wittman), and by 2010, 4 corporations controlled 85% of the beef, 65% of the pork and 51% of the poultry industries (“How Corporate Control Squeezes Out Small Farms”).

2.5 Externalizing True Costs: Cheap Food Policies

Without regulation regarding environmental damage or long-term human health impacts stemming from certain chemicals used to enhance production, the food industry has

been able to externalize the true costs of production, thus making the final products less expensive to consumers. In the chapter, “Does Farm Policy Make You Fat?” in her book *Weighing In*, Julie Guthman argues that while government subsidies for corn, wheat and soy largely contribute to low food costs, it is the combination of slack labor laws, low wages and the externalization of environmental costs that has enabled industrial farms in the United States to make food extremely cheap (Guthman). Many of these foods are made with corn-processed ingredients that contain many chemicals that are known obesogens or carcinogens. The lack of regulation on the use of such inputs has led to increased obesity and health related disease across populations whose main source of caloric intake comes from these products. When large farms are allowed to grow and process foods at minimal monetary costs by ignoring negative external damages, it creates a phenomenon Bill McKibben calls a food “bubble economy” (McKibben).

2.5.a Who Pays: Economic Inequality

The true costs of food production tend to fall disproportionately on the economically disadvantaged. This has exacerbated existing economic inequalities and has been seen as one of the main problems of late capitalism. While specific impacts differ within and between countries around the world, in dominate industrial economies such as the United States and Canada, very few people grow their own food to the extent of self-sufficiency. Although a resurgence of locally produced food has inspired people to grow a portion of their food, 1 in 3 American households as of 2014 (Barth) and 35% of Canadians in 2016 (Cullen), the majority of people in these countries are dependent upon their wages as the means by which they procure food items. This makes those with little income highly vulnerable to price shifts

in the globalized market economy and motivates them to purchase the cheapest food available.

Economic inequalities tend to be racial and gender-based, falling disproportionately on ethnic minorities and women. Low wages result in the lack of means to choose the more expensive fresh, healthy food, therefore these groups tend to be the ones whose health is impacted most by cheap food's low nutritional quality and high levels of chemicals and calories. Throughout this paper, the lack of choice experiences by low-income populations will be referred to as "lack of access" to quality food options. Lack of access is widely discussed in regard to import dependent "Third World" countries, but it is also highly prevalent in developed countries. Areas in the Global North where there is no access to healthy, fresh food are increasingly urban and are popularly described as "food deserts" (Clendenning). The cost for food constitutes a high proportion of daily living costs in these communities and when families are forced to use the majority of their income for "shelter costs", it leaves little for spending on even the least expensive foodstuffs (Clendenning). When there is not a large enough population able to consistently purchase food, grocery stores are unable to profit and tend to leave the area, further contributing to declining food options in food deserts.

3. Alternative Theoretical Frameworks: Food Sovereignty and Food Justice

One reaction to the negative social impact of industrial agriculture has been the Food Sovereignty movement. The concept was born from La Via Campesina, a group of peasant farmers in South America responding to the lack of social and environmental consideration in the United Nation's Federal Agriculture Organization's (FAO) definition of food security. The FAO describes food security as the idea that "people, at all times, have physical, social

and economic access to sufficient, safe and nutrition food” (FAO 2001). Because this definition does not reference the negative externalities ignored by the global agriculture industry such as environmental degradation and social inequality, the current productivist system is able to gain further traction under the façade of aiming for “food security”. La Via Campesina called for a more inclusive concept, defining food sovereignty as “right of the peoples to healthy and culturally appropriate food produced through economically sound and sustainable methods, and their right to define their own food and agriculture systems” (LVC 2007). The group champions the concept that food is a basic human right, explores power relations within the food economy and highlights the need to give agency to individuals regarding how and what food is produced. These concepts have increasingly gained momentum in the Global South but less so in the North. Using language of sovereignty largely appeals to countries that have had a past dominated by a colonial power and is used frequently in indigenous rights movements. In Canada, the indigenous rights movement, Idle No More, has sparked a large grassroots movement to bring to light the plight of the indigenous people (“Indigenous Peoples in Canada”). While the Canadian government claims to protect the rights of their native peoples and honor treaties between them, reality proves otherwise as they still face discrimination on many fronts. Despite this, the indigenous people of Canada and others supporting their campaign for equal rights have created an environment in which a food sovereignty framework has been able to resonate.

On the other hand, in the United States, neither governments nor food activists have been quick to adopt the language of food sovereignty when discussing alternative plans of action to combat the detrimental effects of the industrialized agriculture system within the country. Rather, the language of food justice has taken hold. Food justice “sees the lack of

healthy food in poor communities as a human rights issue and draws from grassroots struggles and US organizing traditions such as the civil rights and environmental justice movements” (“Issue Areas US Food Justice”). Many participants in the food justice movement see food sovereignty as a “white concept underserved communities don’t hear about” (170) because it tends to romanticize “poor peasants” in the Global South and focus less on poor communities of color in urban areas (Clendenning). Although food justice focuses on the racial inequalities within the United States that they feel have been unaddressed within the food sovereignty movement, food justice scholars and activists still advocate for many of the same platforms as food sovereignty. Both “people centered approaches”, the two frameworks draw on ideas that justify and dignify collective action (Brent). While the overlaps in the two theoretical approaches are undeniable, the choice to utilize food justice rather than sovereignty in the United States is due to the historical resonance of racial justice movements rather than calls for independence. While food sovereignty is not obsolete within the United States, it has yet to take a form that addresses the specific concerns regarding racial structural inequalities in the country.

As will be discussed further in the following sections, in Canada, the two ideologies blend into one, using the framework of food sovereignty to encompass food justice. In the United States, the opposite is true. Food justice is the prominent movement within the United States, but could be considered a subset of a potential overarching food sovereignty framework.

3.1 Food Sovereignty in Canada

Food sovereignty has recently gained traction in Canada even though it still is considered to be in its infancy. Two Canadian members of La Via Campesina introduced

food sovereignty to the country through the work of the National Farmers Union (NFU) and the Union Paysanne (UP). The National Farmers Union, one of the founding member organizations of La Via Campesina, is a national, direct-membership voluntary farm organization created by an act of Parliament whose goal is “working for people’s interest against corporate control of the food system” (Desmarais 1). In 2001, the Union Paysanne was created, becoming Canada’s second major group to have food sovereignty as a critical part of their mission. While these groups initially focused their food sovereignty framework around agricultural production and trade policy issues, an emphasis on self-determination, rights, equity, culture and land began to emerge following the 2007 Nyéléni International Forum on Food Sovereignty.

The 2007 Forum shifted the focus of Food Secure Canada. FSC was founded in 2006, initially using a food security lens but now incorporates the language of food sovereignty. Desmarais and Wittman credit this to the participation of several members in the Nyéléni Forum, the creation of an Indigenous Circle within FSC that brought indigenous sovereignty issues into the discussion, and the creation of the People’s Food Policy Project (Desmarais). The PFPP worked to redevelop food sovereignty languages used by organizations such as the NFU, UP and CFS in an effort to redefine food and agriculture policies.

While the development of these groups and their utilization of the food sovereignty framework exemplify the movement’s presence in Canada, it is a divided ideology. The groups mentioned above focus on structural and policy changes, but other main groups such as “foodies” and indigenous groups both present different conceptualizations of food sovereignty. Consumer-based “foodie” groups create a “local food narrative tending to celebrate local food rather than criticize food injustice”, focusing more on taste and freshness

of food than policy changes. These groups push for the construction of the “very local” (i.e. 100 mile diet) through citizen-driven groups who use the language of food sovereignty when discussing local organizing and events (Desmarais 12). Indigenous groups define their food sovereignty as a movement to “seek honor, value and protect traditional food practices and networks in the face of ongoing pressures of colonialism” (Desmarais 13).

Desmarais and Wittman say these “distinct national, provincial, regional and cultural concerns in terms of community identity and subjectivity, and relationships to political and institutional authority” do not pave the way for a universal conceptualization of food sovereignty in Canada, but the “expanding discourse around food sovereignty in Canada has resulted in a reshaping of the political spaces in which decisions and value shifts around food production and consumption occur” (Desmarais 16). It has also allowed Canada to expand their focus on production methods and trade to include “civil society-based and urban food networks like Food Secure Canada who support farmer and indigenous-led struggles over the shape and direction of food sovereignty... who also lead initiatives around socially just food consumption that bridges the conceptual gap between food producers and marginalized/food-insecure populations” (Desmarais 17). This shows that while the focal points of Canadian food sovereignty do vary, the increasing presence of food sovereignty in both discussion and action present a chance to collaborate and evolve into a cohesive ideology to address specific conditions experienced by Canadians.

3.2 Food Justice as a subset of Food Sovereignty in the United States

The United States has not adopted the framework of food sovereignty as directly as Canada but the food justice movement has gained momentum addressing similar fundamental issues. While the two differ, food justice and food sovereignty both fit into a

“fair food paradigm” (Clendenning 168) and focus on educating farmers, skill sharing, equitable access to quality food, discourse surrounding inequalities and marginalized peoples and locally produced foods. The many conceptual overlaps show the beginning of a potential resonance of food sovereignty within the United States.

Food justice is modeled after racial and environmental justice movements within the United States and specifically aims to end structural racism that has resulted in disproportional impacts of diet-related diseases in low-income communities of color. The movement aims to counter institutional racist practices within the United States, such as the supermarket industry’s practice of charging lower prices in suburban versus urban locations for example (Agyeman). This approach claims systemic policies produce economic inequalities, which in turn exacerbates racism. The food justice movement addresses the manifestation of racism in terms of food, bringing racial and environmental justice literatures together to address how food is “deeply intertwined with both personal and cultural identities” (Agyeman 10). While food can bring together groups and provide a source of cultural empowerment, it can also reflect social and economic hierarchies. This can be seen throughout history, as kings ate more meat than their subjects and women and children bore the greater burden of food shortages. This exclusion is reflected in the current, white-dominated, elitist form of the local food movement; the local food movement emphasizes certain types of food, such as organic, slow or local foods, as “right and proper”, categorizing those who eat otherwise as less worthy (Agyeman 12). Food justice argues against this presentation of consumption as an individual choice, claiming institutional racism and economic inequality prevent communities of color from having the possibility of acting on their own agency.

Food justice is the framework in which the United States explores the “racialized political economy of food production and the cultural politics of food consumption” (Agyeman 13). In practice, food justice requires solidarity with other racial justice groups. By showing public support for groups working toward addressing housing disparities, police brutality or medical assistance for example, food justice practitioners can build alliances across multiple fields (Cadieux). In order to employ a truly participatory democratic process within the movement, a concept also frequent in food sovereignty discourse, food justice groups must put in the effort to institutionalize accountability and transparency into their work. While there is a call for more research and analysis of what constitutes food justice in practice, food justice initiatives must embody the above characteristics and provide a constant platform through which to address modern racism in regards to healthy food access within the United States (Cadieux).

In order to take current food movements a step further to frame food as a basic human right, a convergence between food, labor and agrarian justice movements has emerged in the last decade to introduce a form of food sovereignty into the United States. The United States Food Sovereignty Alliance was founded in 2010 and works towards building an American coalition of food justice, anti-hunger, labor, environmental, faith-based, and food producer groups to promote a democratic food system in which healthy, culturally appropriate and ecologically conscious produced food is a basic human right. While its creation shows potential for the movement to increase its presence in alternative food systems discourse in America, the group has gained little traction since its foundation (Clendenning). Despite this, the collaboration between justice movements to create a food sovereignty alliance in the

United States shows a positive step towards the United States joining the international food sovereignty conversation.

4. Putting Theory into Practice: Local Food Systems

Because public awareness of the obvious negative effects on social, political and environmental systems worldwide has grown, alternative food movements and frameworks have gained popularity within the past two decades. These movements recognize the current system's lack of prioritization of people and the environment and provide a space for discourse to develop potential new models. Downscaling and decentralizing food economies is one way to put these ideas into practice. Regions can develop systems in which people can become more resilient to the potential future disasters that could occur within the food system and resist costs the current industry has forced upon them. As fossil fuels and other finite resources continue to be depleted, there will be an inevitable need to move towards a post-fossil fuel structured system and to shift focus to an environmentally and socially aware food system will prepare communities for this impending next step.

There are limits to communities becoming independent of the globalized food system and self sufficient, but in order to begin to move in that direction, there is a critical need to rethink the organization of food systems and develop ways to reintegrate food production within communities (Buchan). Collaboration between farmers, researchers, community groups and local governments can facilitate an inclusive shift from the current global, productivist agricultural model to a sustainable, socially conscious and resilient local food economy.

4.1 Defining Local

One of the main factors hindering communities from downscaling to a local food economy is the definition of “local” itself. There are varying interpretations across academia and the public sector. The United States Agriculture Department, as well as many other organizations, uses the concept of food miles to define “local”. According to these organizations, considering food produced within 100 miles of where it is being consumed is considered “local”. While this is a definition that can be easily conceptualized and applied, it is not as refined as the concept of “flexible localism” (Martinez). Flexible localism requires that there be a consideration of population density and its effects when determining what is labeled as local food, with the definition of “local” changing depending on the ability to source supplies within a short distance or further away, such as within a State. For example, one group working towards promoting local food in North Carolina, Blue Ridge Women in Agriculture, include 9 counties in their scope of local and emphasize sustainable farming. The USDA Farmer’s Market in Washington D.C classifies its local farmers as any farmer in the Chesapeake Bay region within the span of 200 miles, and in the recently vibrant urban agriculture system of Detroit, local is very narrow in the sense the city aims to become completely self sufficient (McKibben 82).

Local food also can be defined by the characteristics of intermediate stages of the supply chain, such as processing and retailing (Martinez). The article “Are Local Food and the Local Food Movement Taking Us Where We Want to Go?” uses a definition developed by Robert Feenstra:

“a collaborative effort to build more locally based, self-reliant food economies—one in which sustainable food production, processing, distribution, and consumption are integrated to enhance production agriculture and is attentive to the many processes up

and down the food chain that sustain a food system as well as their environmental, community, health, and economic implications” (Delind 274).

This definition focuses on the length of the supply chain but further develops the idea seen in the flexible localism interpretation: the requirement of an awareness of and a relationship with the surrounding environment. Delind clarifies by arguing that local food must be seen as clearly place sensitive, values oriented, and participatory in nature.

Some choose to begin approaching the local food movement by developing a definition that stays silent on political, social and environmental agendas in order to be more easily adopted into policy measures. In the article, “Local Food System Planning: The Problem, Conceptual Issues, and Policy Tools for Local Government Planners”, this strategy is emphasized, presenting the definition of local as “characterized by short supply chain between raw food product and consumers within geographical area understood as local community by its consumers”(Buchan 5).

Despite the many characteristics that these ranging definitions share, there will never be a standardized definition of local. “Local” is something socially constructed and applied based on the individual characteristics of each area, but overarching factors must include a short supply chain and being sustainable and politically aware. The “local” that the following will reflect is Robert Feenstra’s definition and Delind’s discussion, rooted in an awareness of the social and political aspects involved in food production.

4.2 Benefits and Strategies for Shifting Towards the Local

A localized food system is intended to mitigate some of the most concerning aspects of the current industrialized global agricultural model, including its negative health implications, lack of environmental sustainability, negative economic impact on less affluent

populations and its destruction of relationships within communities. Local food systems require direct attention to these impacts and thus are more likely to internalize costs that have been previously disregarded.

There are two categories of strategies for facilitating a shift towards the local. The first category is referred to as direct to consumer marketing techniques, examples include farmers' markets, community supported agriculture (CSA), pick your own, farm stands, and community gardens. The second category is direct to retail/foodservice marketing, including farm to school programs, farm to table restaurants and large sales to grocery stores. In a USDA report on local food systems, direct marketing is claimed to be key to increasing an area's food access abilities.

Research also advocates for the use of city planners and food policy to alleviate some of the barriers to the food movement. These could include attention to current land use regulations, funding sources and potential city bylaws that could limit direct to consumer programs. In reference to farmers' markets in particular, Martinez's USDA report states that when addressing problems in shifting back to local food production, "states need clearly stated health and safety rules and licensing and inspection requirements to facilitate the successful operation of farmers' markets" (Martinez 28). A community's governmental and public policy strongly influences how an area can sustain farmers' markets and deal with operational questions, such as where the market can operate, parking, security, and conflicts with adjacent businesses. Direct markets also require the city to issue permits, zoning exceptions, or an approval of a market ordinance. Cities may be involved in promoting and developing markets as part of a local food policy initiative or may assume full responsibility for operating and funding markets (Martinez). Other regulatory solutions include increased

flexibility of health and safety regulations for small producers, an expanded definition of agricultural land use to facilitate on-farm value-added processing and retailing, increased acceptance of food stamps at farmers markets and increased funding for local food initiatives from the public and private sector to maintain and create functional infrastructure (Mount). In *Local Food System Planning: The Problem, Conceptual Issues, and Policy Tools for Local Government Planners*, Buchan and his research team lay out the role of the local government in this shift into categories: to provide resources, regulate and create policy, advocate and undertake projects and support groups participating in facilitating the shift (Buchan).

It is assumed that by implementing policies and programs that encourage local farmers, the consumers will be receiving healthier food. Without needing to travel long distances or remain fresh for an unnatural length of time, food can be produced without chemical preservation additives or potential carcinogens. Economically, localized food economies can be used as development strategy for rural areas as a way to eliminate the middleman in operations, allowing the full profits to go to farmers (Martinez). If consumers purchase food produced within a local area instead of importing from outside the area, sales are more likely to go to the people and businesses within the community, further generating local economic activity. To do so, there must be strong consumer support, the ability to locally source agriculture imports and an awareness of the potential displacement of economic activity already taking place. There will inevitably be job loss in traditional commodity markets and those in distribution and marketing of non-local products (Martinez). Although the positive economic impact is estimated to outweigh the losses, a community must have a certain level of economic flexibility to survive the initial loss in order to make a full transition to a localized system. As the producer and consumer have more opportunities

to interact during these community-focused exchanges, a relationship between the farmer and the consumer can begin to foster. This relationship can promote a sense of transparency within the system allowing a consumer to know where their food is coming from and how it was grown. While local economies can begin to support a community to a certain extent, local food is not implicitly a better option than industrialized practices when it comes to sustainable practices. Although one cannot assume a local farm inherently chooses ecologically friendly farming methods, smaller farmers are more likely to be directly involved with their growing operations, thus having a closer relationship with the land they cultivate that could result in an increased willingness to implement sustainable strategies to protect the land such as diversification of crops or organic practices.

Localized food economies can serve as an economic boost for a community, shorten the distance between producer and consumer, give population a direct market in which to buy fresh foods and potentially promote sustainable agriculture. Localized food economies can be encouraged and supported through governmental policy and community initiative. But while the local food movement is intended to achieve these benefits and build resilient communities, the movement is not without its shortcomings.

4.3 Critiques of the Local Food Movement

The local food movement in its current state faces an array of barriers and criticisms. As mentioned above, reasons for the disapproval of the current agriculture system vary; some critics focus on economic development, some on health, some on greenhouse gas emission and energy waste. The article *Barriers to the Local Food Movement: Ontario's Community Food Projects and the Capacity for Convergence* highlights this lack of cohesion within the movement as the main difficulties of creating a new food system, claiming alternative food

systems will only survive with a more holistic, integrated approach or adoption of broader regional perspectives (Mount). Many factors could potentially contribute to project barriers, including location (urban, peri-urban or rural), regional politics and economic trends, and proximity to a major urban market.

Some argue that the fundamental theories and values of the movement are being lost as the movement gains popularity. One example is the emergence of a shift from the initial ideology based on restoring the ecological system while promoting equity and ethics in agriculture towards an ideology open to individualized interpretation of people able to spend money required to follow a locavore diet. Critics claim the movement has lost sight of participatory democracy and empowerment of the people, becoming just a popular label (Delind). Due to the lack of a concrete qualification for “local” and its necessity to be flexible regarding each region, the term frequently is used and manipulated by corporations and businesses to gain political power and other benefits. As the idea of local food becomes more popular and generally understood to be better for one’s health, the environment and economy, the “local” label has begun to attract attention from a number of sources, including from those seeking to profit from it. Without a specific defining principle, those who do not take the time to research their food purchases are susceptible to making inaccurate assumptions about the source of the food they are buying because companies have labeled the product as a local item. This flexibility and lack of clarity in the definition provide leeway for those looking to attract people interested in the local food movement.

An example of this manipulation potential can be seen in North Carolina; poultry production is the state’s number one agriculture industry and North Carolina serves as the 3rd largest national poultry producer in the United States (North Carolina Poultry Federation). It

is home to massive industrial producers, such as Tyson, that can market their products to North Carolinians as local because the poultry has been produced within their state, regardless of processes behind the final product. Some see growing popularity in conventional markets as an inevitable transformation due to the nature of liberalism, while some see it is taking us away from the important goals of the original movement.

Delind's article summarizes the fragmented understanding of localism stating, "much is being made of local food. It is at once a social movement, a diet, and an economic strategy—a popular solution—to a global food system in great distress" (Delind 273). Delind shows that while the global agriculture system has been deemed imperfect, the local food movement has not yet developed a strong, unified identity therefore allowing it to be vulnerable to manipulation.

4.4 White Dominance within Local Food Movements

Aside from logistical issues, the downside of popularization, and theoretical inconsistencies, the overarching presence of upper class white influence over alternative food movements sparks high levels of resistance. White dominance within the movement undermines the idea that local food can be a way to address structural inequalities within existing societies. In her critique of alternative food movements, "If They Only Knew: the Unbearable Whiteness of Alternative Food", Julie Guthman highlights the discourse of romanticized farming and framing the problem regarding a lack of diversity among local activism as education based to show how the current alternative food idea is modeled around a "white idiom". Guthman bases her argument on two main manifestations of whiteness within alternative food practices: colorblindness and universalism. Colorblindness means the practices refuse to acknowledge racial differences thus "erasing the violence that the social

construct of race” has produced and “the privilege that whiteness creates”, while universalism means the movement assumes certain values as universal and “when those ideals do not resonate, it assumes that those for whom they do not resonate must be educated about these ideals or be forever marked as different” (Agyeman 268). It is highly noted that these alternative institutions disproportionately serve white and middle to upper class populations and can be seen through the manifestations of localism in ways such a locavore diets and “foodie” trends. Guthman shows the prevalence of these particular displays of whiteness by presenting interview responses from CSA and farmers’ market operators, showing that many are not comfortable with addressing race at all or see “healthy, local, sustainable eating as a lifestyle choice that colored people to not adhere to” (Agyeman 270).

Some alternatives are less market-based in their approach to providing and promoting locally produced food, setting up venues calling for food and social justice developed around the idea that low-income African Americans lack access to such types of food. These also tend to be met with indifference or hostility from African American groups. Guthman says this resistance is not so much because of the physical presence of white bodies at these projects but because of the “modes of educating people to its qualities and the ways of delivering it lack appeal to the people such programs are designed to entice” (Agyeman 275). While these programs attempt to acknowledge the class and racial disparities existing among the movement, they still do not recognize that the power of promoting local food needs to be held by those who will then consume it. These programs still radiate a sense of universalism among reasoning behind choosing local.

These two scenarios show a “lack of cultural competency” as both ignore the history of land distribution regarding minorities in the United States, romanticizing the idea of an

age of farming on one's own land to produce their own food. This idea brings images of slavery rather than nostalgia to those who historically suffered at the hands of white land ownership. Without recognizing the historical differences between racial groups regarding agriculture, the promotion of local food will continue to emphasize a white point of view disregarding a past full of demeaning agricultural practices that were felt only by non-whites. In addition, those who "assum[e] the universal goodness of fresh, local, and organic food are asking those who appear to reject this food to either be subject to conversion efforts or simply be deemed as other" (Agyeman 271). Forcing this notion excludes other frameworks upon which to base an alternative food model.

The prevailing whiteness within the alternative food movement has provided critics with the argument that localization of food economies is a fad; people are playing the "hero" by buying more expensive 'local' food. By focusing on those who can afford to eat high quality food, the mainstream alternative food arguments put those who cannot afford these foods beyond consideration, thus practicing the "very definition of exclusion" (Agyeman 276). This hero effect can also be seen in the concept of "bringing good food to others"; "whites continue to define the rhetoric, spaces and broader projects of agrifood transformations.... the goodness of the [local] food continues to go without saying. This is the hallmark of whiteness and its presumption of normativity; it goes to the deeper way in which colorblindness and acts of doing good can work to separate and scold others" (Agyeman 277-8). In particular, food justice groups focus on critique of the universalist notion, portraying it as a continuation of the classist inequalities that exist within the current agricultural system (DuPuis).

4.5 A Response to the Challenges: Reflexive Localism

While the critics of the local food movements cannot be ignored and present valid concerns, there are ways local efforts can be modified to address the barriers of a lack of unity, white prioritization and policy favoring industrial production. By recognizing the flaws of its current state and actively promoting dialogue to address its shortcomings, it is possible to develop a localism that can achieve the good intentions that it was founded upon.

If the local food movement can unite under the framework of assemblage thinking, it may begin to develop a localism that is simultaneously inclusive and exclusive. Assemblage thinking is the process of various heterogeneous actors working together to bring multiple perspectives and knowledge systems into light. Due to the divided nature of the local food movement, this approach would promote a dialogue that could begin to address the range of unique experiences and problems within the food system (Dwiartama). Assemblage thinking will encourage coalition building, a strategy referred to frequently in food sovereignty and food justice research as a way encourage collective action, but will take it a step further to bring in those who are not yet active in the conversation or aware of other's efforts. It is critical to incorporate a multitude of opinions, ideas and perspectives that currently do not share a mission within alternative food movements in order to address the array of concerns pertaining to local food. Assemblage thinking will provide a platform through which the inclusion of a variety of knowledge systems is encouraged. The incorporation of communities that have historically been ignored in the food debate, such as the Native, diasporic and migrant populations, will allow these groups to emphasize many of the sustainable practices they currently employ and will give a voice to those who experience injustices that remain ingrained and unacknowledged within current society.

In addition to the lack of unity within the local food movement, the commodification of food must be addressed; as long as people view food as a good to be bought and sold rather than a human right, the social values and costs of food production will continued to be ignored and low prices will remain the priority of the consumer. A true connection with where, by whom and how food is grown will begin to shape food as a cultural item rather than a marketable product (Mares). The utilization of assemblage thinking will engage voices who have formed deep understandings of what is required from the land and people to grow good food and those who see food as a part of their cultural identity. The inclusion of a decommodified perception of food within common discourse will allow those who have come to accept its commodification to become aware of alternative ways to identify with and conceptualize food.

Through assemblage thinking, the local food movement will be able to adapt a “reflexive localism” (DuPuis). Reflexive localism is a non-perfectionist viewpoint that incorporates an assemblage thinking strategy. It calls for local movements to acknowledge the inequalities and conflicting ideologies that currently exist within the alternative model. Constant awareness of and reflection upon the movement’s current tensions between rural and urban populations, consumer and producer relations, and class and ethnic conflict is key in developing and implementing a system that can address the social and political aspects inherent to community systems (DuPuis). Through cyclical self-evaluation and reform, reflexive localism creates and utilizes alliances between local business, producers and consumers who are concerned with these issues, allowing a sustainable local system to flourish.

5. Case Studies: Waterloo and Tucson

As alternative food systems have become increasingly part of an international discourse, there has been growing pressure to implement policies and create community programs to promote a shift away from the globalized agriculture industry. These efforts have ranged from small community groups to entire regions. While movements have sprung up across the globe, the two cities chosen for this paper—Waterloo and Tucson—illustrate that it is possible to develop strong local food movements in countries where the industrialized global agriculture system dominates. The Waterloo Region in Ontario, Canada has attracted attention for its creation of a food roundtable and incorporation of a specific local food policy into its official regional plan. The area has gathered support from actors across the farming sector as well as from government and universities. Pima County, Arizona, particularly the city of Tucson, also has made significant headway in its effort to develop a localized food economy. Earning recognition from UNESCO's creative city program for gastronomy, Tucson has continued to grow its regionally based food system. The shift has strong support from the local community ranging from food banks to community gardens. The University of Arizona has created special departments and research centers dedicated to promoting and sustaining regionally produced agriculture. The local government recently began developing commissions and funding councils to support the transition as well.

These case studies will show how assemblage thinking is shaping the path to put a reflexive localism into practice. These cities have created dynamic connections between members of the community, farmers, the government and research facilities in order to develop an approach that acknowledges problems faced by a variety of actors affected by the present food system. In particular, Waterloo provides an example that contradicts the belief that the government is solely focused on corporate profit and growth. The implementation of

multiple policy changes and government-led focus groups in the region shows that with the support of the people, the government can play a large role in the creation of a durable, policy supported local food system. The experience in Tucson shows the power of education and that emphasis on the cultural aspect of food can be used as a way to decontextualize food as a commodity, stimulate the local economy and address social justice issues experienced by people within the community. By recognizing the tools and processes that have worked especially well for each city and highlighting the successful overlapping concepts, we will be able to develop a model to create a complete and reflexive local food economy. The next section details the process of developing and implementing the programs in these cities.

5.1 Waterloo, Ontario, Canada

The city of Waterloo is located in the Waterloo region of south-central Ontario, Canada. It is an urban municipality with many farm regions outside of the city and has a population around 500,000. The area has emerged as a leader in the promotion of local food systems. Waterloo has been recognized for its collaboration between the regional government, primarily the Planning and Public Health Departments, the University of Waterloo and the community to conduct research and develop a regional plan to tackle the issues behind healthy food access and security.

In the early 2000's, the Public Health and Planning Departments identified issues with the Waterloo food system as threefold: there was strong urban growth but increased health and environmental issues; agriculture is critical to the economy but rural areas were in decline; and despite an abundance of rich farmland, citizens had inadequate diet due to insufficient access to healthy food (Desjardins). The initial plan for the system created in 2005, *Towards a Healthy Community Food System in Waterloo Region*, acknowledged these

issues and identified methods to develop a sustainable, independent food system. The attention drawn to local food systems that occurred during the research period of this publication led Waterloo to become the first city in Ontario to include a section of policy regarding land use related to local food in its Regional Official Plan. The Plan specifically acknowledged that the predominate land use within the countryside should be agricultural and expressed a dedication to the strengthening of the viability of the farm sector. The Plan states that, “farm businesses today face many economic challenges in a globally competitive environment. To help keep farmers on the land, this Plan contains policies that support on-farm diversification strategies as a means of supplementing farm income” (Canada 75). It also explores preservation measures to keep urbanization measures out of the countryside.

The city sponsored 11 focus group meetings involving over 80 attendees to contribute to the research process leading to the 2005 report. Participants included the Ontario Ministry of Agriculture, Food and Rural Affairs, the Waterloo Federation of Agriculture, the Public Health Department, a technical advisory group, restaurant representation, interested individuals, land use planners, institutional purchasers, producers, Old Mennonite producers, food retailers, manufactures and distributors (Canada).

This process lead to the creation of the Waterloo Region Food System Roundtable. The Roundtable held its first meeting in 2007 is made up of representatives from key sectors and interests of the local food system similar to the participants in the focus groups, such as local farmers, emergency food providers, food processing, distributing, and retail businesspeople and health professionals. They share the goal of connecting people to the local food system, supporting local farmers and food businesses, ensuring access to healthy food for everyone, promoting ecologically sound food system practices and influencing food

policy (“Waterloo Region Food System Roundtable). In addition to the community led roundtable, the Waterloo 2005 plan recognizes the increased prevalence of public support for local food plans throughout the USA and Canada, but describes the rarity of prescriptive compared to supportive policy. The policy promoted and created by the roundtable can lead to legislation laid out in the regional “macro-level” plans that can then allow the municipalities to implement their own policy at “mid to micro level” via zoning regulations and bylaws (Desjardins). The collaboration between these groups makes the Waterloo region unique. The Roundtable plays a key role in convincing the Waterloo Regional Council to incorporate food policies supporting local food vehicles such as community gardens and farmer’s markets. The policy modifications to the Regional Plan were officially adopted in 2009, following the formation of the Roundtable and its collaboration with community members throughout the initial 11 research focus group meetings (“Towards a Healthy Community Food System”).

The University of Waterloo became involved in the efforts to improve the region’s food system as well, specifically the Department of Geography and Environmental Management. The Department of Geography and Environmental Management works to bring together students, staff and faculty members across the University as well as within its sister department at Wilfrid Laurier University to collaboratively explore issues surrounding food in the area. The research coming from the department regarding Canada’s food systems falls under the category of Development and Environment, further divided into sustainable tourism and economies, integrated resource management, and local and regional economic development and policy (“About Geography and Environmental Management”). One of the prominent members of the faculty is Steffanie Scott, who teaches a class on Food Systems

and Sustainability that requires students to specifically research the area's local food system. Scott has also conducted significant research regarding agro-food system sustainability and land, policy, poverty and inequality.

One example of Scott and the University of Waterloo's contribution to the Waterloo Food System is the publication "Building Effective Relationship for Community Engages Scholarship in Canada Food Studies". This publication outlines a "recipe" for community-academic partnerships to help build food security (André 28). Scott and other members from the University describe this relationship as one "involving a faculty member in a mutually beneficial partnership with a community" (André 30). This partnership could include a variety of practices such as community service research or participatory action, with the "purpose of solving community problems or effecting social change" (André 30). The research specifically addresses the region's efforts towards a localized food system and analyzes two models of student-community research initiatives: the Region of Waterloo Public Health's Healthy Eating and Active Communities (HEAC) Team and Scott's class research projects at the University of Waterloo. The HEAC Team draws students from multiple disciplines at multiple universities in southwest Ontario and directly deploys them to work with specific community partners chosen by the Team. The Food Systems and Sustainability course in the University of Waterloo's Department of Geography and Environment gives students a range of research options, sending final works directly to the Waterloo Region Food System Roundtable, of which Scott is a member (André). This publication gives Waterloo a more complete sense of how to connect research institutions with community efforts, emphasizing the current strengths of the "centrality of symbiotic relationships" emerging from "shared goals and interest in relation to creation of a healthy

community food system” (Andréé 34).

In 2009, the Region of Waterloo Public Health established a Waterloo Region Healthy Communities Partnership. One of the group’s priorities is the implementation of programs from the original Healthy Community Food Systems Plan, emphasizing improvement of food access skill sharing. This group works specifically towards the plan’s goals with regional and municipal planning, zoning support and human services (Long). The Partnership works to produce reports to aid the Roundtable, supporting four of its six priorities: urban agriculture, farm viability, local food infrastructure and access to healthy local food. In 2013, The Healthy Communities Partnership published a report with advice for how the community can effectively advocate for support of community gardens and temporary farmer’s markets. Suggestions include advocating for zoning bylaws to permit these ventures in all land use zones, supportive licensing bylaws and regulations, incentives for low fees for temporary markets and policies that support urban agriculture in high density residential areas and park and leisure areas as well as providing low-cost access to water and soil testing (Long).

The above efforts were rewarded with the Ontario Local Food Act of 2013. The Act is a macro-level policy that enables local governments to lobby and advocate for enabling legislation that creates new tools that can be used to further local objectives (Buchan). This gave the city of Waterloo more flexibility to incorporate land use policies and bylaws allowing local food markets to flourish without the interference of larger level government restrictions.

The region released *The Health of Waterloo Region’s Food System: An Update* in 2013. The update detailed successes and failures of the steps set out in the original plan and

laid out new focus areas for the region's future: local food infrastructure, food sovereignty, food policy, urban agriculture, farm viability and access to healthy food (*"The Health of Waterloo Region's Food System: An Update"*). For each of these priorities, the report summarizes what was known in 2005 when *Towards a Healthy Community Food System for Waterloo Region* was published and explores the state of progress by reviewing new research, initiatives and active organizations that have since developed (*"The Health of Waterloo Region's Food System: An Update"*). Areas of particular success include increased farmer's market and food hub locations, emergence of urban agriculture initiatives and supportive policy that will encourage growth in the future, funding directed to support schools, hospitals and municipalities to purchase Ontario foods, and an increased education regarding food issues. There is still much progress to be made. As of 2013, the greatest challenges for the region are access to water and compost for urban agriculture, a lack of popular support and the presence of legal and political barriers regarding urban agriculture, and the inability to purchase locally grown foods in the lowest income groups of people in the community (*"The Health of Waterloo Region's Food System: An Update"*).

The Waterloo Region has emerged as a leader in transitioning towards a locally based food system. The Region has made much progress and continues to collaborate and work towards its goal of a sustainable, healthy food economy.

5.2 Tucson, AZ, USA

Tucson is a city located in the southwestern United States with a population around 530,000. It is also a region in which the community, local government and the university have been collaborating to increase the area's resilience and independence within the global food system. In December of 2016, UNESCO recognized these efforts and deemed Tucson a

creative city of gastronomy. Tucson was chosen because it has the longest agricultural history of any city in the United States and maintains its thriving culinary sector by focusing on innovative programs and regulations to sustain culturally aware local food production and distribution methods (“Tucson”). In an interview with Smithsonian.com, Jonathan Mabry, one of the driving forces behind the city’s application for the award, explained “there are more heritage foods grown within 100 miles of Tucson than any other city in North America”. The Smithsonian article further describes the region’s extensive history beginning with the O’odham people over 4,000 years ago, to the Jesuit missionary who settled the city in the 17th century and reviews the series of Spanish, Chinese Mexican and Territorial Anglo-American periods the city and the subsequent agriculture has experienced (Nalewicki).

In addition to the extensive agricultural history, UNESCO references the sustainable, innovative food culture in Tucson. Following the 2008 recession, Tucson employment levels dropped significantly, resulting in a 22% increase in demand at the Community Food Bank of Southern Arizona in 2008 alone (Nabhan). In order to address the spike in food insecurity, the Food Bank hired a new CEO and began to implement initiatives to involve the community; the bank’s Caridad Community Kitchen began training unemployed Tucsonans to cook rather than simply giving meals and they brought food justice scholars on staff to extend programs across cultural, racial and class lines. Grassroots groups around the city also began to fund and initiate food trucks, community gardens, selling rescued produce and composting groups (Nabhan). All of these initiatives provided food at prices cheaper than fast food restaurants, were able to mobilize their products in order to reach those in food deserts without transportation, and offered fresh, healthy, locally produced food. These programs and projects all are examples of food justice in practice in the Tucson area. The

initiative taken by these community-led, socially aware and empowering groups to address economic and social disparities in the city before the involvement of government, foundations or university research was a large factor in attracting the attention and praise of the UNESCO program. Tucson it is the first out of three cities in the United States to gain UNESCO recognition.

Gary Nabhan, one of the leaders in the United States local food movement, has a strong presence in the Tucson food system. Nabhan worked with the University of Arizona to create the Southwest Center, a research institute that facilitates localization programs and was involved in the city's UNESCO application process ("The Southwest Center"). The Southwest Center collaborated with the University of Arizona, which has been active throughout the rise of Tucson's community based food system. The University has representatives on the Commission on Food Security, Heritage and Economy, has worked with Mel and Enid Zuckerman College of Public Health (MEZCOPH) and the Community Food Bank of Southern Arizona (CFB) to create the Pima County Food Alliance, and regularly contributes research to further the discussion and program developments of the local food movement through their Center for Regional Food Studies ("Center for Regional Food Studies").

The Center for Regional Food Studies is an active contributor to the implementation of a local food system in Tucson. The Center evolved from the research team that led the process of attracting UNESCO attention to the area. The mission of the Center for Food Studies is to "integrate social, behavioral and life science into an interdisciplinary studies and community dialogue regarding change in regional food systems. We will involve students and faculty in the design, implementation and evaluation of pilot interventions and

participatory community based research in the areas in and around Metro Tucson”. The Center is an example of one of the larger groups in Tucson that combine the University resources with the community to facilitate a dialogue that could result in action towards a local food system.

The Center is committed to serve as a hub for education and outreach related to Tucson's City of Gastronomy commitments and as a mechanism to connect the research departments of the University of Arizona with other members of the community. The Center provides training programs such as executive seminars in food systems and courses on rural development and food systems innovation and it hosts the Sabores Sin Fronteras Foodways and Arizona Food and Farm Finance Forums. Outreach programs and public service also constitute a large part of the Center’s activity; these include working alongside and in support of the citywide Community and School Garden Program, the Garden Kitchen nutritional education outreach program, the Tucson Village Farm, Compost Cats, and the Food Justice Lab which is currently being developed with a 100% engagement grant. The facilitation of a graduate student network of food justice scholars to work with community groups such as the Pima County Food Systems Alliance and the Commission on Food Security, Heritage, and Economy is also a priority. The Center for Regional Food Studies is the most prominent food group in Tucson, providing an extensive range in educational opportunities in hope to engage the community in an active participation in discourse surrounding the region’s food system.

In 2015, the Tucson regional government founded the Commission on Food Security, Heritage and Economy. It is comprised of 17 members representing food and culture based groups around the community. The Commission works directly with the mayor of Tucson and the city council to vote on issues involving the development of food access, food

security, nutrition, and economic goals and targets. The group serves as a liaison with other United States and international communities to identify best practices, recommend strategies and potential funding or other resources to implement potential strategies (Berlin). The Commission's current goals and targets include promoting ideas and policies to increase access to healthy foods, raise demand for markets for locally-produced foods, improve local food distribution, reduce food waste, expand composting and other uses of food waste, increase food industry job opportunities and gain food entrepreneur support.

The Pima County Food Alliance is also an influential community group. It has connections with the regional government but it not directly linked to the same extent as the Commission. The Food Alliance's mission has four focus areas: education, network, outreach and policy change ("Pima County Food Alliance"). The group's vision is "an integrated, regional, secure food system that is environmentally sound, supports farmers, fosters economic development and expands access to healthy food for all including low income people and children in Pima County". The Alliance believes that local food drives a community's economic development and the role of public policy should be to aid in the diversification of the food system, awareness and education regarding benefits of local foods. By working to achieve each of these goals, the group aims to engage community members in the development of the regional system. Some of the group's current and previous projects include MyPlate, a USDA model adjusted to use only local products; Farm-to-School programs; Food Hub, a way to look at the food web of the region, addressing water policy issues in Southern Arizona; and collaborative efforts with other community groups, the Mayor and the City Council of Tucson.

Overall, Tucson's strategy towards descaling the food economy in the area is to work with community groups who have connections to municipal government to focus on food sustainability, distribution of locally grown foods, affordable access and stress urban sustainability. The attention to urban areas in order to promote local food was also acknowledged in the Waterloo report. The creation of home and community gardens, urban farms, greenhouses, farmers' markets and small animal husbandry in residential areas has gained popularity as a means to address lack of food access and social injustice in recent years and is predicted to have great potential but faces the barriers of current policies. ("Tucson").

The city of Tucson publishes an annual report on the state of the city's food system as a requirement of the UNESCO designation. The first report details the city's progress between December 2015 and December 2016 and is directed towards additionally helping the mayor's Commission of Food Security, Heritage and Economy as well as other participating groups involved in food initiatives in the area. The report pays credit to efforts that occurred before the UNESCO recognition as well, praising grassroots organizations, non-profits, education institutions and businesses that have contributed to the progress (Mabry). In addition to information about specific programs and initiatives, the report provides statistics regarding local food production, access and innovation and the economic roll of food in metro Tucson. For example, Tucson supports between 12 and 21 seasonal and year round farmers, there are 7 CSA's, 24 community gardens and 57 school gardens, and 29 businesses market 55-60% prepared heritage foods containing local ingredients. In addition, the Pima County Public Library Systems hosts the largest seed library in the world and out of the 2,

500 restaurants and drinking establishments, 63% are locally owned, non-chain businesses (Mabry 8-9).

The statistics above and the extensive list of community groups and programs illustrate how Tucson has become a vibrant example of the potential success of local food.

5.3 Analysis of Case Studies

The cities of Waterloo and Tucson have devoted significant effort and consideration to facilitating a shift towards healthy and locally based food systems. The cities' research processes and programs show the beginning of an engagement with reflexive localism by emphasizing collaboration between the multitudes of actors within the agriculture system. These working relationships reflect the assemblage thinking that is crucial to applying a reflexive framework. The incorporation of diverse focus groups participants into policy research in Canada and the Tucson Center for Food Studies, Pima County Food Alliance and the Commission on Food Security, Heritage, and Economy in Arizona all provide examples of dynamic connections between members of the community, farmers, the government and research facilities working to develop an approach that acknowledges problems faced all actors within the food system.

The process of developing the Waterloo Regional Plan incorporated multiple viewpoints and knowledge systems that are necessary to assemblage thinking. For example, in the Regional Plan, the Mennonite population is referenced, recognizing their presence as pioneers of the Waterloo area, saying, "the culture and farming practices of the Mennonites contribute to the strength of the region's agricultural sector. This Plan seeks to preserve and support the social, economic and cultural needs of this distinct segment of the region's rural population that, in many cases, still relies on horse-drawn vehicles for their primary means of

transportation” (Canada 75). The Plan was able to recognize and incorporate the contributions of this group by including them in the focus groups used to develop the policy. Other voices present in the brainstorming ranged from local farmers to large-scale distributors and retailers, making it possible for the government to integrate perspectives that might otherwise be excluded.

The government-sponsored groups comprising of community members, representatives from the University and policy makers show the potential for further integration and inclusive development. This large amount of support and collaboration with the regional government is what makes Waterloo’s approach unique. By sponsoring the research and evaluation of the regional food system, contracting groups to continue corroboration and research to propose policy, and integrating these policies to promote further implementation and community participation via bylaws regarding farmer’s markets, community gardens and food hubs, the regional government support and facilitate a cooperation between government and community. Many food movements avoid collaboration with government entities due to their contribution to the dominance of the current industrialized agricultural system that has marginalized local farmers. Waterloo contradicts the belief that the government is solely focused on corporate profit and growth, proving that with the support of the people, the government can hold a large role in the creation of a durable, policy supported local food system.

Tucson also presents a successful example of collaboration between actors within the food system. While the local government has become involved in promoting a local food economy following the UNESCO recognition upon the creation of the mayor’s Commission, it needs to be further developed to allow the city to reach its full potential regarding local

food. What stands out in the case of Tucson is the emphasis on food justice through the work of the University of Arizona and the initiative of community members.

In combination with community grassroots efforts, the University of Arizona plays a large role in the promotion of a just local food economy. The Center for Regional Food Studies provides regional food platforms that community members and researchers alike can access and utilize. The Center hosts forums for the community, provides food justice scholars to community groups to provide a food justice lab and hosts training sessions regarding development of rural areas. By making food justice a part of the discourse surrounding local development, the city can incorporate the framework of a reflexive localism. The research community forces the acknowledgement of inequalities within the economic and food systems; through education, the community can highlight potential barriers to a fully inclusive localized system. In addition, the UNESCO Creative City of Gastronomy recognition accentuates the foundation of food in Tucson's culture. The city prides itself in its unique and extensive food history and in its regionally based non-chain food and beverage establishments make up the majority of the city's restaurant sector. This shows how embracing food culture can promote a way to conceptualize food as something more than a commodity, stimulate the local economy and reestablish the importance of place-based food systems.

Waterloo and Tucson both implement strategies that utilize collaboration between multiple actors to promote a food system that takes into account the range of perspectives involved. Each city excels in its respective area, in providing governmental support and in emphasizing the importance of social justice in regards to food access. By recognizing the tools and processes that have worked especially well for each and the successful overlapping

concepts, a model reflecting these systems can be developed to create a complete and reflective locally focused food economy.

6. A Conclusive Proposal: Raleigh, North Carolina

Raleigh, North Carolina is an ideal city to test the application of an integrative, inclusive and collaborative approach to local food. It is a growing city with a similar size to both Waterloo and Tucson with a population around 430,000, a rural to urban ratio comparable to the case study cities and is home to North Carolina State University. While there has been a rise in attention to local food and initiatives to promote smaller farmers and educate the public about the health benefits of buying local in the area, there are currently 18 food deserts in Wake County, with 1/5 of the youth unsure of their next meal and a population of 100,000 struggling with hunger (“Capital Area Food Network”). If the city can utilize the assemblage thinking process in order to bring together unlike ideas and experiences in the area, it will be possible to develop an approach to transitioning towards a local food economy that involves a strong and united force of local government support, University research and community initiative. The current local food researchers and practitioners will be able to collaborate with those who have experienced food insecurity on the ground, giving Raleigh hope for a future just, sustainable and healthy food system.

North Carolina is home to one of the most influential and successful organizations involved with the local food movement: The Center for Environmental Farming Services (CEFS). The CEFS partners with North Carolina Agriculture and Technical State University, the North Carolina Department of Agriculture and Consumer Services and North Carolina State University to promote local food through the publication of field research, conducting providing educational workshops and offering internships as well as through spearheading

statewide initiatives dedicated to helping small to mid-size farms participate in the food economy (“About Us”). The group has six main food initiatives that provide support and technological assistance to enable small to mid-size producers to meet and network with larger scale distributor partners. It also partners with smaller groups around the state to create and promote food councils made up of County Commissioners, planning departments, public schools participants (including agriculture teachers, nutrition directors, parents, students), the Cooperative Extension, Soil and Water Conservation Districts, public health and/or hospital centers, local banks, food pantries, faith communities, community colleges or universities, economic development staff, local restaurants and business owners (“Food Systems Initiatives”). CEFS has also developed a committee on racial equity in food system hoping to bring to light structural inequalities that serve as barriers to any sustainable progress. In addition, to help local food enter mainstream markets and strengthen the economies of small farm and fishing communities, the Food Economies Initiative was created in August 2016. Most recently, a two year research program coordinated by smaller ventures of the CEFS, the 10% Campaign and the North Carolina Cooperative Extension, called “UFOOD”, was launched to connect universities and North Carolina small farms collect data on how local food can enter university markets (“Food Systems Initiatives”).

The 10% campaign is also an effort of North Carolina Cooperative Extension and is included on the City of Raleigh is website as the direct reference to those with questions about local food. It is a statewide initiative to encourage people to spend 10% of their food dollars on locally grown food; it estimates that North Carolinians spend \$35 billion food, and if they participate in the 10% campaign, a potential \$3.5 billion could be kept within the state economy. The campaign uses a broad version of local, allowing all food grown by North

Carolinian farmers to qualify for the 10% although the official website includes a feature allowing one to choose ways to categorize their growers according to mileage, county and zip code. The program is meant to spread awareness and promote the local, sending participants emails tracking progress and providing tips of what is in season and how to prepare local dishes (“The 10% Campaign”).

The CEFS, its partnerships and its initiatives provide an excellent example of successful collaboration of research, government and community effort. It falls short in regards to Raleigh, an urban area experiencing economic growth and a young population influx. The CEFS spreads its initiatives throughout the state, focusing specifically on rural and small communities rather than urban areas. Despite its current priorities, The Center for Environmental Farming Services has great potential to help the city; CEFS can direct certain initiatives and funds towards Raleigh, its credibility with both the community and the government could help facilitate connections in the city and as an established organization, can coordinate efforts to integrate local food initiatives.

Though not extensive, there are existing initiatives that are specific to the Raleigh area, including the Capital Area Food Network and the Raleigh City Farm. The Network is a Wake County food council that was created by the CEFS Food Policy Council Taskforce in the fall of 2013. In 2015 it officially became a non-profit organization, but is still involved with the area’s food issues and is made up of a variety of participants in the food system (“Capital Area Food Network”). The Raleigh City Farm is also a grassroots, community based initiative turned non-profit. It began in 2011 and occupies a one-acre plot in the middle of downtown Raleigh. The organization and hosts classes on gardening, workshops to learn about local food, provides food to a food hub and is open to any volunteers wishing to be

involved with the farm. (“New Year, New Opportunities”). While the infrastructure for the Raleigh City Farm is there and its members are clearly working on promotion to gain support, the Network remains relatively unknown and non-influential.

5.1 The Potential of Urban Initiatives in Raleigh

One topic that has begun to emerge among the city’s policy makers is attention to community gardens and urban agriculture. These strategies, along with farmer’s markets and CSAs, enhance food justice by providing a way to integrate farming into more urban areas. An attention to urban food development was deemed important in the reports published in Waterloo and Tucson, highlighting that developing policies to fully support and promote these ventures are goals they will continuously work towards. Raleigh has the policy foundation to make urban agriculture a focal point of its local food movement, giving the city a platform on which it can address the social issues engrained within its food system. While Tucson has a vibrant history that sparks its discussion regarding just, culturally appropriate food, Raleigh does not have such a background. If policy makers, researchers and community members put forth effort to drive Raleigh’s support, promotion and utilization of urban and community based agriculture, the city would be able to develop its own unique and reflexive food system.

Government support through ordinances and zoning policies are vital for urban agriculture. In North Carolina, municipalities are authorized by law to amend ordinances to allow farming flexibility within the city. The law states “amendments to applicable ordinances may include provisions regarding on-farm sales, pick-your-own operations, road signs, agri-tourism, and other activities incident to farming” (Mettam). Certain policy requirements regarding location of local food initiative include lot size, setbacks determining

buffering requirements, parking, lighting and traffic concerns. There are specific ordinances determining vegetation height and livestock ownership that also have potential to disrupt the implementation of community gardens or urban farms (Mettam).

A CEFS report defines community gardens as “any public or private facility used for the cultivation of edible and ornamental plants by more than one person” and if placed in low-income areas can be especially valuable, as they “provide lower-cost fresh and healthy food to residents who may not have access to a grocery store, cannot afford high prices for fresh produce, and have difficulty accessing a farmers market” (Mettam 23). North Carolina has a supportive partnership with the NC Community Garden Partners, the NC Division of Public Health and the NC Cooperative Extension Service to assist advocates throughout the state. These groups have been able to create social media promotion platforms, establish list serves, and host workgroups in hope to increase the number of statewide community gardens. Urban farms are another example of potential urban agriculture initiatives. These are small farming lots within the urban district that are able to “provide not only working green space for city dwellers, but employment and value-added entrepreneurial activities for residents and a municipal revenue source based on the sales tax levied on farm products sold there” (Mettam 24).

These ventures require specific zoning qualifications from the city, falling under either special or permitted use in areas zoned neighborhood business, rural residential, residential, and general business (Mettam). In Raleigh, community gardens are allowed in all residential and mixed-use zones—a hopeful sign of the government’s support. In addition to the existing permits regarding the gardens, Raleigh is one of 16 North Carolina municipalities that allow backyard chickens, boasting the progress with an annual “Tour

d'Coop" (Mettam). While these are steps towards a committed local governance, there are still problems such as expensive installation of water meters or water lines and start up infrastructure that serve as barriers to those with less financial options.

Raleigh currently has a solid foundation of policy support regarding general ordinances that could support local food, such as the livestock permit regarding chicken ownership mentioned above. Information for the requirements for starting community gardens and urban farm initiatives is fairly accessible if one is connected to the Internet; the city's webpage has a sustainability section briefly providing links to zoning maps and referencing specific land use codes. The CEFS has published a guide to ordinances that shape city planning regarding farmland and municipalities that is available online as well. While this shows the city supports local food ventures, they need to further promote and show the public their investment through providing subsidies or funds to cut certain start up costs or enhance the attainability of water sources. To ensure the public is aware of the city's dedication to local foods, local policy makers and politicians could coordinate with community groups to thrust potential urban agriculture initiatives into the public eye. Coordination between community groups, larger local promotion organizations such as the CEFS and the government can coordinate their combined power and influence citywide to show the benefits that urban ventures could bring to all income levels of Raleigh's population.

Conclusion

Through the examination of functioning strategies in Waterloo and Tucson, a model for Raleigh can be molded to fit the certain needs of the area while incorporating the most successful aspects of the other regions. Looking into the case studies in Canada and Arizona,

North Carolina can work towards a collaborative effort that respects all forms of knowledge and is aware of the social, political and economic inequalities that persist within the food system. We can see the potential of organizations like the CEFS with connections to the government to be able to accumulate the levels of political support that can be seen in Waterloo and by highlighting urban agriculture as a way to deal with socioeconomic disparity, a regular discourse regarding social justice will begin to emerge. While Raleigh is still the early stages of shifting towards local food, the city has the potential to develop a unique food economy that reflects the best of both Waterloo and Tucson, and to continue to grow and discover new initiatives to overcome the inherent barriers to opposing the dominant industrialized global agricultural model.

The promotion of urban agriculture is a way to address the socioeconomic disparities that hinder a large portion of the population from participating in current local food initiatives. Urban agriculture can provide a community with a sense of empowerment; by building a space for citizens to meet and act together, they can begin to identify the particular problems they face and find solutions appropriate to their environment and culture (Heynen). These initiatives can provide employment, entrepreneurial and volunteer opportunities within an area. For example, in some cases, urban projects can develop a system in which they incorporate a kitchen that offers cooking classes, provides chances for residents to develop professional business or culinary skills, and supports a local farmers' market with garden surplus. These food systems also are able to connect with regional schools, providing a place to introduce gardening to children, send representatives to teach about food systems, nutrition and cooking, as well as send products to increase availability of healthy food options in the

schools' cafeterias. These spaces create a sense of place and build social cohesion as people share the labor and products of their work (Heumann).

The connection between community members and the awareness they gain from direct engagement with food production resolves issues of distance and alienation in the food supply chain. It also has the potential to mold a new conceptualization of food. Urban agriculture redefines food as a right that communities have the power to control how it is produced and sold. Urban agriculture is a community solution that substitutes “commodities for activities”, giving agency to the producers and consumers rather than global institutions (Heynen). David Love sums up the need for community strategies like urban agriculture by saying, “better access to fresh and whole foods alone will not get rid of poor health outcomes in low income areas... Instead residents of low income areas need a holistic approach that empowers local residents and workers, takes into account small mom-and-pop stores, encourages these businesses to invest in the community, and boosts healthy eating habits for the long run” (Love). These system changes can begin to take shape as communities feel the power and control return to the people. The idea of empowerment is central to food justice and food sovereignty, and at its core, urban agriculture puts communities in the position to be the main decision making body, uniting them to address inequalities and lack of access they experience as it pertains to their unique environment. Urban agriculture can also be a way the United States can begin to integrate the two theoretical approaches to develop a discussion around food and social issues that is both historically appropriate and inclusive.

As discussed, there are barriers to these initiatives such as urban development and expansion projects, legal restrictions including zoning laws and town ordinances regarding plant height, raising livestock, etc. can prevent urban ventures to thrive. Despite this,

Raleigh's current policy foundation shows these initiatives already have a certain extent of political support. This is a good sign, but the city needs to promote the potential of urban agriculture in order to bring awareness of its benefits and inspire communities to take initiative. Raleigh has the opportunity to defy the critics of traditional local food movements and create an "inclusive yet exclusive" food system rooted in the framework of reflexive localism.

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