2013

People and Plants in a Rust Belt City: a Critical Analysis of Urban Agriculture in Cleveland, Ohio Using a Sustainable Development Framework

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Presented in Partial Fulfillment of the Requirements of Senior Independent Study

March 2013

ABSTRACT

The purpose of this study was to take a critical snapshot of Cleveland, Ohio's urban agriculture movement using a sustainable development lens. Twenty-one representatives of a variety of urban agriculture projects (including community gardens, market farms, non-profits, vineyards, and orchards) participated by filling out a written survey, being interviewed by the researcher, and providing a tour of their project's site. Most of these projects started in 2010 or later. Trends across all projects were first analyzed according to a traditional sustainability framework, finding that Cleveland's urban agriculture scored well environmentally, poorly economically, and mixed socially. However, the traditional sustainability framework oversimplified or excluded some important components of what it means to be sustainable, which is why the use of a more holistic sustainable development framework that heightens the importance of justice (equitable distribution of resources) and democracy (inclusive, grassroots procedures) was also used. These measures prove to be far more important to urban agriculture participants, who contest traditional sustainability metrics and recast the goals of their projects in terms of food justice and community empowerment. Their responses reveal a more complex, critical, and racially aware strain to urban agriculture that has little to do with "going green" or city beautification. Urban agriculture ends up having a lot more to do with people than plants.

ACKNOWLEDGEMENTS

I would like to sincerely thank the urban farmers and gardeners who spoke with me about their projects. Without them this research would not have been possible. I would also like to thank my advisors Dr. Matt Mariola and Dr. Chuck Kammer, for their great feedback along the way and willingness to discuss more than just I.S. Colby Sattler of Neighborhood Progress Inc. provided me with many contacts and resources at the start of my research and for that I am very grateful. I would also like to thank The Copeland Fund for Independent Study and The College of Wooster Teaching Garden Fund for providing me with financial resources to complete my research. Lastly, I would like to acknowledge the summer 2010 staff and students at the Cleveland Botanical Garden's Green Corps program, who inspired me to do this project.

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

Tables

Figures

I. INTRODUCTION

Many American cities today are in what one might call a crisis, fueled by a number of forces that began over a century ago. At one time many of these cities were thriving in industries such as automobiles (Detroit), clothing production and agriculture (Cincinnati), and slaughterhouses and stockyards (Chicago) (Scranton, 1999). However, the development and growth of transnational corporations, the weakening of city governments, and the growth of "free" trade between richer and poorer nations are all trends of globalization which have played major roles in the changes or decline of cities ("Globalization and Cities," 2002, p. 3). These trends have far from disappeared; in fact, they seem in as full force as ever before. Companies that previously may have employed people in American cities are now outsourcing jobs to less developed nations (or have developed technologies that no longer require human labor) where cost of production is significantly cheaper, leaving a number of people in these cities jobless (Warf & Holly, 1997; Johnson, 2002). With the exception of food stamps and public housing, there is little "safety net" for the people or cities that lose out in these trends of globalization and de-industrialization ("Globalization and Cities," 2002, p. 4). This has been an especially strong trend in manufacturing cities or what is now known as the Rust Belt.

The suburbanization of the second half of the 20th century has also changed the way American cities look. This process was originally fueled in part by re-location of businesses outside of the city, starting as early as the 19th century. Influences such as real estate, automobiles, and the desire for home ownership later became important factors (Gottdeiner & Hutchinson, 2011, p. 123-125). Because suburbanization was also fueled

by racism, it also takes the term "white flight". Whites, as implementers of explicit and institutional racism, have long reaped societal benefits and ability to seek out new opportunities such as housing in the suburbs. (Johnson, 2002, p. 30). At the same time, this same racism meant minorities were confined to ghettoes even after the end of segregation through practices such as redlining and home mortgage discrimination. What remains in inner-cities and still remains today shows a new side of the "Great American City": poor minority groups, especially African Americans and Latinos, living in disinvested areas scattered with abandoned houses and vacant lots. These are areas where no business wants to set up shop, including grocery stores that would provide jobs and access to fresh produce. Thus, our inner cities have not only become repositories for the black, Latino, and immigrant poor but they have also become food deserts[1], or food insecure[2].

Not only do we face problems of poverty and racism, but we are also beginning to understand the gravity of environmental issues and the need to support more sustainable living practices. Our changing food system, where industrial production of processed food dominates, means that, not only is it hard to get healthy foods (Wallinga, 2009, p. 268), but food has large-scale environmental consequences: soil depletion, loss of diversity, and the creation of superpests (Weis, 2010). Moreover, unsustainable food production plays a significant role in contributing to climate change because the industrial food system is contingent on the use of fossil fuels (Weis, 2010). Clearly, how

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[1] The USDA defines a *food desert* as a census tract where the poverty rate is at least 20% and more than 1/3 of its residents are more than one mile away from a grocery store (2013). Mead (2008) defines a food desert more broadly as an area (usually within a city center) where people have poor access to vegetables, fruits, and other whole foods; these are predominantly low-income areas (p. 335).

[2] The World Health organization states defines *food security* (the opposite of food insecurity) as the availability of food (it exists in the area), accessibility of food (having resources to obtain food), and appropriateness of food (based upon cultural practices and knowledge of use) (2013).

we grow our food and what we eat plays a big role in our impact on the environment. In inner-city areas, however, most people (due to physical access and financial means) have no choice but to purchase industrial, processed foods from the local convenience store, meaning that the poor minority groups are the most food insecure (Mead, 2008, p. 335).

This paints a rather bleak picture of the state of poor, inner-city neighborhoods and is not far from what has happened in the city of Cleveland, Ohio. Once a booming industrial city, in 2010 Cleveland had a population of fewer than 400,000 with 34% below the poverty level, making it nearly the most impoverished city in the nation (U.S. Census Bureau, 2011). A long period of suburban moves coupled with economic downturn left Cleveland with 20,000 vacant lots which total over 2000 acres of open space (see Figure 1.1). The problem with vacant lots is not just that they are visually displeasing: no property taxes are paid on them, they reduce nearby property values, and they have very high maintenance costs (Choo, 2011). In addition, disinvestment also resulted in grocery stores being on average 4.5 times farther away than fast food restaurants (Grewal & Grewal, 2011, p. 2-3). Thus, the amount of space in Cleveland that would be considered a food desert is very high (see Figure 1.2). Douglas S. Massey (1990), in his famous sociological paper "American Apartheid: Segregation and the Making of the Underclass," notes that racial segregation can put minorities (who tend to have higher rates of poverty) at a disadvantage due to the higher concentration of poverty compared to other areas of the city. Cleveland does not appear to be an exception: the most impoverished, which are also likely to be food deserts, are nearly 100% African American.

While a number of issues have large impacts on Cleveland's decline, it does not mean that there are no solutions to these issues or that no one is working to address these social problems. It is not as if urban dwellers have no agency to create their own survival strategies or that other urban institutions are not gaining interest in re-defining the city. Enter the urban agriculture movement, which seeks to use vacant space in urban areas to grow food. This is not just a way to do something productive with vacant lots. It also provides a space to address larger-scale issues of food insecurity, health problems, economic downturns, social disintegration, and environmental degradation. Unlike many cities, Cleveland has an urban agriculture zoning law that supports food production in specific areas (LaCroix, 2010). There has been additional support through the city and local organizations through programs such as ReImagining a More Sustainable Cleveland, started in 2008 as a citywide greening initiative. ReImagining gave grants to a variety of small groups of individuals to turn vacant lots into green space; many of these projects were urban gardens and farms. Other community development corporations (CDCs), foundations, and Ohio State University's Agricultural Extension have also been major supporters in city greening. In the city of Cleveland, there are currently over 200 community and market gardens (and farms) throughout the city (Grewal & Grewal, 2011, p. 3) with plans to implement more.

Some wonder, though, about the efficacy of such programs. Will growing food in vacant city lots really make any difference? In what aspects will it make a difference? Grewal and Grewal (2011) explored Cleveland's ability to grow food on vacant lots and its economic implications in a recent study. They evaluated the ability of Cleveland to

produce fruits and vegetables, poultry and eggs, and honey based upon the following 3 scenarios:

- Scenario I: Use 80% of every vacant lot in the city (78.5% for produce, 1.5% for poultry and eggs, 20% for walking and storage space). Bees for honey will be on 15% of the vacant lots.
- Scenario II: Same as Scenario I but in addition use 9% of every occupied residential lot (7.2% for produce, 1.8% for poultry and eggs)
- Scenario III: Same as Scenario II but in addition use 62% of every industrial or commercial rooftop for vegetable and non-tree fruit production.

All three scenarios were evaluated for production according to vegetable production practice: conventional urban gardening, intensive urban gardening, or hydroponic rooftop gardening.

The authors found some interesting results for each of their scenarios. For Scenario I, they found that, depending on production practices used, Cleveland could produce 22-48% of its fruits and vegetables, 25% of its poultry and eggs, and 100% of its honey. Adding in part of the residential lots in Scenario II, Cleveland could produce 31-68% of its fruits and vegetables, 94% of its poultry and eggs, and 100% of its honey. Finally, with the addition of rooftops in Scenario III, Cleveland could produce 46-100% of its fruits and vegetables, 94% of its poultry and eggs, and 100% of its honey. Thus, there is the potential for Cleveland to grow almost 100% of its produce, poultry and eggs, and honey within the city using current open space. Not only would this greatly improve food security, but almost all of the $115.3 million that Clevelanders spend annually on produce, poultry, eggs, and honey could be retained in Cleveland. This is in comparison to the current $1.2-1.8 million value of produce currently grown in the city.

While Grewal and Grewal's study shows great promise in the potential of the urban agriculture movement, they neglect some very important factors: social and

financial issues that are hampering the implementation of urban gardens. Many people who live in inner-city Cleveland may not have the financial resources, time, knowledge, or interest to garden. If residents do not possess all of these traits, is it okay for someone outside of the neighborhood to begin gardening or farming on these vacant lots? Even if there is interest and resources to implement urban agriculture, there is the question of how it will be implemented, who will manage the sites, how all of the food will be stored and distributed, and if it will be made affordable for inner-city residents. Thus, making Cleveland an intensive food-producing city is not quite as simple of an issue as Grewal and Grewal make it- but that does not mean that the urban agriculture movement should be ignored. One could take their results and look at them through social science lenses of sustainability and sustainable development, asking the question, what kinds of circumstances need to be in place in order for urban agriculture to achieve such a high degree of productivity in such an impoverished place? And, are the urban agriculture programs that exist right now living up to the task of sustainability? How would urban gardeners and farmers describe what they are trying to achieve- intensive food production or something else entirely?

I rely on the terms sustainability and sustainable development throughout this work. While I will elaborate on these terms in my Theory chapter, it is useful to briefly define them right now. Sustainability refers to basic environmental, social, and economic characteristics that need to be in place for nature (including humans) to function healthily over time. Sustainable development includes sustainability but also justice and democracy. By justice, I mean equitable distribution of resources. By democracy, I mean participatory, community-driven, and grassroots processes. Based upon these

definitions, in this research I will take a critical snapshot of urban agriculture in Cleveland, exploring the following questions: How sustainable are the farms and gardens in Cleveland at this moment in time? How does urban agriculture look according to sustainable development? Which framework best fits the Cleveland context?

Before I introduce existing social science literature on American urban agriculture, I will provide historical background of the urban agriculture movement in the United States and also development of the city of Cleveland. After that, I will present theoretical frameworks for the sustainability and sustainable development the definitions that I laid out above. Then, I will move into my own research methods and the results of my study. I will conclude by providing some areas for further research on urban agriculture in Cleveland.

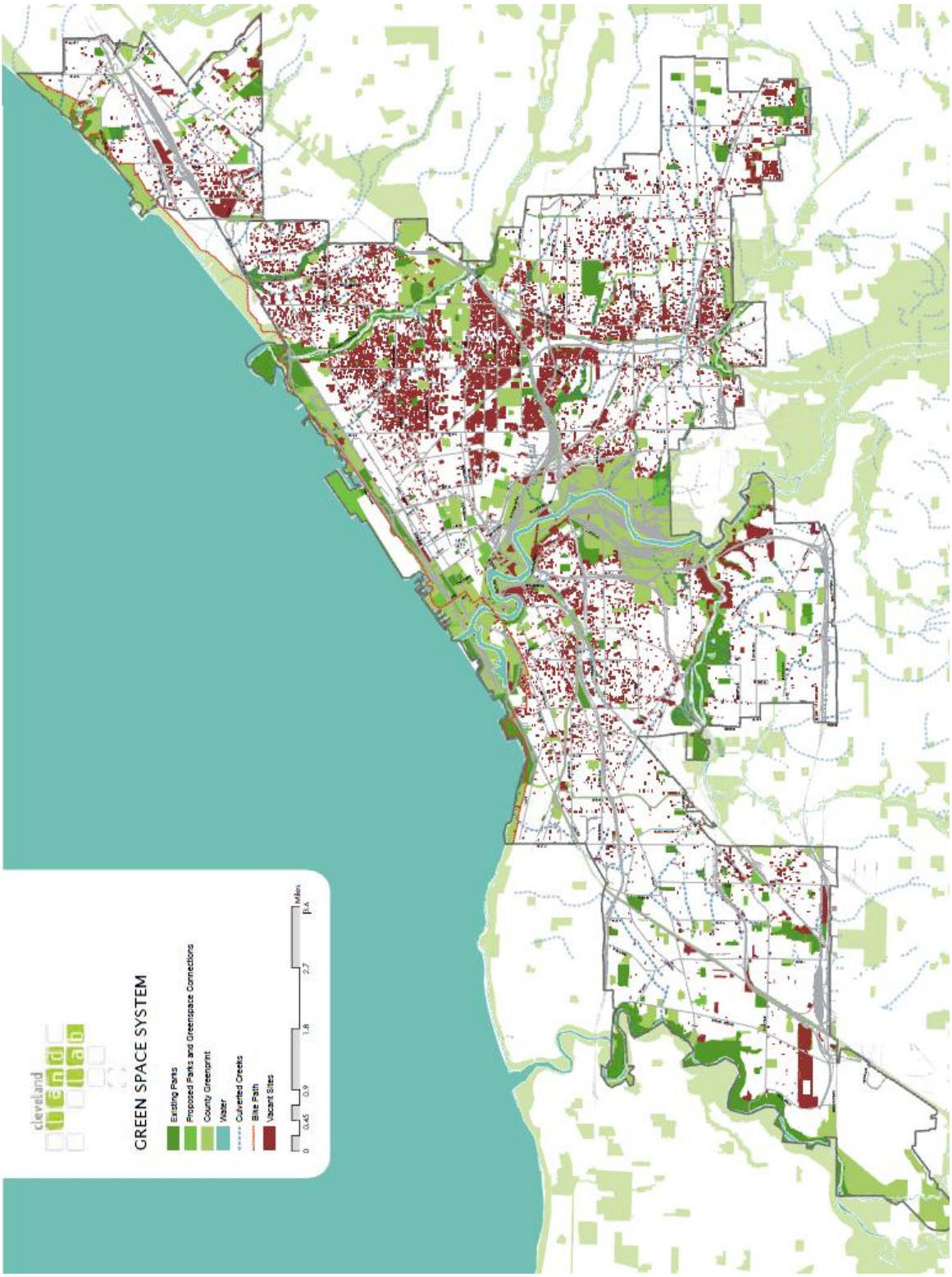

Figure 1.1 Cleveland's Vacant Lots and Green Space. Compiled for the ReImagining A More Sustainable Cleveland project (2008, p. 10). Red denotes vacant lots.

II. HISTORY

Introduction

The context in which I am studying sustainable development, a Midwestern city's urban agriculture movement, is quite unique. Such contexts are not typically the focus of sustainable development dialogues. Before I present my own study, I think it is valuable to describe the specific context of my research. To do so, I have compiled a brief history of urban agriculture in the United States and also a brief history of the city of Cleveland.

2.1 A Brief History of United States Urban Agriculture

Urban agriculture has been a common solution to social, environmental, political, or economic issues in United States cities since the late 19th century when the mayor of Detroit started turning vacant lots into gardens known as "Pingree Potato Patches". The mayor wanted a place for unemployed persons to access much needed food during the 1893 Depression. Not long after, the cities of Chicago, Providence, Buffalo, and Boston adopted similar urban garden programs (Broadway, 2009, p. 2). At this time more gardens, including community gardens and school gardens, also began emerging to combat (in addition to economic problems) trends like increasing urban immigration and congestion (Draper & Freedman, 2010, p. 459).

Early on urban agriculture programs were mainly meant to focus on marginalized groups such as the poor, immigrants, and children. However, the two World Wars and Great Depression in the 20th century broadened the target populations for urban agriculture. Perhaps the most famous era of urban agriculture in American history is the

Victory Garden movement during World War II. At this time 20 million victory gardens existed throughout the country. Estimates note that these gardens were able to produce 40% of the United States' vegetables and fruits for the wartime efforts (Choo, 2011). Victory gardens were largely pushed by First Lady Eleanor Roosevelt, not unlike the encouragement today by Michelle Obama and her White House garden to get families engaged in gardening (Draper & Freedman, 2010, p. 460).

The current economic downturn has also resulted in a growth of urban agriculture which some are calling "recession gardens" (Draper & Freedman, 2010, p. 460). Yet this time the growth in local food production was booming since before the recession hit. According to Broadway (2009), one indicator of this growth is the increase in farmer's markets throughout the United States, going from 1,755 markets in 1994 to 4,685 in 2008, representing a 166% increase (p. 24). I have already mentioned a number of possible reasons for this growth in urban agriculture but the reasons for creating gardens and farms are varied and wide. These include but are not limited to:

- Improving the local economy by raising property values and supporting local food production businesses (Broadway, 2009; Draper & Freedman, 2010; Macias, 2008; Grewal & Grewal, 2011; LaCroix, 2010; Choo, 2011)
- Making better use of vacant land (Broadway, 2009; Ohmer et. al, 2009; Grewal & Grewal, 2011; LaCroix, 2010)
- Improving physical and psychological health through access to fresh food, spending time outside, or having positive social interaction (Broadway, 2009; Draper & Freedman, 2010; Ohmer et. al, 2009; Grewal & Grewal, 2011; Choo, 2011)
- Improving local food security (Draper & Freedman, 2010; Flachs, 2010; Macias, 2008; Choo, 2011)
- Building or strengthening communities and community resilience (Broadway, 2009; Draper & Freedman, 2010; Macias, 2008; Ohmer et. al, 2009; Grewal & Grewal, 2011; Choo, 2001)
- Providing an outlet for recent immigrants or other groups to seek out culturally relevant foods (Draper & Freedman, 2010; Flachs, 2010)
- Producing food in a potentially more environmentally friendly manner than conventional agriculture (Macias, 2008; Flachs, 2010; Choo, 2011)

- Saving or making money (Flachs 2010, Grewal & Grewal, 2011)

Certain cities like Detroit and Milwaukee have become the poster children for the urban agriculture movement. Detroit alone, which has lost upwards of 1 million people since the 1950s and has up to 44,000 vacant lots, is currently experiencing a re-growth in urban agriculture space: the city is currently home to over 400 (some say up to 800) agricultural sites (Broadway, 2009; MSU, 2010). A recent Michigan State publication, similar to the Cleveland Grewal & Grewal (2011) study, noted that Detroit has the potential to produce 76% of its vegetables and 42% of its fruits using vacant land (Colasanti, Litjens, & Hamm, 2010, p.7).

While cities like Detroit or Milwaukee are the most well-known cities participating in urban agriculture, they are not alone. Cities such as Buffalo, Philadelphia, Chicago, Brooklyn, New York, St. Louis, Seattle, and Oakland are all major participants. Urban agriculture projects range from rooftop gardens and educational programs to community garden plots and market farms. Choo (2011) mentions, however, that this growth in activity is often so informal or grassroots that there are no existing legal structures to support it:

> Cities across the country are scrambling to update ordinances to regulate-and often facilitate-a variety of agricultural activities, including community gardens, commercial farms, backyard chicken coops and beehives. Meanwhile, many urban food growers and agricultural businesses operate under a cloud of extralegality, waiting for the law to catch up.

For example, while there are hundreds of gardens in existence in Detroit, there are actually no city zoning laws that permit agriculture (Choo, 2011). Technically the city could choose to shut down all farming operations should it find them a hindrance. On the other hand places like Cleveland, the case study for this research, have developed an

agricultural zoning law which permits certain agricultural practices in the city. The city also has a county land bank where the local government has power to acquire and demolish buildings on vacant lots, then put land back in hands of private property owner for productive and tax-paying use (LaCroix, 2010). Efforts such as these may help Cleveland sustain urban agriculture projects in the long-run but it seems too early to tell. Yet I am also interested in the grassroots efforts that might allow urban agriculture to be sustained over time in a way that would be different from top-down legal matters.

In the end, it is too early to tell if the current phase of urban agriculture is only a trend or something more. Broadway (2009) makes a very valuable point in the discourse on the lasting nature of urban agriculture in the United States:

> The history of community gardening in the United States serves as a reminder of how transient people's interests in growing their own food can be. Pingree's potato patches lasted a few short years, while victory gardens flourished during WWII and then were largely abandoned with postwar affluence. Only time will tell whether the current interest in urban agriculture is a reaction to the worst economic downturn since the 1930s and a desire for Americans to save costs by growing their own food or whether it truly represents a fundamental change in the way urbanites purchase, produce, and consume their food, with farming becoming a recognizable part of North America's urban landscape. (p.29-30)

It is clear from the history above that urban agriculture seems to be growing in ways that it never has before, and it suggests opportunities for research on why it is growing so much, what the impact is on cities in the country, and how urban agriculture projects could become permanent features of the urban environment. In the next section, I will describe Cleveland’s history to set up the context for which urban agriculture in this specific city has emerged.

2.2 A Brief History of Cleveland

2.2.1 Early History and Industrialization

Moses Cleaveland, a surveyor for the Connecticut Land Company, first arrived along Lake Erie in 1776 on the spot which eventually became the city of Cleveland (see Figure 2.1). He and his colleagues were interested in land speculation in what "promised to be a lucrative new market," but early growth was slow and not too noteworthy (Warf & Holly, 1997, p. 209). It was not until 1827, with the Ohio-Erie canal opening (which ultimately connected Lake Erie with other parts of Ohio and Pennsylvania), that Cleveland had true development potential (see Figure 2.2). The city was now at an ideal location to become a transport node and eventual hub of industry, not only because of the canal but because of other physical features like ready access to Appalachian resources, cheap water transportation, and Lake Erie. This time period marks the first large wave of city growth, with population growing to fill jobs in the early industries of dairy, agricultural processing, and coal mining. As people moved to Cleveland to support these activities in the second quarter of the 19th century, city boundaries began to expand and new transport roads were built to lead to these new outskirts. Because the growth was quick, it meant that "orderly" city planning was difficult and remained focused on short-term goals for industry (Chapman, 1953, p. 20).

Figure 2.1 Current Day Cleveland, Ohio. The city is located along Lake Erie. This map shows the city's major neighborhoods with some additions made by the researcher (n.d.).

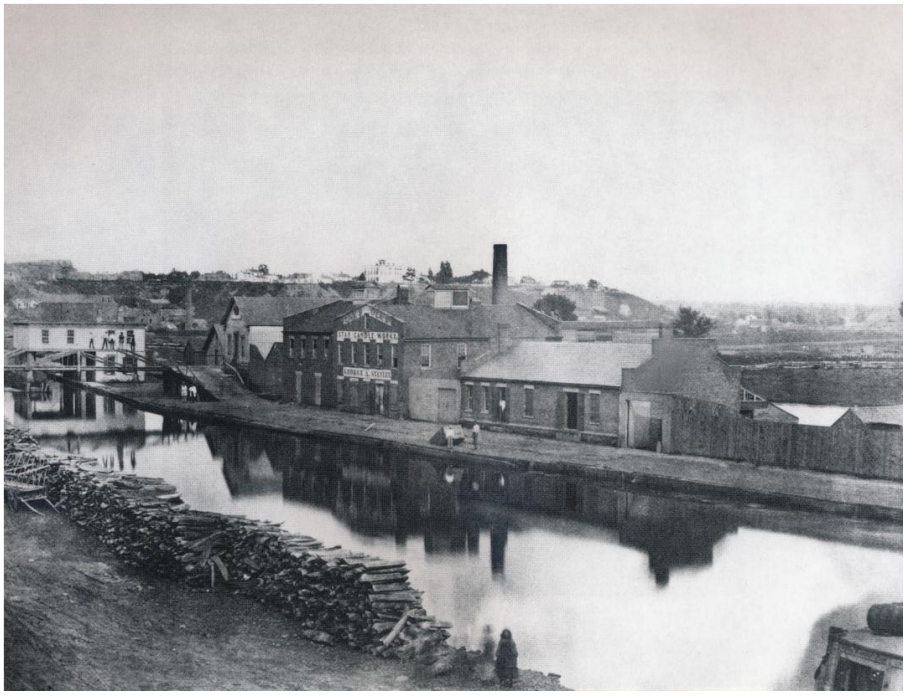

Figure 2.2 Ohio-Erie Canal, ca. 1859 (Burdick & Baughman, 2007, p. 10).

While these aspects were important to city growth, many scholars say the development of a good railroad system starting in the 1850s (with the city being the terminus of a number of rail lines) is what made Cleveland the successful industrial city it was during much of the 19th century and the first half of the 20th century (Chapman, 1953, p. 20). The railroad allowed the city to access more raw materials and, in turn, create more processing facilities. There was also a public rail line that opened in 1859 to transport visitors and residents around the city.

The development of two new industries in the 1870s and 1880s sparked the second wave of growth: petroleum and steel. Iron also became an important city specialty (Scranton, 1999, p. 49). Because the earlier growth of the city was haphazard, Cleveland was "inadequately prepared" for this second wave of industrial growth, which led to modifications of the city landscape that were not always ideal (Chapman, 1953, p. 19). For example, The Flats (see Figure 2.3), still famous today for its industrial history, was the hub of activity. While the development of The Flats was positive for industry, it had many negative side effects. It meant that the lakefront was not well developed for public use, which later made Cleveland undesirable for investment. Chapman (1953) further explains downfalls of The Flats:

> Although swaths of deterioration were thus spread through the town, largely by the railroads, the flats along the Cuyahoga River remained the center of industrial and wholesale development. Here, the main terminal facilities of both water and land transportation converged, encouraging further concentrations of depots and warehouses on the one hand and the development of industrial plants on the other. Congestion mounted and the confusion already established before industrialization was greatly aggravated. To the already extant stock piles and warehouses of the mercantile firms were now added the material dumps, slag heaps and debris of the new factories. Within a short distance from the civic center of town an industrial slum was formed. This disorder spread upstream to the south as the river was deepened and widened to admit larger ships and as several railroads poured materials into the flats. Terminal facilities and shops for

> the railroads were located here as well. The narrower valleys of the side streams, Kings-bury Run to the east and Walworth Run on the west, were likewise invaded, thus driving wedges of industry into the town on each side of the river. The entire area of the flats was ultimately taken over and the character of this part of town persists to the present day. (p. 21)

Because of the activity in The Flats and haphazard city design, water and air pollution were also noteworthy city features, just as in any industrial city of the era (Chapman, 1953, p. 24).

Industry changed the city in other ways too. Public Square, which was originally a civic and residential space, became the central business district or downtown. Buildings became much taller to accommodate for increased real estate prices and more business. Euclid Avenue, which was famous for its grand houses owned by industrial tycoons, gradually transformed into an expansion of the business district and also became a main road for transport (see Figure 2.4). Additionally, the railroad lines along the waterfront prevented the development of a recreational waterfront other than Lakeview Park in 1867. Other green spaces were lacking, except for Wade Park (east of the city center at what is today University Circle), established in 1892, which was four miles away from the city center and thus not readily available for the public at large to use (Chapman, 1953, p. 23).

Figure 2.3 An Early Photo of the Flats (Burdick & Baughman, 2007, p. 96).

Figure 2.4 Euclid Avenue, 1890. Euclid Avenue was a main thoroughfare and living location for the city's elite (Burdick & Baughman, 2007, p. 23).

Cleveland was already a well-developed city (due to the two major waves of growth starting in 1827 and the 1870s) by the time the automobile industry began to boom in the early 20th century. Nonetheless, it quickly entered into the city along with the existing steel and petroleum powerhouses. In this way, Cleveland "matured during the classic period of Fordism, the epoch of production characterized largely by mass markets, mass production, homogenous goods, vertically integrated firms, oligopolistic market structure, and semiskilled labor" (Warf & Holly, 1997, p. 210). For many years, the main industries in Cleveland were able to prosper and create a melting pot of unique populations who wanted to take part in the economic successes of the city. Immigrants from Italy and Eastern Europe supplied the labor prior to World War II and over time also developed some famous ethnically rich neighborhoods around the city that still exist today. After World War II, poor Appalachian whites and Southern black migrants came to fill the labor gap and also created new segregated neighborhoods (Warf & Holly, 1997, p. 210). Cleveland was a mosaic rich in culture and booming with industrial success. In 1950, the city of Cleveland hit its peak population at 915,000 (Collins & Smith, 2007, p. 367).

2.2.2 De-industrialization

Cleveland's boom could not last forever, of course. A number of factors contributed to its ultimate decline. Eventually, the Midwestern labor force was deemed too expensive and corporations wanted to move to a place where workers had not unionized (Warf & Holly, 1997, p. 211) and where the environmental regulations were lower (Castleman, 1979). Other nations' industries started presenting competition at

about this same time (Johnson, 2002, p. 7). Also, as noted, American corporations sought out cheaper labor abroad or replaced human labor with new technologies (Warf and Holly, 1997, p. 213). Thus, businesses moved out of Cleveland and other Midwestern cities, and those that stayed made big job cuts. In Cleveland between 1979 and 1994, the most job losses were in nonelectrical machinery (19,700), fabricated metals (15,200), and transportation equipment (13,300) (Warf & Holly, 1997, p. 211). These job cuts did not hit all city dwellers equally. Many of the inner-city jobs that were moving away (particularly overseas) were jobs held originally by African Americans who lived in high populations in the inner-cities and often lacked the supplemental education required for other types of jobs (Wilson, 1996).

At the same time as job loss and de-industrialization, Cleveland began to see the trend known as "white flight" (the move of the white population out of the cities and into the suburbs). In the 1970s, there was a 24% decline in the population of the city itself, mainly to suburban areas in the metropolitan area (Warf & Holly, 1997, p. 212). From the 1970s to 1990s, many of Cleveland's census tracts (17 in total) gained a black majority (Price-Spratlen & Guest, 2002, p. 115). By 1990, 84.7% of blacks lived in Cleveland, East Cleveland, Cleveland Heights, Lakewood, and Shaker Heights out of the entire metropolitan region. These five communities are considered to be the center of the region and also are where most vacant lots are. In contrast, only 35.4% of whites lived in these areas (Price-Spratlen & Guest, 2002, p. 114). To this day, Cleveland has been marked by drastic segregation with blacks inhabiting the inner-city (especially the East Side) and whites living in wealthy inner-ring and outer-ring suburbs. According to 2010 census data, the Cleveland metropolitan area is one of the most segregated cities in the

country with a dissimilarity index of 72.6, meaning that 72.6% of Cleveland's population would need to move in order for the area to become perfectly integrated. While these numbers are down from previous decades (the dissimilarity index was 85.8 in 1980) this number still represents a very high level of segregation (Logan & Stults, 2011, p. 6).

It was not just job loss or de-industrialization in the latter half of the 20th century that fueled white flight. As noted, the city neglected to develop public waterfront and green spaces that might encourage people to stay in the city. Just as influential were racial tensions and violence occurring at the time. Riots reached a peak across the nation in the latter half of the 1960s with the backdrop of the civil rights movement, general response to city ghetto life, and development of a "black collective consciousness" (Carter, 1986, p. 210). Cleveland was no exception to these patterns of rioting. The two most infamous Cleveland riots occurred in the Hough and Glenville neighborhoods on the east side of the city (see Figure 4). The 1964 Hough riot is characteristic of many of these violent episodes, described here by Collins and Smith (2007):

> The Hough riot started outside the Seventy-Niners' Café, which stood at the corner of Hough Avenue and East 79th Street, after one of the establishment's owners refused to serve a glass of water to an African-American who had just purchased a pint of wine for "take out". Later, a sign with a racial slur appeared on the door. By the early evening, fires burned in several locations between East 71st Street and East 93rd Street. Looting, vandalism, and random gunfire continued in Hough throughout the evening. The next day, looters overran small businesses and random gunfire and arson flared throughout Hough, prompting Mayor Ralph Locher to call for assistance from the National Guard (Lackritz, 1968).
>
> At daybreak on the morning of July 20th, the National Guard sealed Hough Avenue from 79th to 93rd Street, but this did not prevent widespread looting in the outlying areas of the neighborhood. Rioting continued until July 25, with each day following a similar pattern. During the daylight hours, the police and the National Guard would re-establish control over the core of the Hough neighborhood, but looters and arsonists would spread to the outlying areas of Hough and into the surrounding neighborhoods of Kinsman, Glenville, and

> Central (Lackritz, 1968). Four persons died in the Hough riot, and there were more than 500 instances of arson and more than 3000 arrests. (p. 368)

The Glenville riot, occurring in 1968 in the neighboring district, occurred after a tow truck operator was shot, which led to wide-scale gunfire between Cleveland police and a number of African American groups. The violence caused Mayor Carl Stokes to cordon off 6 square miles of the neighborhood and bring in National Guard (Collins and Smith, 2007, p. 368-9).

These authors note that "together these two episodes of violence scarred the landscape of Cleveland's East Side. Burned out and abandoned buildings, vacant storefronts, and vacant lots served as constant reminders of the riots" (p. 369) (see Figure 2.5). Both events contributed to a high population loss and decrease in property values in this area: these authors go on to note that the amount of population and property value loss becomes less prominent the farther one moves away from these riot sites. In other words, those that could leave—not just white families, but also wealthier African Americans from these specific violent neighborhoods—*did* leave. Those that could not leave, namely the poor, elderly, unemployed, or unemployable, remained behind (Warf & Holly, 1997, 212).

Figure 2.5 Hough, 1966. The National Guard came in to east side neighborhoods as a response to riots in the 1960s (Burdick & Baughman, 2007, p. 194).

Unfortunately, government help during the time of de-industrialization, white flight, and race riots was very poor. Low state taxes and less residents in the city to pay local taxes meant that there was little funding to improve the situation. Additionally, federal aid was dramatically reduced in the 1970s and 1980s. This disinvestment racked up the municipal debt. Then, Mayor Dennis Kucinich (1977-1979) blamed the corporate and business community for the decline of Cleveland. In response, banks and corporations turned against him. In the late 1970s, Cleveland had to default on its bonds, the first U.S. city to have to do so since the Great Depression (Warf & Holly, 1997, p. 213).

2.2.3 Re-vitalization?

While de-industrialization turned Cleveland from a cultural and economic boom town into what came to be dubbed "the mistake on the lake," in the 1990s Warf and Holly (1997) note that Cleveland began enjoying a new wave growth. Several factors account for this, including some re-industrialization on account of the pre-existing well-developed infrastructure, presence of a skilled blue-collar workforce, reinvigorated auto industry, cheap petroleum, and growth in exports (Warf & Holly, 1997, p. 214-5). More high-tech industries entered Cleveland, including testing equipment for NASA and become a leading research center for polymers and liquid crystals (p. 215). Service industries such as hospitals, banks, law, and accounting grew and continue to grow as well (p. 215-6). There was also the development of places for "cultural consumption" such as Playhouse Square, University Circle, The Flats, and sports stadiums (p. 218).

Attempts to address urban re-vitalization continue today, with a special emphasis on sustainability with programs such as the aforementioned ReImagining a More Sustainable Cleveland. Here the central idea is that urban agriculture is a great outlet for productive use of land and to combat issues such as food deserts (LaCroix, 2010). Another program is the Waterfront District Plan, which according to its developer the Cleveland City Planning Commission, aims to make Cleveland a more competitive region in the city by having a contiguous green space along the lake to "live, work, and play" (n.d.). Despite these new re-growth programs, improvements have not necessarily equally improved the lives of all Cleveland residents. The poverty rate and joblessness continue to remain at high levels in only certain areas of the city. Thus, the re-

vitalization of Cleveland is disproportionately shared based upon socioeconomic status, and closely related, race.

III. LITERATURE REVIEW

Introduction

The following is a summary and analysis of existing social science literature on urban agriculture in the United States. I start with a literature review written by Draper and Freedman (2010) that evaluates much of the existing published community garden research in the United States from 1999 to 2010. Then I move into three studies of evaluations of urban agriculture in the cities of Burlington (Vermont), Cleveland, and Milwaukee, followed by two studies of regional community development programs in California and Pennsylvania which have garden components. I conclude by noting that, while these studies are helpful in showing that urban agriculture can have a variety of positive impacts, there are still many gaps in the research. I will point out a few of these gaps which I will address my own evaluations of urban agriculture in Cleveland.

3.1 Review of Existing Literature by Draper and Freedman (2010)

Carrie Draper and Darcy Freedman examined the recent (55 articles published between 1999 and 2010) scope of community garden research in the United States, specifically focusing on benefits, purposes, and motivations of having community gardens. They also used their analysis of current available research to discuss some implications for future community garden practice and research. Their literature review provides a new look at the scope of community gardening in the United States, unlike previous community garden literature reviews which focus mainly on nutrition and youth populations. Using the Google Scholar search engine, the researchers searched for

various community gardening key words and selected appropriate articles. They also found additional articles via reference pages. Then, with each of the 55 articles, a full read-through and review was performed. Draper and Freedman specifically looked at the following components: population; setting; methodology; study results; and the purposes, benefits, and motivations associated with community gardening (p. 461). These results were compiled into a formal and comprehensive table (p. 462-476).

Draper and Freedman find some interesting areas of focus for researchers in terms of setting and population. Their findings support the observation that almost 100% of community gardening research occurs in an urban setting due to the nature of people living close together and making it easier to have a common site for agriculture. While overall a wide range of population groups were studied, one-third of the articles focused on youth gardening. Additionally, in studies that did include the population's race or ethnicity, the largest represented group was Caucasian (study populations included both gardeners, program leaders, and other stakeholders, depending on the specific study). This is interesting to note because inner-city settings (such as those in Cleveland) where lots of agriculture takes place are presumably largely minority neighborhoods. Draper and Freedman do not say, however, that the populations of focus in existing research are necessarily representative of all gardening programs.

Methodologies of studies also tended to vary. Many of these studies (49%) used qualitative methods to analyze community gardens. Even though many others used quantitative (40%) or mixed (11%) methods, Draper and Freedman found that the rigor of the quantitative analysis was fairly limited in scope and thus presents an area for expansion in community gardening research. In addition to the qualitative or quantitative

focus there were four main methods of experimentation or data collection. The two largest (in total 85% of the studies) were case studies and intervention. A case study was referred to as an in-depth analysis of an entire or single component of a community garden or group of community gardens, presenting a method for a very broad range of analyses. An intervention is much different, involving manipulation of a specific variable and then evaluating changes. The other two categories of methods found were cross-sectional (specifically surveying teachers and principals to see why they wanted to start gardens in schools) and reviews (looking at patterns and themes in the research).

Draper and Freedman found that generally the community garden research showed positive outcomes on a variety of variables studied. In terms of youth gardening programs, a large area of study (about 20 studies in total focused on youth), community gardens were found to have positive impacts on the following: knowledge about nutrition, access to fresh food, consumption of produce, physical activity, academic success (especially in science and environment topics), and social development. Health outcomes, another popular research topic, were also positive. Gardeners expressed higher physical, emotional, and mental health (four studies), and gardeners were found to have increased fruit and vegetable intake (eleven studies). One study even found improved fruit and vegetable intake for the entire family of the gardener.

There were also a number of overall social benefits to community gardening found in research results. Community gardens ended up putting together people who normally would not interact with one another, allowing collective efforts to sustain a garden. For example, five studies documented struggles of gardens to secure land rights for the gardening space. Gardens were also a place to gather to address larger community

needs, as they were a place to build social capital (ten studies). Community gardening was also found in three studies to satisfy many different needs or desires of community members, including getting access to good food, spending time in nature, improving health, socializing, giving back to the community, and showing support for community green space. I would like to note that, interestingly, none of the articles specifically evaluated many justice and democracy aspects of a community, such as to what extent the community garden was improving food security or to what extent the community garden was involving all members of the community, especially poor or marginalized groups.

While only certain topics were discussed in published results, Draper and Freedman also catalogued various themes that articles mentioned (but not necessarily studied) in terms of purposes, benefits, and motivations for community gardens in the United States (see Table 3.1). These broaden the scope of health, economic, environmental, and social benefits of community gardens:

Table 3.1 Summary of Motivations Behind Community Gardening (Draper & Freedman, 2010)

Theme	Percentage of Articles in Which Theme is Mentioned
Health	50%
Food source/food security	25%
Economic development	over 20%
Youth education/development/employment	over 50%
Use/preservation of open space	20%
Crime prevention	20%
Neighborhood beautification	16%
Leisure/outdoor recreation	15%
Cultural preservation/expression	13%
Social interaction/cultivation of relationships	67%
Community organization/empowerment/mobilization	25%

Unlike the topics of study, motivations that are mentioned *do* include justice and democracy themes such as food security (mentioned in 25% of the articles), economic development (over 20%), social interaction (67%), and community organization/empowerment/mobilization (25%). The fact that such a high percentage of articles mention such topics suggest that it would be valuable to study these aspects of urban agriculture and see whether these things are in reality tangible benefits and important to gardeners and farmers. Another interesting gap in the research is that many people are not talking specifically about macro-scale problems in the industrial food system and how having a community garden can move away from this type of agriculture (for example by using organic growing methods). Articles are also not mentioning the larger environmental problems that our globe is facing today as reasons for starting up gardens. Other articles outside of Draper and Freedman's literature review mention this as an important reason for engaging in community gardening (for example, Flachs, 2010).

I have noted that there have been a number of gaps which Draper and Freedman do not mention themselves. However, they do note the importance of studies that will "determine best practices for forming and sustaining community gardens with diverse populations and in diverse settings" (488). This is an important gap, because the majority of community garden research appears to focus on simply a few things (Caucasian groups, youth groups, health) which are not necessarily representative of the entire community garden spectrum in the United States. By expanding the research to more "diverse" populations and settings, more studies can (and I would also say should) be done on minority groups, impoverished groups, and inner-city groups, and the effects that

community gardening has on things like community empowerment, food security, inclusion, economic well-being, and environmental improvement. Part of this diversity would also be in types of projects. Draper and Freedman's literature review focuses only on community gardens, which even when broadly defined does not include all types of urban agriculture. One might find additional results if more project types were studied.

While there are a number of gaps or areas for expansion existing in the current research on community gardens, there is still clearly a wide variety of research that has already been completed. Draper and Freedman nicely sum up implications for practice based upon these results:

> Considering the breadth of community deficits and assets that community gardens are shown to simultaneously address and highlight, community-based practitioners may use this as a tool to fulfill multiple goals within a given community (e.g., economic development, food security, leisure and recreation). Moreover, community gardens may be implemented with any community population, ranging from prisoners to nursing home residents to students and more. An advantage of using this versus other interventions is that community gardens can be formed and easily manipulated based on the needs, abilities, and interests of a specific population. (p. 487)

Thus, community gardens are a way to achieve a variety of goals within a community including social, political, economic, and environmental goals. This becomes more and more apparent as research is released that shows the benefits of community gardening, providing incentive for more communities to adopt local community agriculture projects.

3.2 Three Examples of City-Level Evaluations

3.2.1 Burlington, Vermont

One particularly interesting article that was part of Draper and Freedman's literature review was Thomas Macias' (2008) study on local food production in

Burlington, Vermont. He compared three different types of local food production in the city to see if there was a relationship between the type of program and its effect on the local population. Macias' rationale for the research was that often it appears that local agriculture projects, while in theory are supposed to help all members of the community, tend to benefit the wealthier, less discriminated against populations. This is one of the reasons that I also became interested in examining urban agriculture projects in Cleveland.

Macias measured the effects of different types of local food production on the community by using three sociological concepts which he notes are "crucial to an understanding of the relationship between agriculture and local communities" (p. 1087). While Macias says that these are all related to social impact, I would like to emphasize that they also are related to a more holistic understanding of sustainable development by relating to environmental, political, and economic impacts. The three concepts are detailed as follows (p. 1088-91):

1. *Food equity* refers to equal access to healthy, fresh, and nutritious food. This includes physical access, like living in a neighborhood with a grocery store. However, financial means also plays a very large role as many families may not be able to afford fresh produce (which is more expensive than fast food) or they might not have time to prepare healthy meals because of long working hours. Race, gender, and socioeconomic status play large roles in this inequality, as poorer minority groups often live in food deserts or need to take extra jobs to make enough money for their family to live. Thus food equity can indicate that a community is improving socially and economically.

2. *Social integration* refers to the extent to which various groups can participate in a specific activity or society as a whole, a very important aspect of making a society more democratic. It emphasizes being not just inclusive but also participatory, encouraging social interaction among individuals in the community. Macias notes that societies have become more socially isolated with lower levels of participation in voluntary associations and civic engagement. What he wants to know is if the local food movement allows for more social integration- or is mainly a white, well-educated, and wealthy movement? (There could be a similar case in Cleveland's local food production systems.) If the local food movement tends to be the latter, then, while it may have many good qualities, it is not necessarily just.
3. *Natural human capital* is a concept which Macias uses in an attempt to combine main aspects of human capital and natural capital. It refers to an individual's knowledge of and appreciation for the natural world and more specifically the act of increasing this knowledge. A large part of increasing human natural capital is realizing human's dependency on natural world for survival. Macias cites Constanza's 1997 study in *Nature* which puts the prices of 17 essential ecosystem services at an annual cost of about $35 trillion, currently not factored in to the economic system, as a reason for the importance of human natural capital. Natural human capital is also about realizing that people are gradually losing access to nature, but even that loss is unequally distributed. Thus, measuring natural human capital can show how a community is developing socially, economically, and environmentally. Moreover, what Macias does not include is

that the increase in human natural capital can move further into economic and political arenas as citizens "vote" (either in elections of with their dollar) for a more just, equitable, and sustainable food system. This is a potential important impact of community garden systems.

According to Macias, a project with a high social impact would score highly on all three of these concepts.

In order to test which type of local food production was best at improving food equity, social integration, and natural human capital, Macias used projects in Burlington that are part of Intervale. This is a 700 acre green space located in the city which holds many sustainable agriculture projects. It is managed in part by the Intervale Foundation, a non-profit focused on promoting sustainable agriculture as a way to "mend the social fabric" in the local community (1091). Intervale holds a total of eleven organic farms that produce 500,000 pounds of food a year for local market, 6% of the total produce for the city of Burlington (p. 1092).

Macias used the 2006 growing season to collect data, doing a forty question, semi-structured interview with four CSA[3] farmers (Burlington Community Farm), four partners in a direct-market organic farm (Riverside Organic Farm), and four community garden site coordinators (Intervale Community Garden). In addition to these in-depth surveys, Macias attended a Northeast Organic Farming Association meeting, made observations at two local farmers' markets, and was a member of a community garden in the area. All of the data compiled was used to evaluate whether each type of project

[3] CSA, or *community supported agriculture*, is a system of local food production and distribution. Individual families pay a seasonal fee to become a "shareholder" at a farm. In exchange for this payment the individual or family receives produce from the farm throughout the season, usually in weekly deliveries (Flachs, 2010).

scored low, moderate, mixed, or high in the three metrics for measuring the effects of each project on the local community. What Macias ended up discovering was that there was a wide variety of low and high positive effects on the local community. His findings suggest that some types of projects (or types of urban agriculture programs) can better develop the community (and do so in a more sustainable, just, and democratic way) than others.

Burlington Community Farm, one of the three CSAs located at Intervale, has 500 household shareholders who pay on average a $400 season fee. Like other CSAs there is a weekly produce delivery. Shareholders also have the opportunity to visit the farm to get their produce and even harvest it for themselves, which can help foster human natural capital. Burlington Community Farm CSA was started by a group of "community activists and interested citizens who wished to promote local agriculture" (p. 1092). The founders and shareholders tend to be environmentally conscious, educated community members with an average college graduation rate of over 90%, over twice that of the average graduation rate for Burlington as a whole. Shareholders advertise to their friends about the CSA by word-of-mouth and thus the social integration is limited to the wealthier, highly educated population. The same goes for food equity; food access is only extended to those who can afford the CSA season fee (a large upfront cost) and who hear about it through the grapevine.

Intervale Community Garden, one of the eight community gardens at Intervale, has 165 25-by-30 foot plots which gardeners can rent for $52 per year. Six site coordinators are in charge to keep the six sections of the garden in order. The Intervale Community Garden serves as a lower cost but higher time commitment option compared

to the CSA, meaning that people who are poorer may be able to afford the annual fee but not have the time for plot upkeep. It is also requires time and money to commute to the garden as the nearest residential area is a half mile away. Nonetheless, the community garden seems to be more representative of the local population than the CSA as about 40% of the gardeners are college graduates, implying higher levels of social integration. The community garden has had vandalism and theft problems, and there are anecdotal stories of poor people feeling left out of the garden, meaning that it may not be perfect at achieving full social integration. According to Macias' interviews, however, some try to make up for it by donating food to local food pantries, improving food equity in the community. Thus, community gardens, which tend to be more representative of the local population, have a wider positive impact on the community.

Riverside Organic Farm is one of five organic market farms at Intervale. It was started by four partners, most of whom had no prior farming experience. All four founding partners came from suburban, middle-class backgrounds and note that their decision to start a farm was more about activism and less about farming itself. They also note that they are less focused on promoting community participation than taking a stand against corporate agriculture. Yet, they reach high levels of social integration because they sell produce at farmers markets that reach a wide range of people. They sell at the Saturday market downtown and Tuesday market in a "more ethnically diverse working-class neighborhood" which has a subsidized purchase option and is a venue to sell produce used in a variety of cultures represented in the area (p. 1096). The distribution at this market is important for increasing food equity. There is less of a social element on the farm than in the CSA or community garden, which means that the role Riverside

Organic Farm plays in increasing human natural capital in the local population is fairly low (even if the four founders may be increasing their own human natural capital). So, while the market farm might do reasonably well at improving food equity and social integration by its work at local farmers markets, it still is not as strong as a community garden which can also improve human natural capital.

A great summary chart of Macias' results and discussion can be found below (p. 1097):

Table 3.2 Summary of Social Impact of Three Burlington Programs (Macias, 2008)

Modes of Local Agriculture	Food Equity	Social Integration	Natural Human Capital
Community gardening	Moderate: Low cost of entry encourages broad participation; high time commitment discourages people with multiple jobs and/or children	High: Includes a wide range of participants who share tools and responsibilities; relationships are fostered gradually over time	High: Gardeners learn from each other and from direct experience how to grow their own food
Community-supported agriculture	Low: High cost of entry and word-of-mouth recruitment strategies discourage diverse participation	Mixed: Weekly on-site pick-up days promote member interaction; members tend to share a common highly educated, social background	Moderate: Many parents see the CSA pick-up days as a way of teaching their children where their food comes from
Organic market farm	Mixed: Restaurant and high-end grocery markets serve mainly higher-income clientele; farmers' markets reach a diverse population	High: Community participation is not part of its mission; however, a regular presence at two farmers' markets assures local interaction	Low: Customers do not visit the farm and product information is shared mainly at the market

Macias' study is a great example of how to holistically evaluate a local food system. There is value in seeing how different types of projects compare to one another and how they each have their own strengths. A potential challenge is that the three

metrics Macias uses (food equity, social, integration, and natural human capital) can be very hard things to measure. I also think there are additional aspects of sustainable development which could be included in an even more holistic evaluation. These could be specific, measurable factors, which might indicate various levels of sustainable development. Some examples would be: "Who does the food in the garden go to?" as an indication of food equity or "What types of local community members are involved?" as an indication of social integration. Such questions are ones I employ in my study.

3.2.2 Cleveland, Ohio

Andrew Flachs (2010) presents a case study of Cleveland's urban agriculture that overlaps in a number of ways with Macias' case study of Burlington. Flachs catalogued four different types of projects, each as an example of a different garden type (individual plot, communal plot, CSA, and outreach), to examine various social impacts of agricultural projects in the greater Cleveland area. He used a combination of in-depth interviews with garden stakeholders (including gardeners and staff members) and site observation to determine motivation for and impacts of the garden on the various gardeners.

The first garden that Flachs studied was the Kentucky Garden, an individual plot community garden. Located at West 38th Street and Franklin Boulevard, community members can rent individual plots for a $5-$20 annual fee depending on plot size. In exchange for the annual fee and adherence to garden rules, the gardeners have open access to plant starts, tools, water, compost, and other gardening materials. Flachs found that the Kentucky Garden has a positive social impact as it "provides a space for

socialization and nurtures personal development" (p. 5). More specifically, it is a space for experienced gardeners to share and teach new gardeners regardless of background. It also is a place that helps people feel they are productive members of the community in part because of their ability to improve access to healthy, nutritional, and fresh food. Thus, the Kentucky Garden had positive impacts on community building, environmental awareness, and food security. These would be considered positive aspects in the realm of sustainable development. These findings are also consistent with what Macias found in studying the Intervale Community Garden in Burlington, supporting the idea that community gardens may be the best form or local agriculture to foster community development.

Flachs examined the second garden type, a CSA, using the City Fresh program. City Fresh is part of the New Agrarian Center, a non-profit organization whose goal is to "promote environmental sustainability and reduce food insecurity in Northeast Ohio" (p. 5). City Fresh runs a CSA in which individuals or families pay a seasonal fee for a weekly share of produce from local farms. Shareholders that are below a certain income level only have to pay half price for a share; in this way City Fresh works to increase access to fresh produce for all income groups. Flachs found that the City Fresh workers and volunteers tended to be women of color with a wide background of ethnicities, religions, and socioeconomic status. However, the shareholders (who came each week to pick up produce at designated drop-off points) tended to be Caucasian, middle class women or the "Whole Foods" type of shopper (p. 6). Despite the demographic of shareholder, Flachs emphasizes that City Fresh does increase access to affordable food for a number of Cleveland residents. In fact, City Fresh produce was significantly

cheaper compared to produce at a local IGA grocery store. Thus, City Fresh was a way for a variety of community residents to work together to improve overall food security in the area but it is unclear to what extent this improvement is occurring. Flachs does not state, for example, the number of shareholders who are paying half price in comparison to the number of total shareholders.

Flachs chose George Jones Memorial Farm (GJMF), a seventy acre farm with three acres of intensive food production, as his communal plot example. GJMF is subsidized by the nearby Oberlin College and is run mainly by volunteers and student interns. This farm is based upon the principles of permaculture[4] and wants to encourage a whole new "utopian" way of living (p. 6). Because of the nature of the site, it is a very educational environment with many students, camps, workshops, and visitors. Flachs found that the educational aspect helps foster the mindset that sustainable agriculture can help combat climate change and global food insecurity, and thus was having a significant social impact on farm workers and visitors. While the farm staff is mainly white, visitors and volunteers come from more diverse backgrounds. So, it appears that GJMF is a helpful tool in educating the community in sustainable agriculture practices and fostering a sense of environmentalism. Flachs does not comment, however, on aspects such as who the food goes to (and thus how it impacts food security).

The last type of garden Flachs studied was an outreach garden, in this case for a homeless shelter. The 2100 Lakeside Men's Shelter Garden is a site for men in Ohio's largest homeless shelter to garden either for fun or to fulfill work requirements. Flachs found that many men enjoyed working in the garden because of their desire to work

[4] According to the Permaculture Institute, *permaculture*, or permanent agriculture, is an "ecological design system for sustainability" that focuses on designing spaces for living and producing food that make use of beneficial relationships that exist between all types of living things (2013).

outside and experience nature, stay active, and have a sense of purpose (environmental and social benefits). Sometimes men could also receive compensation or job training by working at the garden (economic benefits). Thus, the garden had a positive impact on the shelter residents. Another question to ask would be (just as for GJMF), "Do the homeless residents get to eat the garden produce?" In this case it would improve food access for this population.

Once again, I want to emphasize that Flachs found positive social impacts for the individuals involved in all four projects. However, the variety of social impacts is notable, ranging from improving access to affordable produce to spending time outside to fostering a desire to combat climate change. This shows that gardening and farming can serve a variety of uses all at once that can positively impact the community, just as Draper and Freedman (2010) conclude in their own review. Going back to Macias' terms, each garden type appeared to have varying impacts on food equity, social integration, and human natural capital. It may have been helpful if Flachs used more specific evaluation criteria in his study so we could specifically see areas of social impact that were succeeding or failing. Overall, he seems to talk more about perceived benefits than benefits confirmed by empirical observation or measurement. If one could expand the analysis to a look also at objective aspects of sustainable development, there would be increased ways to evaluate these urban agriculture projects.

It appears that community involvement was also significant but all in different ways due to the nature of the program. The CSA tended to impact more affluent, white individuals while a project such as the homeless shelter impacted poor individuals. Nonetheless, a strong community involvement in each program might play a role in the

success of the program. As Flachs notes and I would like to emphasize, these examples of gardens show how gardens can link community organizers with socially conscious people to improve the local environment (socially, economically, and ecologically).

3.2.3 Milwaukee, Wisconsin

Michael Broadway (2009) provides a helpful third city case study by looking at another Rust Belt city: Milwaukee, Wisconsin. He studies three major projects, as well as a few minor ones, that have arisen out of the urban agriculture movement, identifying their key features and major challenges. Broadway's article differs from Macias' and Flachs' because it is much more descriptive rather than critical or analytical. Nonetheless, his study is useful because perhaps some of Broadway's observations in Milwaukee are similar to what one would observe in Cleveland.

The first program that Broadway profiles is Growing Power, a national non-profit organization that runs a two-acre farm in the city. This farm was founded by Will Allen, who has now won many prestigious awards, including awards from the Ford Foundation and the MacArthur "Genius" award. Together with his 35 employees and many volunteers, he has created a fully-equipped farm that includes six greenhouses and eight hoop houses. In addition to fruits and vegetables, Growing Power has chickens for eggs, turkeys, ducks, goats, and an aquaponics unit (for tilapia, perch, watercress, and sprouts). At the time the article was written, they were even looking for a way to expand their aquaponics system to grow up to 100,000 fish and $50,000 in greens and herbs per year. Growing Power sells their food to commercial restaurants and public schools. In addition, they have weekly market baskets in the summer that includes food from Merton

Farm (one of Growing Power's rural farms) and from the Rainbow Farmers Cooperative. Another small source of income is weekly farm tours (run by donation) and, of course, Growing Power is able to save a large amount of money with the extensive volunteer base.

The second major program that Broadway profiles is the Milwaukee Urban Gardens (MUG) system. Like Growing Power, it is a non-profit organization. Broadway says that the goals of MUG are "to acquire land and work with community groups to preserve, develop, and maintain community gardens" (p. 26). Hence, as of 2009 they helped with nine community gardens, four of which are in the predominantly black and poor Harambee neighborhood, an area which is dotted with vacant lots. All of the MUG gardens are less than a half acre and must go through a two-part evaluation process to be implemented. First, both the MUG and the City Development Office must approve the community's proposal for a garden. Then, the City of Milwaukee grants leases to MUG to create the garden. MUG clearly believes "the impetus for creating community gardens must come from the community; gardens cannot be created by outsiders" and thus all of their projects are community-driven initiatives (p. 27). In addition to the community gardens, MUG has administered "Grow Your Own Groceries" workshops and has seen a neighborhood watch group come to being out of one of their gardens. According to Broadway's visual inspection of the gardens in July 2009, all but one seemed to be "flourishing."

The last major urban agriculture project detailed by Broadway is the University of Wisconsin Extension Milwaukee County program. The extension service operates seven community gardens which all have 400 square foot plots for people to rent for an annual

fee of $20-$25 and compliance with a number of garden rules. This is the largest community garden program in the city. Gardens vary in quality; some are flourishing, some abandoned, some heavily fenced for protection. One example of a successful extension service garden is Alice's Garden. Gardening workshops are held at this site and a variety of people tend to the plots, including local youth groups and the large Hmong immigrant population nearby. An interesting connection to Alice's Garden and the Hmong population is the Fondy Farmers Market, which was started in 2000 "with the goal of providing inner-city residents with access to locally produced fresh fruits and vegetables" (p. 28). This market is open six days a week, May through November, and provides an outlet for thirty local "small family farmers" (including the Hmong of Alice's Garden) to sell produce.

Broadway mentions two final urban agriculture projects in Milwaukee. The first is the Walnut Way Conservation Corps, which was founded in 2000 "to promote civic engagement, economic enterprise, and environmental stewardship" (p. 28). They work to turn vacant lots into gardens, employ teenagers via the Gardens to Market program, and have an apiary. As of 2009 they were also fundraising for vegetable processing and storage equipment as well as more education programs. The other program Broadway mentions is the Victory Garden initiative in the nearby Shorewood suburb. This group of 150 "loosely affiliated members" uses backyards, front yards, rooftops, and patios to "move grass and grow food" (p. 28). One person even started a rooftop CSA.

It is interesting to note the variety in Milwaukee's urban agriculture programs. It has nationally known organizations, university extension services, community non-profit organizations, the local government, neighborhood associations, and informally-tied-

together individuals all working on various urban gardening projects. Such variety suggests that a variety of people are participating. Broadway seems base his opinions on the overall "success" of each program and which programs he thinks are the best only on simple visual inspections. Based upon his descriptions, however, it appears that urban agriculture is helping improve the community in a number of ways. For example, they are an outlet to increase local food security by providing food for low-income residents and local schools. They also create a space for recent immigrants (such as the Hmong) to grow food.

I think that Broadway provides a nice description of these programs that warrants more of an evaluation of each project. MUG stands out as an organization that clearly focuses on community-driven projects and appears to be successful at helping foster urban agriculture in impoverished neighborhoods (namely the Harambee neighborhood). Shorewood also appears to be successful, although in presumably a much different type of neighborhood than where MUG operates because Shorewood is the suburbs. While Growing Power seems like a very successful initiative (indicated by the large infrastructure, staff, and desire to expand), it certainly seems different than other urban agriculture programs in Milwaukee. This program has a very charismatic and famous leader (Will Allen) and has been able to gain national attention for its program. It would be interesting to see how much local community involvement Growing Power farm has (it definitely holds a large volunteer base).

3.3 Two Examples of Regional-Level Evaluations

Now that I have looked at examples of three city-wide evaluations of urban agriculture projects, I will briefly highlight two examples of studies of regional scale development programs that have urban agriculture components. In Joan Twiss et al.'s (2003) study, the researchers present important lessons learned from the California Healthy Cities and Communities (CHCC) program, which started in 1988 to help communities with "developing, implementing, and evaluating programs, policies, and plans that address the environmental, social, and economic determinants of health" (p. 1435). Since its founding, it has helped over 65 communities, a number of which have started community gardens as part of this program, showing the importance of community gardens in community development.

The communities that received grants and technical assistance for CHCC were predominantly white areas even though they did have minority residents. However, Twiss et al. do not detail specifically which members of the community were involved in the garden's implementation process and how community-driven or inclusive that process was. Nonetheless, they do state three key elements for success as seen by the communities that received community gardens. The first element is local leadership and staffing, showing the importance of involving the community in the community garden. The second is volunteers and community partners, who can contribute the important resources of time, expertise, experience, and money. The third element is skill-building opportunities that help sustain "garden momentum" including gardening, leadership, community organizing, cultural competency, implementation, and evaluation workshops. To me this suggests that these programs can help improve the capacity of the community

and thus gardens can be tools for improving communities (especially if they are facilitated by the community members themselves). Twiss et al.'s study, however, does not provide specific metrics for *how* the community was improved like Macias (2008) does to evaluate Intervale; she just includes factors that help make a community garden "successful" without defining what success is.

Another similar region-wide program was studied by Ohmer et. al (2009). The Community Conservation Program (CCP), established in 1982, works to start community gardens in Western Pennsylvania in order to connect people in urban centers with nature. The goal is to engage people in creating "vibrant" neighborhoods by making valuable community assets and encouraging volunteerism, connections, & conservation (p. 384). Since their founding, CCP has completed 170 greening projects. The goal of Ohmer et. al's study was to look at a broad group of stakeholders in the community gardens that CCP has created and see what they believed were the primary outcomes of the program. This information could, in turn, be used to improve community gardens in the area. This presents a different style of methods for evaluating a community garden than other studies I have been looking at, because it asks the stakeholders themselves what *they* think success is rather than using a pre-determined notion of success.

The researchers conducted in-depth interviews with 48 garden volunteers, community partners, and funders. Additionally, written surveys with both quantitative and qualitative questions were distributed to many other volunteers, community partners, and funders. These interviews and surveys asked questions about what stakeholders thought about a number of concepts including motivation, volunteerism, conservation mindset, and sense of community.

The authors found that the gardeners in these communities were mainly white females. They saw that overall, gardening "somewhat" increased the conservation mindset and sense of community. However, respondents did strongly agree the community garden was a positive impact on the community. What I am wondering, though, is in what way did the community garden have a positive impact? For whom did it have a positive impact? Was this positive impact distributed equally? The researchers also found that the more a volunteer was involved, the more likely they were motivated, had a higher conservation ethic, and had a higher sense of volunteerism. It is unclear, however, which members of the community this was and thus it was unclear which members of the community the garden was best benefiting. I would presume that those benefiting were the white females who were the main gardener population, and so it is not clear whether it the community gardens were benefiting the community at large.

3.4 Strengths and Omissions in the Literature

Now that we have looked at a number articles on urban agriculture programs in different cities, I would like to take a step back and see how these articles are helpful. As we have seen, urban agriculture has many potential positive benefits for communities. These benefits can make for more sustainable, just, and democratic communities. I think that all articles provide good starting points for evaluating impacts of urban agriculture programs on communities, and all touch on a number of social, economic, and environmental impacts. It is helpful when researchers provide specific tools for measurement in their methods (Macias, 2008) rather than having very open-ended or undefined notions of impact or success (Flachs, 2010; Broadway, 2009; Twiss et. al,

2003; Ohmer et. al, 2009). When the researcher defines what he or she is evaluating it becomes much easier to judge the program (as I hope to do in my evaluation of Cleveland's urban agriculture).

There are a few major omissions from the majority of the research presented that I think are important to note (see Table 3.3). The first omission is the extent to which each urban agriculture program is using organic methods. Using organic or other noted methods of sustainable agriculture can be an important indicator of what the garden or farm is doing to prevent further environmental harm and degradation that much of agriculture is responsible for. The second gap refers to the methodology of projects: the above studies focus on one project, a few projects, or a single organization. There could be value in looking across an entire city with more than just a few case studies so that one can see larger trends and better understand what variety exists (or does not exist) and why. The third omission refers to a lack of evaluation of the extent to which programs involve the community. All do mention which communities are involved, but not (with the exception of Macias, 2008) who founded the garden, who is largely in charge of operating it, which community members participate, and if that is representative of the local community. A more in-depth examination of the grassroots and participatory nature of the program might be helpful in examining if the local community takes ownership of the garden and to what extent they reap garden benefits. The fourth gap is that few studies look at the extent to which justice, such as improving food security, might be important to urban agriculture. The last gap is that these articles are all addressing benefits of urban agriculture. Yet surely there must also be some negative effects or at the very least some challenges. Taking a critical lens could be very useful for seeing in

which ways the urban agriculture movement could improve. Related to this idea would be creating some sort of metric by which to judge the gardens and farms rather than an undefined judgment system as is seen in many existing studies.

Table 3.3 Summary of Literature Review

Study	Location	Methods	Results	Drawbacks & Omissions of interest
Draper & Freedman 2010	U.S.	Literature review of 55 studies	Community garden research focuses on youth, health, urban Caucasian population, & qualitative methods	Focuses only on community gardening, not many studies that focus on justice or democracy
Macias 2008	Burlington, VT	Measured three different projects' social impact through interviews and participant observation	All project types receive mixed scores; each project type shows its own strengths in creating social impact	Specific measures of social impact hard to measure, only three projects included in study
Flachs 2010	Cleveland, OH	Participant observation and interviews at four different project sites	Gardens serve a variety of uses including personal, communal, environmental, and agricultural and may have positive community impacts	Positive impact (what it is) is undefined, only four projects included in study
Broadway 2009	Milwaukee, WI	Descriptions of multiple project sites	Milwaukee has a variety of urban agriculture projects that appear to be flourishing	Descriptive rather than evaluative, only five projects included in study
Twiss et al. 2003	CA	Descriptions of project sites	The gardens potentially have a variety of benefits; potential elements for success are provided	Positive impact (what it is and for whom) is undefined
Ohmer et al. 2009	PA	Interviews and surveys of gardeners and project partners	Gardens help revitalize neighborhoods, improve sense of community and volunteerism, & impact conservation behavior and beliefs of gardeners	Positive impact (what it is and for whom) is undefined

IV. THEORY

Introduction

In this chapter I will describe the theory that underlies my research questions and analysis: the theory of sustainability and its connections to justice and democracy (encompassed in the term sustainable development), and how sustainable development can succeed through grassroots implementation. I will first outline a brief history of the contemporary sustainability movement in the United States. I will then lay out the traditional three-legged stool model of sustainability. After explaining the traditional stool, I will present an alternative three-legged stool framework that comes out of the discourse on development. This stool includes notions of social justice and democratic, grassroots participation, or a stool more fitting with sustainable development. I will spend the remaining portion of the chapter flushing out these concepts in depth with the help of a number of theorists. Finally, I conclude with how these theories can apply to the agricultural and urban contexts of my own research.

4.1 Defining Sustainability: Historical Context

Principles of sustainability are not new. They have, in fact, been supported by many individuals and communities for thousands of years. Late 18th century population theorist Thomas Malthus, 19th century conservationist John Muir, and early 20th century agriculturalist Sir Albert Howard are a few examples of early environmental scholars. The birth of the contemporary environmental movement, including the development of the term sustainability, however, did not take root until the middle of the 20th century.

Writers such as Aldo Leopold (who coined the term land ethic), Rachel Carson (whose *Silent Spring* catalogued how humans destroy nature through pesticide use), and Garrett Hardin (who wrote of the tragedy of the commons) are examples of trailblazers in this contemporary environmental movement.

Probably the most well-known attempt to define sustainability arose from the international sphere, when in 1983 the UN General Assembly formed the World Commission of the Environment and Development (WCED). Headed by Gro Harlem Brundtland of Norway, the WCED is more commonly known as the Brundtland Commission. *Our Common Future*, which became known as the Brundtland Report, is the defining publication of the Brundtland Commission. The famous part of the report is the most-quoted definition of sustainability: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 41). The report, however, is much more in-depth at fleshing out exactly what sustainability means. This becomes apparent to anyone who looks at the full document instead of simply its most quoted sentence, seeing that the Brundtland Commission also meant for sustainable development to include ideas of limits, poverty, inequality, and how to enact change (Dresner, 2002, p. 35).

According to scholars today, who might find such ideas obvious, this description provided a new direction for the sustainability movement: the report "implied an important shift away from the traditional, conservation-based usage of the concept...to a framework that emphasized the social, economic and political context of "development'" (Agyeman et al, 2003, p. 5). As noted by Dresner (2002), the report did say that environmental problems are caused by powerful and wealthy nations, disproportionately

affect the poor, and that even the poor can be environmentally destructive in their strategies for survival (p. 36). In this way, Dresner says the Brundtland Report had an important role in preventing institutions from denying the importance of environmental issues:

> After Brundtland, few governments continued to dismiss environmental concern as merely a Western or 'bourgeois' luxury. By emphasizing the connections between the environmental and more traditional concerns with economic development, the Brundtland Report forced governments and international agencies such as the World Bank to begin to think and talk about the issues. (p. 39).

Despite the progressive ideologies present in the Brundtland Report, it also had a fundamental problem: it was "faced with was how to reconcile concern for environmental protection with the desire for economic development in the South and economic growth in the North" (Dresner, 2002, p. 35). This tension ultimately caused a number of shortcomings. Yes, it did acknowledge the link between poverty and environmental problems. However, this acknowledgement was more in the description of the problem than the proposed solutions. The report advocated for economic growth as a way to end poverty, but Dresner emphasizes that it did so in an inconsistent way because the growth being advocated for was not one that would fit within the physical limits of nature. It does not mention anything about lifestyle changes or reduction of consumption. The ultimate shortcoming of the Brundtland Report, then, is this: "It is this seeming desire of the Brundtland Commission to tell people they could have everything they wanted and that nobody would have to make sacrifices that explains both its political popularity for squaring a circle and the suspicion it is viewed with by the more skeptical" (Dresner, 2002, p. 39).

Dresner goes on to note that the Brundtland Report therefore represents an example of a sustainable development document that falls into the trap of being more focused on development or growth than on environmental sustainability (Dresner, 2002, p. 71). In the model of sustainable development presented by my research, I will build upon the links between sustainability and development that were included in the Brundtland Report. This includes a re-framing of sustainability that moves toward sustainable development (i.e., inclusive of justice and democracy) by borrowing ideas from more recent sustainability and development scholars. To start off, I will look at the different aspects of traditional sustainability models.

4.2 Three Components of Sustainability: The Three-Legged Stool

A traditional notion of sustainability is often described as having three important components. A useful framework is by imagining each as a leg of a three-legged wooden stool (see Figure 4.1). If one leg is missing or weak, the chair will fall over or break, representing the interdependence of the three components and the necessity for all components to be present and strong for sustainability (the seat of the stool) to function properly. Some proponents of sustainability (such as in the business world) refer to this model as the triple-bottom line approach or the nested components of sustainability (see, for example, Elkington, 1998).

Figure 4.1 The Three-Legged Stool of Sustainability (n.d)

The environmental component is perhaps the most common criterion that people think of when they hear the word sustainability. The environmental leg of the stool refers, in the simplest sense, to respect for the environment, which translates to the idea that humans must function within the physical limits of nature. This means that social and economic systems must be structured in ways that do not destroy nature, but instead sustain "life-support systems" such as energy, water, atmosphere, and soil (Khalili, 2011, p. 7). Working within the limits of nature requires limiting consumption of natural resources and reducing pollution through more environmentally sound production and waste management practices (Khalili, 2011, p. 7; Agyeman, 1998, p. 15).

The environmental leg can also extend to ideas of protecting or promoting nature and its diversity rather than simply working not to harm it (Agyeman, 1998, p. 15). Underlying this attitude is the understanding of interdependence between all creatures in nature and the need for diversity to maintain stable and healthy ecosystems (Shiva, 2003). Examples of environmentally sustainable practices that value interdependence include

adopting organic forms of agriculture, using renewable energy sources, reducing human population growth, and creating nature preserves. The approach to these environmentally sound practices can differ depending on an anthropocentric or ecocentric worldview, as will be discussed later in the chapter.

But we cannot just stop with an environmental leg. Ikerd (2008) explains why we need to include other legs:

> Humans are unique among species in that we make purposeful, deliberate decisions that can either enhance or degrade the health of the ecosystems of which we are a part. Thus, any question of sustainability must take into account the purposeful, conscious nature of individual and collective human actions, which are driven by economic and social motives of people. (p. 96-7)

The second leg of the stool, representing economics, is therefore another vital component . Sometimes it is over-emphasized by proponents of growth and development, such as in the Brundtland Report. The most basic definition of the economic leg describes it in terms of human-made capital: that it should be maintained in a way that it does not reduce over time (Khalili, 2011, p. 7).

More radical forms of economic sustainability look beyond simple notions of capital. Such definitions emphasize that people need to make a living, even within an environmentally sound system (Kuyvenhoven & Ruben, 2002, p. 59). Some will argue that these livelihoods should even be satisfying and rewarding (Agyeman, 1998, p. 15). In other words, the economic leg could be seen as the leg that represents sustainable livelihoods for all individuals. Lastly a sustainable economy is one that serves not just the individual and the environment, but the community at large which according to Daly and Cobb (1989) is achieved by becoming self-sufficient (p. 268). In these local

economies, profit is not the goal. Supporting communities, the individuals in those communities, and the dignity of all, are the goals.

The third and final leg, which represents social sustainability, is often the last leg to enter the discourse. Traditionally social sustainability refers to the idea that for systems to sustain themselves forever, there must not just be environmental and economic maintenance, but also social buy-in from the communities. In other words, for sustainability to become a reality, one must consider not just the environment and the economy but also society (McKenzie, 2004, p. 11). The social leg represents structuring programs (such as businesses) in a way that is "consistent with the morals and values of society" (Hutchins & Sutherland, 2008, p. 1689). Inconsistency with society's values means people will revolt and systems will not function. Simply casting the social leg as buy-in, however, is a bit simplistic. Nowadays sustainability proponents say that the social leg is more about the reduction of poverty (Khalili, 2011, p. 7). This is not conflicting with the need for buy-in, as communities with high poverty often are unhappy with their situation and will not see the system that creates the poverty as legitimate. The social leg, in other words, is often concerned with social justice. If societies are not just they cannot be sustained over time socially and environmentally (see for example Agyeman, Bullard, & Evans, 2003) a concept that is very important in my argument for reframing discourse on sustainability and sustainable development.

If we return to the Brundtland Report, we see that environmentally destructive systems disproportionately affect poor people and continue operating not only at the expense of the environment but also the expense of the poor (Dresner, 2002, p. 36). Many will prescribe economic growth in order to reduce poverty. Yet there are issues

with growth being compatible with environmental sustainability, and there are questions about whether or not the economic growth will actually benefit the poor. Therefore, many others advocates for the equitable distribution of resources referring not only to money, but food, water, and housing. Equal distribution could also include non-humans, depending on what the definition of community is. Expanding the meaning of the social leg even more, we could say that it includes creating strong and diverse cultural identities, the promotion of public health, and empowerment of locals (Agyeman, 1998, p. 15).

Table 4.1 Summary of Traditional Three-Legged Stool of Sustainability

Environmental	Economic	Social
• Respect for environment • Sustaining "life-support systems" • Protection of nature's diversity	• Maintenance of capital • Promotion of sustainable livelihoods • Self-sufficient communities	• Matching societal values (social buy-in) • Reduction of poverty • Re-distribution of resources • Social justice

4.3 An Alternative Three-Legged Stool: Wangari Maathai's Model of Sustainable Development

Wangari Maathai, 2004 Nobel Peace Prize winner, offers a new perspective on the three-legged stool in her work *The Challenge for Africa* (2009). This stool is what I would call representative of sustainable *development*. According to Maathai, the first leg, as in the traditional stool, represents the environment. This includes sustainable and accountable management of natural resources, for current and future peoples, in a manner that supports justice and equality. The second and third legs are where the framework differs significantly from the traditional stool: while this was not necessarily Maathai's

intent, here I will interpret Maathai's stool in such a way that "reconfigures" the traditional stool to support a more holistic form of sustainability. In a world of massive poverty and injustice, simply saying we want economic and social components to sustainability is often not enough (even if they might include ideas like poverty reduction). Re-framing sustainability by bringing such issues to the forefront of the discourse is crucial.

The second leg in Maathai's model represents justice. She says justice is created through a culture of peace that supports virtues such as compassion, fairness, and forgiveness. I call the second leg "justice" because it implies an end to societal injustices. The third leg represents democracy. By democracy, Maathai means accountable leadership that respects human and environmental rights. Just as importantly, her definition of democracy includes active citizen participation, or grassroots action, as the driver of development. This idea of grassroots participation is especially crucial, because Maathai says only in this way can the stool become reality: "No nation has developed these three pillars without the people themselves chiseling them" (p. 59). Just as the in the traditional stool, these three legs of environment, justice, and democracy are interdependent, and "the issues must be addressed together and simultaneously" for true sustainable development to be achieved, (p. 57). I will now go on to describe in more detail how the reconfiguration of the second two legs creates a more holistic and synthetic version of sustainability, or sustainable development.

Table 4.2 Summary of Maathai's Three-Legged Stool of Sustainable Development

Environment	Justice	Democracy
• Sustainable and accountable management of natural resources for all peoples	• Creating a culture of peace that supports compassion, fairness, and forgiveness	• Accountable leadership • Grassroots participation

4.4 The Importance of Justice in Sustainable Development

The traditional three-legged stool laid out above can be argued to be too simplistic, especially when it comes to the linking of sustainability with justice. If you have a model of sustainability which supports concepts like reducing resource use, you can no longer choose a growth model to address injustices such as poverty. Indeed, as Haughton argues, this requires "acknowledging the interdependency of social justice, economic well-being and environmental stewardship. The social dimension is critical since the unjust society is unlikely to be sustainable in environmental or economic terms in the long run." (Agyeman et al., 2003, p. 9). Ikerd (2008) echoes this statement in his writings on sustainable agriculture, stating that the belief that a society can be sustainable without justice and equity "ignores fundamental human nature": "Human societies that lack economic equity and social justice are inherently unstable, and thus are not sustainable over time. Such systems will be characterized by recurring social conflicts that can do irreparable damage to both economic and ecological systems that must support them" (p. 98). Other scholars also agree with these statements (see, for example, Agyeman, 2005; Agyeman et al., 2003; Faber, 2008; Lind, 2008).

Thus, systems cannot be sustainable, according to the definition I will be using, if they are not also just. This is why it is important to re-frame one of the legs of the stool

as justice like Maathai does in her stool. While many scholars agree that there needs to be social and economic components to sustainability in theory, it is rarely seen in practice as one that supports justice. Such claims have also been verified empirically by research. For example, Warner (2002) found that only five out of 33 United States city sustainability projects surveyed actually included an environmental justice initiative. A number of academic scholars as well as practicing activists are now trying to address this question, or have written about important social movements that do try to make the sustainability and justice compatible.

Also important to note is that environmental goals alone do not always include what is most just. Andrew Dobson (2003) argues that environmental sustainability does not automatically mean justice, or vice versa. These two "terms are contested and have, therefore, no determinate meanings" (p. 84), and a very specific definition of the two are required whenever discussing or implementing sustainability and justice projects. Other authors have also noted the contested nature of these terms, and emphasize that the confusion of terminology means that the practical applications (such as in forming policy) can be "lacking precision" and thus effectiveness for real change (Agyeman, 2005, p. 12). What is needed, then, are various models that describe exactly how justice comes to be a central component of sustainable development. In the following section I present some attempts at creating these models, as well as specific movements that have fairly successfully integrated both sustainability and justice (which combined with democracy forms sustainable development) into their frameworks. Some are formal theories and some are general commentaries written by specific scholars. For the sake of

comparative analysis, I group the models into a few different categories: calculations-based, international policy critiques, alternative economics, and re-distribution.

4.4.1 Calculations-Based Models: Environmental Space and Ecological Debt

Some of the more basic ways of thinking about justice in the sustainable development context are centered on calculating what a just distribution of resources would look like. The first is the idea of *environmental space*, which is the calculation of how much each individual can consume without causing environmental harm. According to Buhrs (2008), the environmental space concept is based upon two principles: abiding by the precautionary principle to respect ecological limits, and providing equal access to resources for all individuals that fits within those limits (p. 1). The amount of space given to each individual must be enough that one can live with dignity (Agyeman, 2005, p. 12). The value in this approach, Buhrs (2008) says, is that it looks at consumption of resources as a whole rather than as isolated issues (meaning individual resources, communities, or nations), indicating the interdependency among issues. It also provides a clear framework for where things are now and where they need to be in order to be sustainable and just. A theoretical example of an environmental space calculation would be to determine the total resource consumption that Earth can survive and divide that by the total number of humans. One might find, however, that that amount of resources is not enough for each person to live with dignity, in which case it is unclear what would happen.

The environmental space discourse combines with the anti-colonialism movement and Malthusian worries over population to produce the concept of *ecological debt*

(Simms, 2009, p. 88-9). Ecological debt reframes the traditional concept of debt by saying that there is both a financial *and* environmental form of debt. Nature or natural resources become a type of wealth just like money in the environmental form of debt, or ecological debt. Proponents argue that while "poor" nations might be in traditional debt to other nations, industrialized nations have an ecological debt to the rest of the world because they exploited natural resources from the undeveloped nations without paying the environmental cost (Simms, 2009, p. 90). Ecological debt is a way of recognizing the historical injustices against the poor that have been damaging both environmentally and socially and should be repaid by the rich (Agyeman et al, 2003, p. 30-2). Ecological debt thus turns the issue of justice to the perpetrator of wrongdoings and advocates that those perpetrators pay back what they took. How repayment occurs, however, is rather unclear.

4.4.2 Critiques of International Environmental Policy

Environmental space and ecological debt both arose out of the international environmental policy world. The *Global South*, or developing countries which have been exploited by the developed world (also known as the Global North), have also produced useful discourse on sustainable development in response to *international environmental policy* discussions. The South has been especially vocal in response to the various global environmental conferences (usually on climate change) that have been taking place since the Brundtland Report of the 1980s. These conferences have often been dominated by the Global North because they are the countries who have "most of the money and most of the power" and thus control the agenda (Dresner, 2002, p. 47). This power is reflected

in the international climate decisions they make which often forget about notions of justice (and ironically, even the environment).

The Global South often views outcomes of international environmental policy conferences to be very negative and has, in turn, responded with a demand for a different framework- one that acknowledges not just the need to work within the limits of nature but is also just for all nations and individuals. According to the South Centre, a group comprised of developing nations, this includes "restructuring of global economic relations" in a way that supports sustainable development rather than economic development for the North only. It requires remembering that some nations are not where they want to be in terms of ability to meet basic needs of their inhabitants. The emphasis on sustainable development includes implementing the idea of environmental space and getting rid of the structural adjustment programs implemented by the IMF which plagued the economies of the Global South for decades (Dresner, 2002, p. 46).

With the push by the Global South and support of NGOs, Agenda 21 was passed at the 1992 UN Conference on Environment and Development, which supported a more just form of sustainable development by including grassroots solutions to problems (rather than top-down approaches) and accountable governments (p. 46). Not much of Article 21 has been adopted, and the global South still continues to fight back against nations such as the United States which try to make the developing world cut down on carbon emissions as much as the developed world. A notable example of this trend, as detailed by Dresner, is President Bush's refusal to sign the Kyoto Protocol, which focuses on reductions in carbon emissions of industrialized nations (p. 58). While international

policy may be a prime example of failure to incorporate justice into its actions, the Global South is trying to change the trend.

4.4.3 Re-framing Economics: Herman Daly and John Cobb

The model presented by Herman Daly and John Cobb (1989) in their famous work, *For the Common Good*, was not explicitly a model for elevating justice in a sustainable development framework. Instead, it was a formal attempt to critique the dominant economic system and present an alternative that would be more just, equitable, and fit within the limits of the nature. Their model is essentially a re-framing of economics. Using Greek terminology, they describe how we should return to the original derivation of the term "economics," *oikonomia*, which means the "management of the household so as to increase its use value to all members of the household over the long run" (p. 138). *Oikonomia* is set in contrast to *chresmatics*, or the "manipulation of property and wealth so as to maximize short-term monetary exchange value to the owner", which is the basis for the dominant economic system.

The proposed economic model, *oikonomia*, is what Daly and Cobb describe as "economics for community," one that includes the idea of a household as not just people but the "land, of shared values, resources, biomes, institutions, language, and history" (p. 138). Not only is this economics for community situated in the long-term, but it considers the costs and benefits to the whole community. It also considers use value (which is tangible and thus has limits), rather than the conventional and abstract exchange value (p. 139). Lastly, it reframes welfare such that it includes the sum of both economic and non-economic welfare. In *oikonomia*, an increase in economic welfare could result

in a large decrease in noneconomic welfare, which would not increase overall welfare, suggesting that economic growth does not lead to sustainable development (p. 146).[5]

Also incorporated into Daly and Cobb's model for the common good is community-centered self-sufficiency, taken from Gandhian economics. Self-sufficiency means de-centralization of power and subsequent village control by villagers themselves, the goal of economic self-determination, and participation in community by all members (p. 172-4). The justification for community-centered self-sufficiency in terms of building justice and sustainability is as follows:

> There is no guarantee that when a peasant village defines its own goals it will do so wisely. Yet the number and seriousness of mistakes that arise out of this kind of community development are far fewer than those that arise when individualist theories determine what is to be done. The latter may introduce changes in agriculture (such as the Green Revolution) that destroy traditional village life or dictate the building of a large dam that floods the village land. It can be argued that the nation as a whole profits through increased GNP, but we are skeptical. Certainly the villagers involved lose. On the other hand, the normal result of community development is genuine economic progress (even if small) from which most of the members of the village derive some benefit. The social and environmental costs are rarely large...The dominant patterns of economic development throughout the world have been quite the reverse of community development. (p. 166)

Thus, Daly and Cobb emphasize that village-controlled development will produce the most benefit for the members of the community. In their model, the limited resources that exist are controlled and distributed by villages in the way that is appropriate for them. This idea of village-controlled development is how Daly and Cobb's re-framing of economics to *oikonomia* can be put into practice in both a just and environmentally sound way.

[5] Vice versa, author Jane Jacobs argues that the absence of justice is a major roadblock to development. Poorly treated workers will not want to do their jobs, causing the economy to grind to a halt (2000, p. 33).

4.4.4 Re-Distribution Models: Environmental Justice and EcoJustice

The *environmental justice* movement is perhaps the most famous discipline that has brought justice to the forefront of sustainability. Environmental justice is based upon the notion "that certain minority populations are forced, through their lack of access to decision-making and policy-making processes, to live with a disproportionate share of environmental 'bads'—and suffer the related public health problems and quality of life burdens" (Agyeman, et al, 2003, p. 6). Thus, in the definition of environmental justice, there is an explicit understanding that injustices to people and environmental harm are inherently linked. Well-known examples are the siting of hazardous waste facilities like heavy-polluting factories, landfills, or incinerators in neighborhoods of people of color. Groups of activists have fought back against these sitings and have been successful at showing the force of the environmental movement. Indeed, many scholars agree that the "success of the environmental justice movement in linking environment, labour and social justice into a master frame through which to communicate claims and clarify goals and grievances to others" is one of the most important features of the movement (Agyeman et al, 2003, p. 7). Agyeman provides further elaboration on the success of the environmental justice movement in a 2005 article:

> Environmental justice organizations emerged from grassroots activism in and around the U.S. civil rights movement. They expanded the dominant traditional environmental discourse, which was based around environmental stewardship, to include social justice and equity considerations. In doing this, these organizations redefined what are considered environmental issues so that the dominant wilderness and natural resource focus now includes urban disinvestment, racism, homes, jobs, neighborhoods, and communities. (p.12)

These various movements' members include those who come from a history of resisting injustices and not just environmental degradation.

The historical context of environmental justice helps explain another important component of the movement: contrary to popular knowledge, is not just about keeping environmental harm from being placed on already disenfranchised communities. Environmental justice is about questioning *why* the environmental harm ends up where it does in the first place. In other words, it is interested in looking at the systemic issues at hand in the distribution of environmental contamination. Thus, it makes sense that the environmental justice movement arose in part out of the civil rights movement, as they both develop out of the same larger issue of racism. After understanding why environmental injustices exist, environmental justice works to prevent the creation of environmental harm in the first place by ending macro-level problems such as racism and profit-centered capitalism (Bullard, 2005, p. 25-6).

One more crucial aspect of environmental justice is that it supports grassroots efforts. Agyeman (2005) notes that the most mainstream "concepts [of sustainability] emerged in large part from top-down international processes and committees, government structures, think tanks, and international nongovernment organization networks" (p. 13). Like the Global South or Daly and Cobb, environmental justice wants to get away from top-down approaches because it views the development of sustainability in that realm as ineffective. I will discuss more about grassroots approaches when I return to the democracy leg of sustainable development later in this chapter.

Ecojustice is similar to environmental justice in the sense that it is focused on re-distribution. However, while environmental justice focuses on re-distribution of environmental *harm*, ecojustice focuses on re-distribution of environmental *benefits*. It arose out of the social justice and environmental movements of the Christian church and

is an attempt to combine the two into something more comprehensive. It was first coined by Richard Jones of the American Baptist Churches as "both ecological wholeness and social justice" (Lind, 2008, para. 3). According to Dieter Hessel (in Lind, 2008), an American ethicist, ecojustice includes four main aspects:

1. Solidarity among all people and living things as a community
2. Environmental sustainability (and lifestyles that fit with this ideal)
3. Ensuring sufficient resources for all
4. Participatory decision-making and management of the commons (para. 4).

Ecojustice expands the notion of justice to include more than humans. Ethicist William Gibson says that ecojustice is about "recognizing 'in other creatures and natural systems the claim to be respected and valued and taken into account in societal arrangements...The concerns for ecological soundness and sustainability includes but transcends the concerns of humans for themselves'" (Lind, 2008, para. 3). Here the idea of re-distribution must be within the limits of nature but also across *all* of nature rather than simply humans. It is important to note Lind's comments on the difficulties of establishing ecojustice-style thinking: he says that it can be hard to combine the suffering of earth and the suffering of humans in Western thought (or in general see humans and nature as interconnected) because the Enlightenment period stressed how separate and above humans are from nature (para. 8). Such questions of community, who is in that community, and how they should be able to participate in that community are central components of the third leg of sustainable development, democracy, which I will turn to now.

4.5 The Importance of Democracy in Sustainable Development

I have just laid out a framework for how to bring justice into sustainable development. Now I propose how Maathai's third leg of democracy fits in. I want to focus especially on the concepts of inclusivity and grassroots procedures, two important pieces of a functioning democracy. Some of these ideas appeared in the justice theories, as they overlap closely. The major way I differentiate the two is that justice is focused on distribution which democracy is focused on procedures. Democracy is how the environmental and justice components can be put into practice.

One thing to note right away is that the term grassroots is often used in policy creation. Although it is true that grassroots movements are what makes legislation become a reality and it is not entirely unrelated to community development, the focus of this research is more on the use of grassroots movements to make sustainable development projects function successfully. For my purposes here, grassroots refers to situations that are locally-driven and autonomous (Smith, 2000, p. 9) and which support both collective action for social change as well as the empowerment of individuals to take action over their own lives (Chetkovich & Kunreuther, 2006). Many people describe grassroots approaches as bottom-up, inclusive, and participatory. The following theories explain what a democracy that supports sustainable development would look like.

4.5.1 Concepts of Democracy: Ecological and Earth Democracy

Often included in discourse on environmental justice and sustainability is the idea of *ecological democracy*. This works on the premise of solutions created "by the people" (as an ideal democracy would function) that are "for the people" and for the environment.

The principles of ecological democracy have been defined by Faber and McCarthy (2003) as follows:

> 1. Grass-roots democracy and inclusiveness—the vigorous participation of people from all walks of life in the decision-making process of capital, the state and social institutions that regulate their lives, as well as civic organizations and social movements which represent their interests
> 2. Social and economic justice—meeting all basic human needs and ensuring fundamental human rights for all members of society
> 3. Sustainability and environmental protection—ensuring that the integrity of nature is preserved for both present and future generations. (p. 57)

Note that these principles are nearly identical to the three in Maathai's three-legged stool. This, again, displays the essential interdependence of these issues and also the importance of using grassroots action (point one) to implement justice and sustainability (points two and three, respectively).

Another version of democracy that fits with Maathai's democracy leg is Vandana Shiva's *earth democracy* model. While ecological democracy operates within an anthropocentric framework, Shiva's vision of earth democracy is a biocentric one. Her framework comes out of the understanding that the environment needs a voice, an idea taken from the deep ecology movement. Deep ecology is founded on the principle that humans exist within a greater system of nature and have no more right to "live and blossom than any other non-human being" (Naess, 2008 p. 144). Earth democracy is based off two principles: that community includes all living things and that there is a "continuum between and indivisibility of justice, peace, and sustainability" (without one there cannot be the others) (p. 43).

Like Maathai, Shiva states that ecological democracy must go beyond the "triple crisis of economic injustice, ecological non-sustainability, and the subjugation of people and other species brought on by the growth of global capitalism," moving to a new

worldview where humans are part of a larger earth family embracing diversity, inclusivity, and interdependence (p. 43-4). Thus, we see here two examples of democracy which clearly emphasize not only the importance of combining sustainability with justice, but also see inclusive, grassroots procedures as key in making sustainable development a reality. But what do inclusive, grassroots practices actually look like? Authors James Scott and Robert Chambers provide some potential answers.

4.5.2 Grassroots Implementation: James Scott and Robert Chambers

Perhaps the best way to frame the importance of a bottom-up approach at the outset is to ask why non-inclusive, non-grassroots projects so often prove inadequate in producing sustainable development. Indeed, most scholars I have laid out so far are in favor of grassroots initiatives, or at least have criticized completely top-down projects. Scott, in *Seeing Like a State* (1998), describes specifically *why* state-driven schemes (characteristically top-down projects) are set up to fail. It is often the case that the state qualifies as what he calls an "imperialist regime", which attempts "state-initiated social engineering" through reliance on four concepts (p. 4):

1. Simplification of nature and society: trying to bring order by modifying both in ways that are vastly inadequate. The modification leaves out the important complexities that exist that allow these systems to function.
2. Love of modernism: faith in science and technology and the idea that rational order can solve all problems.
3. Use of authoritarianism: the state uses its power to implement a modernist simplification of nature.
4. Weakness of civil society: commoners are unable to fight back against the state.

This imperialist thinking causes failure both in society and for the environment. Scott describes several case studies that underscore his thesis. A few examples are the mandatory villagization in Tanzania, the creation of a new high modernist Brazilian

capital (Brasilia), and the imposition of Western industrial agriculture on developing nations. All of these cases ultimately failed in their original goals.

Like James Scott, famous development scholar Chambers also provides valuable insight on why non-inclusive, non-grassroots projects fail to produce sustainable development. He talks about the limits of any outsider to a community, whether that be a government, NGO, or individuals, in creating true sustainable development. In his work *Putting the Last First* (1983), he specifically discusses this problem within the context of rural development in the developing world. He says that outsiders tend to have a very limited understanding of rural poverty, under-perceiving it because they remain in the urban "cores" and actually ignore what is going on in the rural "periphery" (p. 2). Outsiders also heavily rely on modern science and disregard the valuable knowledge that rural peoples have.

One example of rural people's knowledge is in their "sophisticated and appropriate" forms of agriculture. Chambers points out that "it took organized agricultural research decades to realize that what appeared primitive and unprogressive was complex and sophisticated. Small farmers are, after all, professionals. They cannot afford not to be" (p. 87). Many of these agricultural techniques, such as mixed planting, have a variety of advantages that are good for the soil, crops, labor availability, pest management, and long-term farm health (p. 85-6). These techniques are also appropriate for the specific type of climate, farm size, and lack of mechanization of rural undeveloped areas. The fact that the development "experts" ignore these forms of knowledge means they do not make use of the existing skills of the community and in turn cannot implement the most effective sustainable development.

Both Scott and Chambers outline why non-inclusive, non-grassroots initiatives will not produce sustainable development. Just as importantly, they both also provide alternatives that embrace principles of democracy. Scott values the following concepts in doing truly effective development work: practical knowledge, complexity, and the ability to adapt to new situations (p. 6). To explain these further Scott uses the Greek term *metis*. The importance of this term to Scott is similar to the emphasis that Chambers puts on rural people's knowledge when it comes to rural development. *Metis* is roughly translated as practical knowledge that is gained through experience (p. 313). It is seen as the best type of knowledge, representing an ability to deeply understand and adapt to any situation at hand. *Metis* is held by community members about their own communities (because it is a knowledge that arises out of experience), and thus *metis* and *metis* alone is what will create the most appropriate action in a particular and local situation (p. 317).

Chambers also sees the importance of using local knowledge to end poverty. Modern scientific knowledge should be complementary to the local knowledge rather than the panacea. In order to make this combination of modern science and local knowledge a reality, "outsider professionals have to step down off their pedestals, and sit down, listen and learn" (p. 75). Not only must they step off their pedestals, but they have to examine their own "preconceptions, prejudices and rationalizations" (p. 104). This includes preventing the common "paternal trap" that development personnel have in their desire to help poor rural peoples, expecting they know exactly what they need (p. 141). Instead, development personnel must ask what rural peoples want (like a functioning democracy would do for its citizens) (p. 141). In other words, effective sustainable development involves a complete mindset shift by the outsiders.

Sometimes the outsiders and insiders will not agree. Where they do agree, however, is where there is the most likely chance for successful development. Once agreements are laid out, it is important for the outsider not to co-opt the development program; instead it must be adapted to local conditions by the rural peoples themselves.[6] Combating the deeper issues around poverty and power can only be done by "enabling the poor to mobilize and organize, to demand, gain and maintain control over assets and income" (p. 140), instead of what an outsider might be tempted to do which is tackle visible physical weaknesses only (such as setting up an eye clinic or a lunch program). The entire ideology that Chambers puts forth is known as "putting the last first": by valuing things that are traditionally marginalized or ignored, decentralizing the locations of work and communication of those in development, and continuously asking who will benefit and who will lose out in specific projects or situations, sustainable development can be achieved (p. 168).

4.6 Applying the Sustainable Development Model to My Research

I have laid out what sustainable development can look like in a form that supports justice and democracy as well as the environment. None of the theorists I have used, however, focus their work specifically on sustainable development in my study's setting: a city in the developed world. Many focus on rural or developing world settings. So, how might the theories laid out previously apply to the United States urban context? Peterman (2000) focuses on neighborhood development in the United States. Like other theories I have delineated throughout this chapter, he argues that grassroots participation

[6] Chambers' work closely parallels more recent scholarship by Pretty and Uphoff, who study agroecology and participatory development (2002).

is a required criterion for successful neighborhood development (in other words, public officials cannot drive the change). A good example of the failure of community development by the government (and faith in the "rational planning model") is the urban renewal programs in the 1950s and 1960s, which essentially ruined many poor, minority urban communities (Peterman, 2000, p. 38-9). This echoes both Scott and Chambers in the emphasis that outside perspective does not provide adequate understanding of a problem and thus appropriate solutions.

I can take the theory of sustainable development one step further and speculate on the specific components of environment, justice, and democracy that one would see in Cleveland's urban agriculture movement (see Table 4.3). An *environmentally sound* urban agriculture would use ecological growing methods that would fit within the limits of nature. These are often called organic growing methods. A *just* urban agriculture in Cleveland would work for equitable distribution of produce and other benefits of the gardens and farms. Lastly, a *democratic* urban agriculture in Cleveland would work to include diverse populations in all aspects of production and distribution. It would also be driven by neighborhoods and emphasize neighborhood knowledge. These standards of sustainable development are what I can use to examine the actual values and practices of farmers and gardeners in Cleveland.

Table 4.3 Sustainable Development Frameworks

	Environment	Justice	Democracy
General (combining Maathai and other theorists)	Resource consumption within limits of nature	Equitable resource distribution	Inclusivity & grassroots procedures
Urban Agriculture in Cleveland	Organic agricultural practices	Equitable distribution of produce	Neighborhood-driven & diverse populations can participate

V. METHODS

As noted in my literature review, there is a wealth of research on United States urban agriculture and especially urban community gardens but a lack of research that does the following:

- Asks to what extent gardens and farms use organic methods, indicating a level of environmental consciousness (many say farms are organic but do not provide specifics- for example see Flachs, 2010; Macias, 2008)
- Looks at urban agriculture on an extensive city-wide level (many use a case study of an individual project or only a few projects- for example see Broadway, 2009; Flachs, 2010; Macias, 2008)
- Works to include justice and democracy frameworks (most avoid making judgments about the garden or farm's ability to work towards justice and democracy- for example see Broadway 2009; Draper & Freedman 2010; Ohmer et al., 2009; Twiss et al., 2003)
- Takes a critical rather than descriptive viewpoint, using a specific set of criteria for evaluation (most are descriptive- Broadway, 2009; Flachs, 2010, Ohmer et al, 2009, Twiss et al., 2003)

In order to evaluate Cleveland's urban agriculture movement through both a sustainable development and critically-oriented lens, my methods included aspects of all of the above trends.

31 gardens and farms were originally contacted to participate in this study. I generated an initial list of farms and gardens with the help of staff members at

Neighborhood Progress Incorporated (NPI), a CDC located in Ohio City. NPI was responsible for administering the ReImagining a More Sustainable Cleveland project, a city-wide greening efforts program where individuals or groups could apply for funding to start a greening project. According to NPI, there were a variety of partners in funding, administering, and helping implement the grants which included the City of Cleveland, OSU Extension, Cleveland State, the US and Ohio EPAs, and many foundations (2013). I also added other projects to the list through personal contacts made from a previous farm internship in Cleveland. Lastly, additional names of contacts were received from some of the participants in the study who had friends interested in talking with me.

22 of the 31 projects responded with interest and 21 ended up participating. Twenty gardens or farms were located within the city limits of Cleveland. An exception was made for one garden which was located in Lakewood but was very close to the Lakewood-Cleveland boundary. There were a number of different types of projects that participated. Catalogued by primary mode of operation, there were six community gardens, six market gardens or market farms, five non-profit organization gardens or farms (doing a variety of projects under the non-profit status), two educational gardens, one orchard, and one vineyard (see Table 5.1). In total, the majority (fourteen) of the projects were not-for-profit, while the remaining seven were for-profit operations. Just under half of these gardens and farms were part of ReImagining's first round of funded pilot projects, receiving start-up grants in 2010.

A representative from each garden or farm was asked to fill out a fifteen-question survey that covered founding date, location, size, distribution practices, mission statement, finances, organic status, and organizational structure (see Appendix A). Most

of these were submitted online using a Google form and the remainder were submitted through snail mail. Gardeners and farmers completed these surveys sometime between April and August of 2012. Upon completion of the survey, representatives were contacted to set up an in-person interview. These interviews were completed in July and August of 2012. When possible, the interviews were completed at the garden or farm site where I could also receive a tour. A few interviews were completed in other locations, after which I made a separate visit to the site itself.

The in-person interviews were semi-structured, including both objective and subjective questions (fifteen multi-part questions in total) which were generally more in-depth than the questions on the survey (see Appendix B). The goal of the interviews was to get a sense of how projects fit into sustainability and sustainable development frameworks. I asked about the environmental techniques used on site, the distribution methods, customer base, finances, and staff and volunteer base. I also asked representatives to define the goals of the project, the success of their project, and what success would look like in Cleveland's urban agriculture movement as a whole. All interviews were recorded on an mp3 recording device and photos were taken on the tour when possible (Appendix C shows a small selection of these photos). Interviews took anywhere between 40 minutes and over two hours. I also completed participant observation by volunteering to work on a few of the gardens and farms and by visiting farmers markets in Tremont and Ohio City.

Interview recordings were transcribed into an Excel document using a special formatting system. I entered in the important themes that I heard (or read in my surveys) under the following categories: garden and farm basics, goals, distribution, sources of

funding or sales, costs, revenues, customer base, staff and volunteers, success of project, desired resources for project, challenges, success of urban agriculture in Cleveland, education of representative, and other observations. To conduct the critical analysis of sustainability and sustainable development, I carefully read through the interview quotes under each category and noted patterns, correlations, and repeated observations that related to my basic set of research questions.

Table 5.1 Summary of Urban Agriculture Projects in Study

Project Type	Number
Community garden	6
Market farm or garden	6
Non-profit doing a variety of activities	5
Educational garden	2
Orchard	1
Vineyard	1
Total	21

VI. RESULTS

My results are divided into three major themes. In the first theme I look at how the traditional three-legged stool of sustainability applies to urban agriculture in Cleveland. In the second and third theme I focus on justice and democracy and how these ideas were expressed in my interviews. What is particularly notable is how my results align with the a sustainable development that emphasizes the environment, justice, and democracy.

6.1 Theme One: Traditional Sustainability Shortcomings

My major conclusion for Theme One is that if one was to take a very strict idea of what "sustainable" means, these gardens and farms would not be perfectly sustainable. Collectively, projects scored well (but not perfectly) environmentally, poor economically, and mixed socially. These results seem oversimplified or misleading because these make certain parts of the movement seem much more important than they appear to be in reality and downplay the importance of other parts. These findings lead me directly into Themes Two and Three, Justice and Democracy respectively, which were two central concepts of urban agriculture in Cleveland that present a more complete picture of the movement.

6.1.1 Environmental sustainability

The major form of evaluation for the environmental leg is what types of growing techniques farmers and gardeners used on their site. Representatives noted a wide variety

of environmentally friendly practices they were using to grow crops (see Table 6.1). Most notably, only one site regularly used synthetic fertilizers or pesticides. 19 out of 21 practices were organic (but not certified), indicating that environmental sustainability is an important value that is being put into practice. While using environmentally sound techniques is an important component of environmental sustainability, the most fitting description for a garden or farm that is sustainable would be one that entirely produces its own inputs for its farm; in other words, the garden or farm is a closed system. However, considering that all of these farms are located in the urban environment and are limited by space, it is understandable that they are unable to do this. One market farmer expressed the inability to produce his inputs to me during my interview with him:

> It's an impossibility. My idea of a sustainable farm would be one that grows all its own inputs and matches the inputs with the outputs. I don't have any space to grow any inputs here. I don't have the space to grow cover crops in between seasons or to rotate from a cash crop to a cover crop...I'm producing vegetables out of these beds all the time. There is no opportunity for "off" here.

Later in the interview he added the following:

> In a perfect world I would compost my own vegetable scraps and vegetable residue, my chickens would scratch around and turn that compost into a useable input, and then I would spread it on my fields, harvest the vegetables, feed the scraps to the chickens and that's a complete circle…To the extent that I'm bringing in external physical outputs for the soil, I'm not sustainable. I have no illusions that this place is sustainable in that respect.

This farmer's words echo the same limitations that other urban gardeners and farmers have. At the same time programs did work hard to be environmentally sustainable within their limitations. For example, gardeners and farmers found local sources for items such as food scraps for compost, old materials to build beds, or local companies from which to buy soil amendments.

Table 6.1 Summary of Production Techniques Used

Technique	Number of farms
Organic in practice	19
Organic fertilizers (including purchased fertilizer, compost, manure)	21
Composting on site	15
Cover crops	13
No-till (on at least some of the site)	15
Raised beds	17
Mulch	10
Crop rotation	15
Bees	4
Other ecological growing methods[7]	6
Organic pesticides	12
Scouting for insect pests	10
Traps for insect pests, rodents, or groundhogs	9
Hand weeding	20
Releasing beneficial organisms or insects	6
Companion planting	11
Attracting beneficial insects	12
Row cover	7
Rainwater irrigation	5
Organic seeds	19
Saved seeds	6
Season extension (hoop houses, tunnels)[8]	6

6.1.2 Economic Sustainability

6.1.2.1 Revenues and costs

The majority of programs I evaluated were, at the time of the interview, not able to generate enough revenues to cover their costs. In this sense, they are not currently financially self-sustaining. When asked if revenues were covering costs, three programs answered that revenues exceeded costs (that there were net profits), eight programs

[7] Some examples of ecological growing methods used were permaculture, SPIN (Small Plot Intensive farming), IPM (Integrated Pest Management), Joe Kovach Ecological Design, and Teaming with Microbes.
[8] Five additional farms said they would be implementing season extension very soon.

answered that revenues met costs, and ten programs answered that revenues fell below costs. However, I quickly learned that these classifications were not telling the whole story. Of the 3 farms (all market farms) that had net profits, none were including labor as a cost. In other words, none of these farms were including wages for their workers *even* if receiving a paycheck from the farm was a part of their ultimate goal or notion of success. For example, one market farmer said the following about the current financial state of his team's farm:

> I would say we're in the black this year. And then you know anything on top of that [seeds for next year] would ideally, in an ideal world, be used for management fees - so myself [and the other partners] could then maybe one day take some form of payment for our three and half years of just very strenuous physical labor or in addition to that…some sort of farm labor eventually in the future.

He characterized his farm as being "in the black" or having revenues exceed costs despite the fact that no one is currently getting paid for their work. If he included the labor costs then perhaps the farm would not be covering their costs.

The eight programs that answered that revenues met costs were separated in two main groups. The first group is similar to those that had net profits, which were market farms and gardens. They also neglected to include labor costs in their calculations. Sometimes other items were also excluded from the calculations such as donations of tools or plants. Another potential situation was that the organization was selling produce but was not not-for-profit. In this case sometimes the determination of costs was calculated through the revenue; it was also calculated so that the only costs incurred were ones that could be covered by the revenue. One woman tried to explain her project's situation in the following way:

> If the money isn't there then we don't have the costs. We don't incur costs…So what it does is it limits what can actually happen. So if we take in three-thousand dollars in the CSA and we need to buy tools and soil and all that kind, we might spend two-thousand or two-thousand five-hundred. So it just depends. We're just limited by the activity of the sales proposed.

The second group in the category of revenues meet costs is community gardens. Community gardens by nature have no intention whatsoever of turning a profit. They are also intentionally run by volunteers, and thus do not include labor in their calculations of finances. In community garden economics, plot fees and individual expenses might "fund" the garden, but many of the costs are simply externalized (each plot holder's seeds, plants, tools, etc).

Thus, the two main conclusions from the perspective of economics is that urban agriculture in Cleveland tends to not be financially sustainable at this point in time and also that the traditional economic model where one can simply do a revenue to cost comparison is inadequate. An important point of confusion is what actually counts as a cost. Does labor count as a cost when it is something people are doing as a hobby? One man who thought that labor should always count as a cost explained how he would incorporate the costs into his budget as follows:

> A lot of volunteer time [is put in] here. If I total up the hours that the volunteers put in, at minimum wage, we would be so far in the hole. There's probably about 4000 labor hours that go into this place in a matter of seven months. At ten dollars an hour, that's $40,000 a year, right? Plus if I were paying people at $10 an hour, I'd also have to pay worker's comp, half of their social security...and so my costs for 4000 hours of employee time would be beyond - above and beyond - the $40,000, probably be closer to $60,000.

His explanation provides some important food for thought. Perhaps one reason most farms were not interested in questions about self-generated revenue or financial

sustainability was because they are really focused on some other social mission, as I will delineate in Themes Two and Three.

For all types of programs in the spectrum, volunteers and grants were the two major items that make up for the lack of the sales or inability of sales to cover costs. Volunteer labor hours number into the thousands for many of these gardens. The bulk of the grants come from a small number of initiatives and organizations: ReImagining A More Sustainable Cleveland, Neighborhood Progress Incorporated, Neighborhood Connections, and OSU Extension. From an economic standpoint, one might say that it is problematic for all projects to be so reliant on a few funders to sustain their farms and gardens. However, these grants have been instrumental in the creation of many of these programs and it is unrealistic that these programs could have started without them.

6.1.2.2 Expectations for revenues to increase

Despite the dearth of programs that were financially self-sustaining, the majority programs expected their revenues to increase very soon. 17 of 21 projects expressed this expectation. For example, one organization that began in 2010 sees itself as becoming more financially sustainable over time once its biggest investments are made. The representative that I interviewed from this program said that currently sales are not covering costs, but he expects that to change:

> [The sales from the produce current cover] not nearly enough [of our costs]. I would say this is probably a five year to break even kind of proposition. We're really investing a lot in value properties and bringing people on and getting properties productive and that type of thing...Our goal is to cover our costs and make a nickel after that.

Other rationalizations for expected increase in revenues included introducing value-added products (two sites were doing this), get better at growing and marketing, and implementing more "extending season growing" with hoop houses. Another man said he was going to make more money when he got more land: "We want to do more. Only [growing at] this place [is] small. Maybe...next year we might open another spot." The biggest future expected revenue source was through more grants. One project director believed that as his project became more established, foundations would be more willing to give him money:

> I'm convinced that it's just a matter of time [until the foundations will give us money]. By showing that we have these expanded partnerships, that we are answering our mission, that we survived a winter and we're about to survive another winter. In doing that it shows that we're in it for the long hall, we're not something that you're gonna give money to and it's gonna disappear next year. We use our money responsibly, we use it the way we say that we will, it's really important to them [the foundations] and we've proven that we do that. It's just a matter of time.

What is important to note here is that 19 out of 21 programs started in 2006 or later. Many were founded in 2010 through ReImagining. In terms of organizational history, then, these projects are all extremely young and have not had time to pay back the costs of their initial infrastructure of capacity building projects. Perhaps it is too early to evaluate financial sustainability. When I asked one farmer about the profitability of urban agriculture, he commented on the importance of putting things into context and why was "patient" and confident that his farm's sales would increase. He argued that it was too early to simply say that urban agriculture was not financially realistic:

> Farming is something that's passed down from generation to generation, it's difficult to be an accountant or a graphic designer and then to start a farm. You're not gonna learn it overnight. So it's a learned trade that takes patience…The expectations people have for how quickly things happen [are high but] it's very difficult to start a business. It's very difficult to farm. So starting a farm business

> is very, very difficult…There are things that are going against farming, like subsidies for commodities and people just are eating more prepared foods and goin' to restaurants and don't cook anymore. All this stuff doesn't help farming, it doesn't make it any easier but at the same time there are stresses on any other industry that you're trying to start a business in any industry they'll make your competition more of a competitor against you…I think farming and urban farming gets a bad rap at times. Even though it's gotten a lot of positive press, I think it gets a bad rap for being not economically viable or possible to make a living wage at when in all actuality it's just tough to make a living wage while starting a business. That's what it comes down to.

What would be interesting is to come back in five years and evaluate if more gardens and farms move into a more financially sustainable position. My guess is that there would be some that are financially sustainable and others that would no longer exist because it was not affordable for them.

6.1.3 Social Sustainability

Social sustainability, in its basic form, is social buy-in, which can be very hard to measure. One area where I found at least an indication of community buy-in was when I asked the question, "Do you think you are being successful?" The majority of projects (18 out of 21) did see themselves as successful or soon-to-be successful. Interestingly, some saw themselves as successful precisely because their communities are interested and buying in to the programs. One woman said she thought her community garden was successful because "No one really bothers it, knock on wood. The neighbors all seem to like it." Another woman said a similar comment about the neighbors but also expanded to include other communities who were buying in to the project:

> We're totally meeting success. Anytime we take this space which was trash filled, dead animals, all kinds of dead and alive, just - crime and everything and turn it in to something where the neighbors are like "Ooh, we love this! This is so great!" and that they feel comfortable participating in, and that they feel comfortable sharing their ideas for what should happen. Huge success. When we

> have other communities call and say "Hey, we were referred to you, and we would like to have a program like yours in our community." Huge. So we're a success.

One more example of a program that saw themselves as successful because of social buy-in was an educational program. The fifty percent return rate from the previous growing season, the highest return rate the program had ever seen. This indicated to the program director that the structure (including goals, schedule, and curriculum) for the students is "consistent" and that they thus find value in staying enrolled in the program.

In addition to seeing some evidence for social buy-in, I also saw the need for buy-in because the majority of the projects were driven by few individuals each, indicating that they farm or garden might fail if that one person left. I observed that the majority of projects were driven by individuals. As put by one woman, "We have all kinds of ideas but just a few core people that are committed. And we also have jobs. I'd say that's the biggest struggle, is how do we do this?" Another woman who runs a school garden said that it would be hard for her to expand her project just because of the limited human resources: "I feel like I would be doing so much of it on my own. I would love to try do more of that [expanding garden curriculum]…but again it seems like I would be doing a lot of that my own."

Some other instances indicated that there may not be community buy-in. Theft was one issue that might suggest some community members are not supportive (seven gardens experienced some form of theft). Would you think a community gardener that told me, "Probably 40 to 50 percent this year went to theft" is receiving social buy-in from the community? Another example that could indicate unsupportive neighbors is complaints. One farmer in Ohio City said that "we have been called on by our

neighbors" about their compost pile and their fence, presumably because they did not look very appealing but also because those neighbors did not see the value in the farm's activities. A project could (and usually did) experience both positive and negative reactions from the neighborhood, showing how tricky measuring buy-in can be.

Newer social sustainability frameworks that are less traditional usually include reduction of poverty to complexify the notion of social buy-in, meaning perhaps just looking at community buy-in is not the whole picture. As I will describe in Theme Two, the goal of poverty reduction is actually quite significant, suggesting that perhaps the idea of poverty reduction should take more of a major role in theoretical frameworks instead of a side idea that is really not a central focus. Moreover, as I will discuss in Theme Three, it is important to many of these programs that their communities are a part of the farm or garden in one way or another. In other words, the ideas of justice and inclusivity are much more central to urban agriculture in Cleveland than just looking at it as social sustainability.

6.1.4 Traditional Sustainability Frameworks Leave Something Missing

When we look at urban agriculture in Cleveland using the three-legged stool of sustainability it scores are mixed. However, it appears as if something is missing. After all, Cleveland's urban agriculture movement seems to be booming and is highly regarded by many who live in Cleveland and even people outside of the city. Maybe another lens of analysis would be beneficial. Here I think my analysis leads me back to the work of Wangari Maathai and her emphasis on justice and democracy.

6.2 Overview of Goals and Success Responses (for Themes Two and Three)

Because both Theme Two and Theme Three rely heavily on the responses to three specific interview questions, I will provide an outline of the responses here before delving into analysis.

6.2.1 Goals responses overview

All garden and farm representatives responded to the question about the goals of their program. Many of these programs (just under half) had formal mission statements. Others provided informal ideas of what they hoped to achieve with their projects. To facilitate my analysis I divided up these goals into categories which I thought best represented the responses: food access, community, grow food, economic, education, environment, personal enjoyment, and other (see Table 6.2). What immediately becomes clear is the sheer variety of goals even within one category. Moreover, often the representative would provide a mission statement or goal that encompassed multiple types of goals. One example of a multi-faceted goal would be to grow food in an organic way and help provide more families with fresh produce. This goal would fit into three categories: grow food, food access, and environment. This type of response for the question of "What is the goal of your project?" was not uncommon, indicating that urban agriculture is working to serve a variety of needs or address a variety of issues – in line with the literature that exists already on the subject.

What might not be apparent just by examining the number of responses in different categories of goals, but becomes more so when looking deeper into the interviews and explanations of what respondents meant by their mission statements and

goals, is that *urban agriculture in Cleveland is really about people*. The most prominent goals were ones that focused on justice for residents of the city by combating social or economic poverty or other forms of unfair distribution of resources. They also wanted to do so in a democratic way that includes and is driven by members of the community.

Table 6.2 Responses to "What is the goal of your farm or garden?"

Category	Number of times mentioned
Community	13
Economic	13
Food access	13
Grow food	13
Education	10
Environment	9
Personal enjoyment	3
Other	5

6.2.2 Success responses overview

Participants were also asked to define what success would look like for their program and for the city of Cleveland's urban agriculture movement as a whole. The intent was to give respondents a chance to express subjective opinions about their program, to see if there was anything else that was important to them that might not be explicitly in their mission statement or goal statement, and, critically, to see if they thought their own programs could be called successful. I put these responses into the same categories as the goals responses but with a few additional categories (see Tables 6.3 and 6.4). Like in the responses surrounding goals, the definitions of success also presented a variety of ideas on what individuals and organizations desire in their urban agriculture projects and urban agriculture as a whole. As spoken by one gardener, "I

think you need a variety [of urban agriculture projects] because it meets different needs," echoing once again the emphasis in existing literature that urban agriculture is used to address a variety of issues simultaneously. While some responses were very directly related to goals (such as to meet the program's mission statement), many were not and thus gave another interesting window into what urban gardeners and farmers want to achieve. Many of these definitions speak directly to the topics of justice and democracy and in fact form a *central* motivation for farmers and gardeners.

Table 6.3 Responses to "How would you define success for your farm or garden?"

Category	Number of times mentioned
Community	9
Economic	5
Organizational capacity	5
Self-sufficiency	5
Food access	4
Recognition/Inspiration	4
Grow food	3
Cleanliness/No vandalism	2
Meet mission statement	2

Table 6.4 Responses to "How would you define success for Cleveland's urban agriculture movement as a whole?"

Category	Number of times mentioned
Grow food	11
Economic	10
Food access	7
More networking	5
Inclusivity	4
Recognition	3
Supportive CDCs & Government	3
Variety of Projects	3
Autonomy	2
Community	2
Reuse Vacant Land	1

6.3 Theme Two: Justice

I found a number of commonalities in my analysis of program representatives' responses about the goals of their programs, their definition of success of their program, and their definition of success of urban agriculture in Cleveland. Perhaps the most prominent of these commonalities, both for the frequency with which it was mentioned and for the way it stands out relative to the conventional discourse on sustainability, is the theme of justice. Many urban agriculture programs are overwhelmingly grounded in missions that are related to justice, or, put more concretely, working for a decrease in poverty, increase in equality, and re-distribution of various social and economic resources. In this sense, farming and gardening in Cleveland is a vehicle for more than simply cultivating plants. I have divided this section into categories (based upon Tables 6.2-6.4) that directly concern justice (food access and economics) and those that are stepping stones to achieve justice (grow food and education).

6.3.1 Categories Directly Related to Justice: Food Access and Economics

6.3.1.1 Food Access

I categories food access goals as ones that are related to providing more food for the neighborhood, specifically fresh produce that is deemed healthier than the typical processed foods of local corner stores. Many of these goals often arose out of the acknowledgement that many community members fresh, organically-grown produce was not available to all community members and that this was a problem. Rhetoric surrounding the term food deserts was used on occasion here. As one woman who started a program in the Hough neighborhood noted in her statement of goals, "We're a food

desert. So to be in this neighborhood, to be able to provide resources, healthy food options, and environmental education in a neighborhood that is challenged is huge." Another program representative in the Ohio City area expressed similar interest in eliminating food deserts, although on a larger scale:

> I think the way we [urban agriculture in Cleveland] could be most successful is by eliminating food deserts in Cleveland. Through education and availability. The one thing that I hear constantly from so many people is that the food just isn't available. And I think it is just as much education as it is availability... And that I think…that that has happened over decades. It's not just, as some people would like to put it... "These urban people"—and by urban they mean black people—"just choose not to eat well. They just don't eat good food and that's why their families are in the shape they are." And it's not that. I think over a long period of time our system of food has failed people in that we have...chosen to go to quicker, less healthy options, in every aspect of the society, whether it's fast food or microwave meals or processed food. The entire society is a push towards long-term, storable, bad food that you can make in less than five minutes or obtain in less than five minutes for the cheapest amount of money possible. So let's say that you did that to a wealthy, educated community who had a history of eating well. You would end up with a percentage of those people eating bad food because they just love the taste. But then when you do this same exact thing to a population of people who don't have that access to grocery stores, who don't have the experience of eating well, and who don't have a lot of money, then you end up with a much higher percentage of people who will not eat well.

This representative is getting at a number of very important points when it comes to the issue of addressing food access, which is to say food justice, in Cleveland. The first point he makes is that there is a tension between structural issues, such as food deserts and lack of access to resources, and the notion of individual choice. However, both this respondent from Ohio City and the previous one from Hough are acknowledging how important it is for them to challenge these inequalities.

Sometimes food access goals were expressed in other ways, such as by providing space to garden so that people could grow food for themselves. Of the 21 programs in this study, seven provided affordable growing space to community members for self-

consumption. As one west side community garden coordinator put it, every gardener has different goals when they sign up for a plot, but "For some people it [their goal] is survival." A place to grow food at a low cost (often for only five to twelve dollars per year) could allow the food access to increase and thus allow individuals and families to survive. Another program on the east side also suggested that they wanted to focus on "food access and availability" by providing "community growing space" and "gardening workshops."

Other programs, rather than providing all target populations with growing space, would provide food to underserved populations by donating the food to a food bank or hunger center. Here these programs were working closely with other food access organizations or simply a group of community members, creating a broader network of food access work. Eight programs told me that they either currently donated or planned to donate once they had produce available. One urban orchard representative explained why he thought it was important to have an extensive food support system, noting an at-large "gap" between food and people who need it:

> I think we just really need to be concentrated on how to close that gap and ensure that these significant food gaps in the city environment are taken care of. There needs to be a baseline safety net, just like there needs to be economically, there needs to be physically around food. I'd love to see more ways that we can do farm to table or farm to schools and programs in the urban environment.

He went on to say that he thought closing the gap through donations, rather than a for-profit business, was important, showing one unique opinion on increasing food access that not all respondents who discussed increasing food access held. Some believed strongly in for-profit operations only.

One final way that the intent of food access was displayed was through the sales of produce at farmers markets. Sometimes programs would note that they would decrease the prices of their goods in certain neighborhoods in order to make it affordable for the residents that lived there, but more often representatives would discuss their involvement in the Ohio Direction Card Double Value Produce Perks program. This program allowed food stamp recipients to use their benefits at any farmers market and also receive an additional ten dollars to spend on produce at that market. Of the 21 farms interviewed, ten participated in this program by selling their products at farmers markets in Cleveland or in nearby suburbs. This is an important tangible effort to make distribution of nutritious, fresh, and local food more equal that spans across not just the farms and gardens I interviewed but the city's local agriculture movement as a whole.

6.3.1.2 Economics

Economic justice was the second major justice-related motivation for farmers and gardeners. Perhaps the most prominent economic goal was job creation. Specific programs targeted creating jobs for specific populations. For example, the founder of program that works with a local "halfway house" said, "Urban agriculture is one of the fields where nobody cares if you've been incarcerated." One of his goals was to create jobs for formerly incarcerated individuals who would face a difficult time finding employment in another sector. Other target populations included refugees, persons with developmental disabilities and youth.

A commonality I found among gardeners and farmers who wanted to create jobs was that having a job implied more than simply earning some money. Different program

representatives expressed what a job in their project meant in different ways: one person argued that jobs helped build "life, work, and leadership skills." Another said that employment was a way to get out of poverty. Two different programs mentioned that jobs can help provide a means for self-sufficiency; as put by one community gardener in West Cleveland, "What we're fighting for on our side is self-sufficiency." Another farmer who promoted self-sufficiency explained that he wants to provide workers with "job skills training so that when people are finished with our program they can go find a job somewhere else." He went on to say that "one of the biggest things we offer is the ability for people to show that they've had a job here. So to have resume experience, to say I worked here for three years and these are the different tasks that I've done." Such responses show that variety of what having a job was about: building skills, getting out of poverty, credibility for future employment, and fostering self-sufficiency.

One more example of a job being more about something other than money demonstrates the close relationship of economic justice and food justice. As one representative stated as one of her motivations for the creation of her market garden on the east side, "A lot of people have poor health, and it's directly related to what they eat. And more so what they don't eat." She also noted her garden's goal of providing jobs that would promote better health, saying "the bottom line, really, is health. Not havin' jobs, not havin' good morale, and a whole lot of other things lends itself to poor health." Giving a job would mean people would "wanna stay here" and they would be healthy, so they "could actually contribute more" dollars to the city, which is another economic benefit that her urban agriculture project could provide.

What's notable, especially given the fact that one entire leg of the traditional three-legged sustainability stool concerns earning a sustainable revenue, is that only one person said that "my goal for success is to turn this [farm] into a profitable operation," even though seven sites were technically for-profit. What I think is important is that it is not just as if these farmers only wanted some income and nothing more out of their projects. While the lack of the goal of profit might be because it is indeed difficult to currently make money in urban agriculture, it is also because these people have other genuine passions that they hope to achieve through their projects. They expressed other goals and definitions of success which related very directly to other goals of sustainable development. Even the man who said his goal was to turn a profit was still motivated to use environmentally sound practices and grow nutritionally-dense foods. Other for-profit operations still said they wanted, for example, to provide food "in the neighborhood," employ "local residents," or to "provide learning and education opportunities for people in our community." Here I turn to a statement by the founder of a relatively young non-profit organization that does urban agriculture on the east side of Cleveland:

> One of the goals [of policy organizations in Cleveland] is to achieve 25% [of the city's food sales through local production]…Imagine that money going into the economy here. That's a billion dollars. That's pretty good. I'd like a little of that, wouldn't you? There's 3000 empty acres of land in Cleveland. What if we turned all of those into food production? And what if we did it in a way that, every empty lot, the unemployed person who lives closest to that, takes over that lot and cares for it, and grows the food in it?

The idea embedded in this man's statement—dual desires to capture more dollars of the local food economy and use agriculture to benefit people who are unemployed in the city—is a great example of how a goal of profit might be combined with a justice goal.

A good way to describe these for-profit urban farms and gardens might be social enterprises. They are working within the existing economic systems to promote their own mission of food justice or economic justice, using principles from the business world and applying them to what used to only be the work of non-profit organizations. One program that identified as a social business said that "We want people to buy our produce because it's really good and then our social mission's just kind of an added bonus. As long as our prices are competitive and our produce is really good. We're not a charity. It has to be as good as somebody else's." Another program that plans to employ twelve individuals expressed a similar sentiment about business: "I see it as an opportunity to create what I call a triple net bottom line. Re-use vacant land, create jobs, and produce food. Wealth-building, community wealth-building. The goal of course is to ramp this up to where people make a living doing this. It's not a hobby. It's a business." So, in this case, the goal of profit is a way to provide the other economic goal of providing income for individuals, which can achieve the greater "social mission" or "community wealth-building."

While the methods of non-profits and for-profits may differ, the ultimate goals of both were actually quite similar. Recall the man from the orchard who wanted to create a "baseline safety net" for his community. That sounds quite similar to "community wealth-building." Such goals mirror Daly and Cobb's emphasis that the root word for economics is *oikonomia* (household well-being) rather than something that means growth, profit, or individual gain. Thus, I conclude that urban agriculture in Cleveland is making attempts at re-framing economics to make it more focused on justice.

6.3.2 Focusing on Process: Goals Which Serve as a Means to Justice

A different set of responses was about, not the existence of justice per se, but activities that were conducive to *creating* more just communities. They might be classified as indirect justice goals, or a means to justice. I have divided these into two main categories: the goal of growing food and the goal of education.

6.3.2.1 Grow Food

Perhaps the most obvious expected goal of having an urban garden or farm would be to grow food. But no program I spoke with simply said that they wanted to grow food and nothing more. Here is one example of an organization that has a plethora of goals in addition to growing produce:

> [Our mission is to] improve the quality of life of those around us by growing vegetables year round and selling them at low cost to urban families, employing local residents and teaching sustainability and earth science to young people. [This organization] is a sustainable urban farm that applies ecological design principles and engages community participation to grow wholesome food year-round that is provided at low-cost to the neighborhood, improving personal health while generating training, mentoring and employment opportunities.

As we see in this example, growing food is an outlet for the following components of justice: food access, employment, education, and health. In general, growing food was paired most closely with such themes. In other words, the idea of growing food is closely in alignment with some other goal, and that other goal is often the one that takes precedent. A prime example of how the growing food goal would come second to others is from an interview I did with two people who ran a community garden near Ohio City. When I first asked what the goals of the garden were, one of them told me that "what we'd really like to do" is "get to know" the neighbors through gardening. He elaborated

further, saying how important the garden had been for improving the neighborhood. Then, the other representative chimed in: "It's what he said, and plus we can grow our own food." It was almost as if the growing food part was an added bonus.

Representatives also expressed more specifically what type of food they wanted to grow or how they wanted to do it, including growing food in a "sustainable" way, growing "healthy" food, growing "our own food," or growing food for neighbors. Such goals of growing food tie closely with other important social or economic goals which usually form the bulk of the farm or garden's goal. In other words, growing food is not just growing food. It is a means towards achieving a greater goal of justice.

6.3.2.2 Education

Education came up often in representatives' responses about goals. There was great interest in using education to allow people to better their own lives. I have already noted individuals who said they were using education (such as gardening workshops or job training) to build food and economic justice. Education took on a variety of forms in my interviews. One school teacher created a garden to provide more resources to her school which was in a "transient" neighborhood which lacked much "green space": "My ultimate goal is to have classes use it and tie it in with their science curriculum, but also other curriculums." She thought her students could get an enhanced education by tying what went on in the classroom to processes in the garden.

There are other examples of program leaders who had goals that used education as a means to achieve justice. One man who helped start an orchard that plans to donate food said that "I hope that some of this will bring about enough confidence for our group

to teach other people about it [orchards]. So that's really I think what needs to be done long-term, in terms of our long-term vision." Another man said he wanted his project should be educational: "To show people how to grow grapes in their own communities" was one of his ultimate goals.

One woman on the east side of Cleveland expressed the relationship between education and justice nicely in her organization's mission statement: "Our mission is to help people in underserved communities learn to grow fresh local food and build healthy long lasting relationships with each other so they can use those skills and relationships to create opportunities in their own neighborhoods." When individuals learn something new (whether that be growing orchard fruits, grapes, or vegetables), it means that they have a valuable skill which they can use to "create opportunities in their own neighborhoods," or improve their communities. As I will explain in the following section, education can also be an important part of democracy; when people have some sort of knowledge, they are able to use their own skills for creating solutions for themselves. Thus, education is a tool for justice and democracy and ultimately sustainable development.

6.4 Theme Three: Democracy

Wangari Maathai's third leg in her sustainable development stool, democracy, also came up in my interviews and in a wide variety of ways. Many gardeners and farmers envisioned inclusivity, participatory programs, and grassroots implementation as central components of urban agriculture. These comments seem to indicate that in addition to justice, democracy is an important value and should be part of the dialogue on

sustainable development. While I include responses goals and definitions in Theme Three, I will also include other quotes that were not responses to either of these questions. Often the theme of democracy would come up as participants told the history of the creation of their garden or farm or when they began speaking about challenges they face. I have also organized the categories differently than in Theme 3 so that it is more fitting with components of democracy. These relate to the descriptions of democracy I provided in my theory chapter, in which there are important components of community inclusivity and participation, change being driven from bottom-up demand, and grassroots implementation.

6.4.1 Community Inclusivity and Participation

6.4.1.1 Inclusivity in Programming

An important component of a functioning democracy is that everyone has the chance to have a voice. One important way that programs in this study attempted to give a variety of groups a voice was by actively including the community in their program and expressing that they wanted Cleveland's urban agriculture movement as a whole to do the same. One woman who ran an educational program and market garden said that not including the community in her program would not make any sense: "We could grow here, by ourselves. That's all it would be. What would it be? They [the neighbors] wouldn't like us very much; I mean they wouldn't feel vested in this program." In other words, her project would not be achieving what its goals—"food, relationships, and opportunity"—if there were no people to participate and, perhaps just as importantly,

locals from the neighborhood to participate who would support ("feel vested," as she says) the program and see its importance in the community.

Another nearby market garden program had similar goals of creating relationships with the community and allowing for community participation. The representative I interviewed expected students in the program to learn through "community engagement" which included selling produce on-site to neighbors, selling at local farmers markets, providing gardening workshops for the neighborhood, and designating a portion of the market garden for community beds so neighbors could grow their own produce. This program showed a wide variety of ways that an urban agriculture program might work to be inclusive, allowing neighborhood and community members to participate in a number of ways. The program representative described such activities as providing "access points" and providing "resources" for the community, pairing the idea of community inclusivity with earlier justice themes.

A big component of many community gardens was to bring the community together through the act of gardening, allowing inclusive participation. Put simply by one community garden leader, "Our goal is to reach the community through having small lot participation where we get to know each other just because we're here taking care of our little ten by twelve or ten by seventeen foot section of ground." This garden was trying hard to get more folks in the neighborhood involved so that it could be more of a neighborhood rather than an individual-driven activity. As he said, "It would be nice if we had more people participate." He also emphasized that including both gardeners *and* non-gardeners was needed: "If it's a community garden you've gotta talk to your community so in some ways they may not all be gardening here but we are touching

them." He said that the attempt to engage in dialogue with all community members played an important role in changing the neighborhood, providing "a positive influence of neatness and caring" that was encouraging all residents to be "quieter" and "more respectful" and litter the streets less. Thus, there was a connection between being more inclusive by reaching out to all community members and producing more positive neighborhood benefits.

Another east side community garden had a similar goal to make an inclusive garden. The garden coordinator said the purpose of the community garden was for it to be "a vehicle to bring diverse groups together." The diverse groups included parishioners from a local church, individuals from a nearby drug treatment center, and children at summer camp. The garden coordinator says that this goal of "inclusive gardening" was "very successful":

> Well you can imagine. You know, school parents are saying, "Well these guys are [in] alcohol and drug recovery. Do I really want them right next to my kids?" Seniors are goin', "These are all guys that look, you know, pretty tough." So it's really helped people to understand that they're all – we're all nice people.

She added at another point in the interview that on top of changing perspectives about different types of people, the garden has also encouraged collaborate amongst diverse groups, as gardeners are "meeting one another, they're learning about one another, they're sharing ideas." Just as in a functioning democracy, all different groups in the community are able to participate and work together.

Some projects had to work very hard to reach out to the community and get them involved. One farm manager told the story of his program, which he did not think was doing a good job at involving all types of community members, including the low-income

population, when he arrived. He described to me the process of how he worked to improve inclusivity of the farm:

> This year we've started expanding more to people that are just neighbors. On Sunday we had an event year, we had an open house. Much to my boss' chagrin I really didn't involve them at all. Because I didn't want it to be a typical [organization] open house. I wanted it just to be focused on low-income households. So we did a lot of flyering in [the nearby CMHA housing complexes]…I worked with a community organizer who lives in the area...She's been in this neighborhood for I think like 25 years. She said "If you want people from the neighborhood, I'll do that. Just leave it up to me." And so I gave her a bunch of flyers and everyone she knows and all the organizations that she knows. So we had 260 people here, Sunday, which was great. So I was pretty happy about that...So it was a fun event and everyone who came who I wanted. Like it was mostly people from [the nearby CMHA housing complexes]...so it was good to have that experience with all of them.

Another program coordinator also described to me the efforts he put forth to gain initial local support and participation for his community orchard. He learned a lot from his efforts on how best to create a participatory program: "What I often saw was the greatest need was trust. You know I saw that knocking on doors, holding public meetings, and doin' a lot of work with neighbors who would become friends. I thought that trust was probably the greatest issue you have with the broken bonds in the social fabric of the urban environment." Eventually he was successful, noting that "all of a sudden people were just pouring out of the woodwork" to help out. His story and the other farmer's open house story are examples of how it actually takes a great deal of conscious effort to make community members feel welcome, encourage participation, and confide in the motives of the project.

Lastly, a select few programs had intentions of employing local residents, presenting another example of how programs could actively work to allow for increased community participation. This is different from the economic justice theme because it

does not include all programs that wanted to create jobs. It focuses specifically on those that want to create jobs for locals. For example, a central component of one non-profit organization I interviewed was to "employ local residents." Another man who represented his program said that he would "like to create a dozen jobs," employing neighbors and residents of the local "halfway house." Neither project has been successful in this goal yet, due to financial challenges of being a young business (both started in 2010). Despite challenges they expressed that they would achieve the goal of employing locals and that a desire of local residents to gain employment in the projects was present. As one non-profit director put it, "90 percent of the people in this neighborhood would be happy to work if I could pay them minimum wage. They're just not interested until I can pay them minimum wage. I don't blame 'em."

6.4.1.2 Inclusivity in Food Distribution

One common challenge among many market gardeners and market farmers in this study was ensuring that all types of community members, especially low-income individuals within the city limits, could participate in the act of purchasing produce from them. While part of the unequal distribution of food was expressed as a justice issue for some representatives, it also manifested as a democracy issue because what was troublesome to farmers was that they had to be sustained by "outsiders" rather than their own community members. One beginning market farmer expressed that "If you really wanna make a living right now at this, you gotta sell to like, rich white people in the suburbs." He wanted to provide discounted produce in his own neighborhood which he characterized as "transient" because the neighbors had been really good to them and kept

an eye on their garden but he just did not know how to make that desire a reality.

Another individual, when I asked him who his customer base was, answered:

> They're from the 'burbs. My customers are primarily white, educated, and from the 'burbs. Which isn't to say that I don't get a few people from here, 'cause I ask "What's your zip code?" and surprisingly every week I get two or three people from my zip code...But everybody else is from somewhere else. Could be the next neighborhood over, but my customer base is primarily white suburbanites. Educated white suburbanites, with jobs. With disposable income.

This man's statement gets at the heart of the food distribution gap that many other types of programs are trying to address. While many market farms chose to sell their product outside of their (often low-income) neighborhoods so they could be more financially sustainable in this way does not mean that they were being inclusive or that they perceived themselves as inclusive.

In contrast to such programs that sell only to "white suburbanites," some projects have taken it upon themselves to change the distribution practices of the organization and make them less exclusive and more diverse. Here is the description put for by one market farmer:

> It feels a lot better than the first year, when I was like, I'm just delivering food to these rich people that my boss knows. It just felt really odd and weird...That's one of my goals, is to not have the food that I grow be so segregated. We're gettin' there. We've improved ten-fold from last year. Last year we were goin' to these stuffy restaurants and these stuffy white people on the east side.

I went on to ask him, "What does your customer base look like, demographically?" He answered as follows:

> The customer base varies. We do a drop-off [for our CSA] at [a private school in an east side suburb]...And then this year we also have a stop in Cleveland Heights for people who live in Cleveland Heights. Last year we had a group from the [a church] headquarters downtown. They came out to volunteer and a lady there said, "Hey, can you come and speak to [us] just about what you do and your food offerings?" and so I did and 30 people signed up for the CSA…And that's really cool because…it's a real cool cross-section of education [backgrounds], of like

> people who don't know vegetables, a lot of people who really love local foods, so it's really cool to get all of the different mix of people...And then we have people from this neighborhood who have started buying the CSAs. So there I would say that we are pretty firmly rooted in with the CSA, with the [church] we have a really good demographic mix of people- blacks and whites and young and old. The east side…people are all stuffy white people. Not that I don't like that it's just they're…the typical eastside of Cleveland wealthy person. And then here at the farm stand we get a really good mix of demographics as well. Like we sell inside this CMHA building each month, but then we have a lot of people who live up there come out here to buy. And then we have a lot of people from the neighborhood…So I like those selling opportunities because we just get a lot of different people.

The above example represents an attempt to make food distribution more inclusive geographically (by including local residents), racially (by including more blacks), and socioeconomically (by including more low-income individuals). What I think is especially notable is how differently the farmer feels now that he can sell to a variety of groups; as he said, it "feels a lot better" to have a customer base that is "a lot of different people" and "a really good demographic mix."

There were also projects that, in part because it was rooted in their mission statements, never turned to an exclusive distribution model. A market farmer on the west side of Cleveland, located in a very diverse neighborhood, said that "One of the primary things that we want to do is grow food for sale in the neighborhood…Sell it to the neighbors. Enrich the neighborhood." She added that you might not find some products at her garden that you would find at other gardens because there is a demand for specific types of produce in her neighborhood: "Our garden is really geared toward neighborhood tastes. I mean, we wouldn't exactly fit in the Shaker Square model." The "Shaker Square model" she referred to is the idea that one must leave the city to sell produce at bigger, higher-priced farmers markets in wealthy suburb (something that other farms in this study did indeed do) to make a profit.

6.4.1.3 Divides Between Institutions and Individuals

Encouraging inclusive participation in employment, production, and food distribution were concerns for a majority of farms and gardens in this study. Another inclusivity issue at a macro-level also was raised although by a smaller number of gardeners and farmers. That issue was dissatisfaction with bigger institutions such as the city government of local CDCs. One form of dissatisfaction was overly simplistic planning by such institutions. When I asked one woman what success for Cleveland's urban agriculture would be, she told me it was about better planning:

> The only thing I have a problem with is the actual planners…I don't think they worked hard in trying to save the homes that could've been re-habbed and could've been left as part of the housing stock, 'cause there was a lot of houses that should've never been demo-ed. They could've been saved. I think if they started out with a section of Cleveland and not just have this hodge podge, because if people don't keep up on this, I can tell you now there's people that have walked away from their garden. And they've left them to be back on the burden of the city. I just think they should've done quadrant planning…And, you know, every time you have a vacant land you don't just want to throw a garden in.

While this woman was very supportive of urban agriculture, what she was dissatisfied with is an excellent example of what Scott calls modernist, reductionist planning. An overly simplistic plan could, as Scott describes, fail in many ways. This gardener supported an alternative framework which would decide on appropriateness of land use for each lot, focusing on much more contextual, small-scale case-by-case basis rather than sweeping city-wide policies.

Another aspect of the citizens-institutions divide that I experienced was through the CDCs' apparent neglect to include all in their respective districts in their programs. One woman of a project that began slightly earlier than others in this study (2006) provided a few cases when she thought the local CDC and government had not been

supportive of her group's project. She expressed how unsupportive the CDC was when they first started their program, a few years before ReImagining and general trendiness of urban agriculture began. When I asked her what she would define as success for urban agriculture in Cleveland, she included the following in her answer:

> One big aspect of success would be that all the people that have wanted to turn their lots into farms and into gardens would be supported by CDCs and the city. Supported but not interfered with. Not taken over but actually respected and supported…I know a lot people that have gotten discouraged by the CDC's sudden interest in urban agriculture…And they're doing this [project to fix up the street that this garden is located on]…For their meetings such a small percentage of the neighborhood was there. It was all white people - that doesn't represent our neighborhood…But I feel like, you know, they could do a little harder work to try to not just have the one meeting and then say that they've done it, you know. A lot of people voiced that opinion but they still…did a design for this section [of the street] and it was favorable in that there was a lot of potential here, but they came up with what we could do here without ever talking to us, and presented it to the public as if we're not here doing anything. It's like that kind of thing is what I'm talking about. Like don't go in and act like the people that are doing something - busting their asses - are nothing, and that you're gonna take over, you're the experts now, and you're gonna tell them how they're gonna run their project. That is really disheartening to grassroots organizations and people in the neighborhood. If you're a neighborhood development corporation and supposed to develop your neighborhood, learn how to do it!

Here is a clear example of participatory development, what both Scott and Chambers argue for, not being put into action, and subsequently causing negative repercussions in the community. First, there was a concern that urban agriculture was difficult to implement until the city found value in it; they did not find value it in when only the local residents wanted to do it. Second, the CDC completely ignored some residents in their neighborhood study, showing a lack of inclusivity. Third, the residents who did attend the meeting with the CDC were white, despite the neighborhood being racially mixed. Not only did these actions produce ineffective results, but it was, as this woman put it later, very "disrespectful" to leave out the locals in the area. Other programs, off the

record, mentioned similar disgust with how the CDC was deciding when and which urban agriculture programs were important, especially in the creation of one of the larger, well-funded farms in the city which, according to representatives I interviewed, ignored some individuals' requests to be involved or meant they could not get funding for their own smaller projects.

6.4.2 Race

Underlying a number of the challenges discussed in the above sections is race. Before I add on new components to the theme of racial tension, let me briefly return back to some of the topics from earlier subsections.

6.4.2.1 Race in Community Inclusivity

To use terms of people that I interviewed, farmers and gardeners stated that they did not like that their food had to be so "segregated" (which has a racial connotation) or that they had to rely on selling to "educated white suburbanites." No one talked only about income inclusivity; racial divisions were just as prominent as income divisions, if not more prominent. The divide between individuals and local planning agencies (including CDCs and the government) also had an underlying racial component. Recall the woman who expressed concern that at the open meeting hosted by the CDC, the attendees were "all white people - that doesn't represent our neighborhood." It was not that the CDC was being generally exclusive or unwelcoming, it was more specifically that it was *racially* exclusive or unwelcoming.

A similar story about the same CDC was told by a black farmer in a nearby neighborhood who was angered that he could not be employed by the CDC but young white individuals could:

> I've had kids come into the farm, college kids in particular, you know 99 percent of the white, and they want to learn everything they can about the farm and what I do. And then the next year they're funded by [the local CDC]. They've got these desk jobs, working in the urban agriculture scene. I'm like, you're 22, 23 years old...How did you get this job?

This man was also angry that the local government, in conjunction with local CDCs, was eager to give people from the "outside" use of the land bank. He wanted to see more focus on community empowerment, which would mean respecting the needs and desires of people in the neighborhood, including African Americans. I saw racial exclusivity at play on my visit to one of the local CDCs. While the CDC is meant to work for the city's needs as a whole, I noticed that the majority of the staff members that I saw on my visit were white. Remember that the city of Cleveland is actually majority African American.

6.4.2.2 Gentrification

Another theme directly related to race that was mentioned in a few of my interviews was the issue of gentrification, a complete forced removal of community members (in most cases African Americans) and a far cry from a participatory, inclusive democracy. The same woman who was concerned about the CDC's lack of inclusivity in their street fix-up project mentioned that the CDC was supportive of things that she thought symbolized gentrification: "They did support us in getting our gate and our fence, anything that looked pretty and looks like their idea of gentrification they're gonna support, automatically." The gate and fence were projects mandated by the local CDC so

that the project would look more respectable, according to the CDC (there were many misconceptions about the project because it was based in permaculture principles and many people do not understand permaculture, said the woman).

A similar concern about gentrification was occurring on the east side, which is arguably much less gentrified compared to the west side of Cleveland. One black man who started a project in his neighborhood emphasized how important it was for people like him to start projects as a way to stick up for African American neighborhoods and prevent so many outsiders from coming in. He mentioned that it was quite hard for him to get funding for his project, noting how the funders thought he did not have enough experience in agriculture. It is unclear whether this man thought he would not get the money because he was not qualified to do urban agriculture or because he thought there was an element of institutional racism playing out. However, he did note at the end of my interview with him that racism is still alive and well in this nation and it is important for anyone working in urban agriculture to learn about race. The issue of gentrification, then, is related more to a subconscious or structural form of racism. It reminds me of Scott's analysis that authorities say "we know what's best" for development by targeting the specific group that they feel has problems, but ultimately is very detrimental to that group and fails to create sustainable development.

6.4.2.3 Race as a Hidden Issue

The racial divides or tensions described by my participants is an issue that relates to democracy because it is a specific case of lack of inclusivity; what is more concerning to me is that race as an issue was often a hidden issue that was discussed in a more tacit

way. At this point I cannot say if it is because people were hesitant to discuss race with a researcher or if it was simply something they just did not think about. What I point to, though, is some information on which study participants *did* speak with me about race. All individuals in my interviews who society would label as racial minorities (African American, Asian American) mentioned race in one way or another in their conversations with me. Not white participants mentioned race. These findings suggest that the discussion of race relates directly to lived experiences which allow for local knowledge of a situation, just as Chambers argues that rural persons have a special knowledge about rural development. I saw the theme of race spoken much more openly in my experiences with urban agriculture in other cities (such as Milwaukee and Detroit) which are arguably movements that are more dominated by racial minorities.

Let me turn to just a few specific examples of how race might be taken as a hidden issue. First let us look at the comment of an African American individual who used to work for OSU Extension but who now runs her own urban agriculture project. This person was frustrated that OSU Extension did not advertise its programs to everyone: "I started thinking, what wasn't this advertised to the people in my community? Which it was not." When I asked what success for Cleveland's urban agriculture movement would look like, this person said the following: "Inclusion. That everyone has access in a fair way. And fairness to me is providing resources to people in a language that they understand. That was an issue with me when I worked at Extension. They tend to cater to the people that look and sound and are educated like them." One might hear this comment and be confused about what she meant. But I think the racial component becomes clearer when connecting a few different dots about her story: she

was an African American woman working in Extension which is predominantly white. Extension did not cater well to people who did not "look" or "sound" like them. People often equate black people with being poorly educated. Thus, the implications of her comment were that OSU needed to do a better job at catering specifically to the black community. A different black farmer also talked about white domination in Extension. He said that OSU Extension needs more black graduates and more people of color to go work in the inner city; whites can be trained in university but they just won't get it. Both comments speak to the importance of having local knowledge, including the experience of being black in the city, included in sustainable development schemes.

Another individual who spoke quite openly about race was a white man who manages a farm on the west side. He is the individual who spoke about how poor black populations will end up having less people "who will not eat well" because they have poor access to good food, not simply because they do not like good food. What is important here is how he started his response: "It's not just, as some people would like to put it…'These urban people'—and by urban they mean black people—'just choose not to eat well. They just don't eat good food and that's why their families are in the shape they are.'" He is pointing out an important euphemism that people use to cover up a discussion about race, or a discussion that is at least partially about race. Even *he* expressed some hesitation about pointing to race, noting when describing his customer base, "this is gonna sound bad" and "I hate saying this" when describing his sales to both wealthy white people in the suburbs and black people in the city. I think this really gets at the tension in the Cleveland community about how to speak about race in a constructive, respectful, but not dismissive way. I think these comments also point to the

fact that oppression of minorities is structural and exists everywhere. Urban agriculture is one manifestation of structural racism which is yet to be solved, although some are willing to work on the issue or at least talk about it.

6.4.3 Bottom-up, Grassroots, Participatory Development

The last major component of democracy I heard in my interviews was the emphasis on grassroots and participatory development. Many people who I interviewed, when I asked about goals and definitions of success, responded that they wanted to see more grassroots projects in urban agriculture and food systems. While involving the community is an important component of grassroots development, it also implies being community-*driven* and working from the *bottom-up*.

6.4.3.1 Starting Small: Community-Driven Projects

The first component of grassroots development I observed in my interviews was the emphasis on starting small, community-driven projects. The desire for such types of programs was not just for urban farms or gardens, but for all types of projects that relate to the food system. When I asked her to provide a vision of success for Cleveland's urban agriculture, one gardener from the east side listed some reasons why small projects that involve the community were important to her and should be important to the city:

> If saw more places like [my project] or even the Kinsman Farm [a farm incubator] where, you know, there's a lotta different groups involved, I think for the city that would be a good thing. Because you have people that work so they wanna stay here, people that were healthy so they could actually contribute more than they take away from the actual dollars in the city. So it seems real simple but it's not at all. There's a lot of barriers to break down. The food system is so huge and it's not very inviting to a lot of small enterprise. So in my world, if I could have it my way, there would be a lot of small people. I'm comin' from a very, very small

> town and so Wal-Mart is just so bad to me…I would like to go to a place like this [the small, local coffee shop we're sitting in for the interview], where Jane and Joe own it. And it looks like them, and when you walk in you say hi to them. And they're part of the community and they're makin' money right where they live. So if the same thing could happen with urban agriculture to me that would be great.

This woman saw community-driven projects as a response to the Wal-Mart model, which focuses not on healthy neighborhoods but on uniformity, mass production, massive scale and profit over people. Recall that another woman expressed that her project's goal was to encourage neighborhood-driven development in each person's *own* neighborhood, rather than an outsider person or outside ideas being the driving force for the change: "Our mission is to help people in underserved communities learn to grow fresh local food and build healthy long lasting relationships with each other so they can use those skills and relationships to create opportunities in their own neighborhoods."

6.4.3.2 Using Community-Driven Projects to Drive Larger Social Change

Coming directly out of the visions of community-driven projects was the hope that each small change could be built upon by others in their respective communities to create a much larger change: in the case of my interviews, a change that would be across all of Cleveland. One man, in the explanation for why he wanted to start a project in his neighborhood, brought up Majora Carter, a woman famous for doing community development work in New York:

> Her famous saying is, "You shouldn't have to move to live in a better neighborhood," and I believe that. Make your own neighborhood better. So my goal is to everything that's around me - to improve it. And if the next person a couple of blocks over do that, [you can] create this circle...eventually you renew your whole city with citizen power.

Another man said success would be when "the majority of the food we consume is grown locally…By the people from the neighborhoods where the food is consumed." Notice both of these men and others emphasize acting in one's "own neighborhood," not someone else's neighborhood (such as, for example, a poor neighborhood that one is not a part of). What working in one's "own neighborhood" can provide is a collective movement that is grounded in grassroots projects and, as the man above said, "eventually you renew your whole city with citizen power."

Why not rely on the city for important changes? Many farmers and gardeners expressed discontent with how the city and CDCs were inadequately supporting change, or an opposition to top-down attempts at change. The alternative then is that these individual communities must create the change in a bottom-up way. One man argued, in his vision of success in Cleveland, that change can start at an even smaller level than a neighborhood:

> I have no doubt that it is a thing we will need to work on for decades, to improve eating habits, and it needs to be something we work on as a city because the government won't do it for us- the national scene won't do it for us. It needs to be something we work on as a closed system, like us in Cleveland need to work on improving people's diets through availability and education…I think it's possible for neighborhoods right now or even streets. I think people could change streets, even. 'Cause you can change a household...and if people could focus on streets, or houses, or neighborhoods, I think it's happening. It's just a long time before we can say that we're even close to success.

There are two components of this man's vision that I think are especially important. One, that "the government won't do it for us," echoes others' discontent about large institutions being able to represent citizen's needs. Two, the idea that "you can change a household," is an insightful comment on how large social change starts. According to

this farmer, changing the way we eat starts at the household level and not the government level.

One last step of grassroots change hoped for by gardeners and farmers was the coming together of various community projects to create a collective network, or movement, for change. One farmer envisioned the following:

> Each neighborhood that they call a food desert…could support and have their own grocery store, owned and operated by the citizens of that community. Feeding themselves, creating jobs themselves, and creating a new industry as far as local food is concerned. Connecting these major arteries, then, to a masterhead so that as a selling force, as a buying force. We could take this mobile neighborhood store, market, and drop it in any city in America. Take it to many festivals around the country, large ones, and feed all the people there and quadruple the money [that could be made]…the money would be broken down and divided into these small neighborhood grocery stores. So the concept is to act as an octopus, as one unit.

One final component that underlies the above comments about grassroots development is autonomy. The emphasis on making change in one's "own neighborhood" relates to autonomy in the sense that individuals should be allowed to take responsibility over their own communities. But autonomy is one step deeper; outside forces should not be dominating. As put by one woman, local projects should be "Supported but not interfered with. Not taken over but actually respected and supported." She added that "The hierarchy isn't in charge, but the people at the bottom of the ladder are in charge of their own thing and getting some support." Another man, in his vision of success for Cleveland's urban agriculture movement, talked about the larger food system and the importance of providing autonomy to people over their food: "We are not being dictated about our food, we are dictating our food, we are taking control of our food again."

VII. CONCLUSION

I began this paper by noting that urban agriculture in cities like Cleveland is in many ways a product of suburbanization, globalization, and de-industrialization. Such processes have meant that the majority of financial and political resources (including jobs and nutritious food) in recent decades have been directed to people outside of the cities and have left those remaining to fend for themselves and create their own survival strategies. Throughout time, urban agriculture has been one such survival strategy for many people in the city especially in times of economic hardship. Now cities (meaning city governments) are also becoming interested in urban agriculture, but from their perspective it has been framed as a way to rejuvenate and green the city and save money on maintaining vacant lots (of which in Cleveland there are 20,000). Previous literature shows that urban agriculture is used to achieve many goals at once. However, the literature does not always address the full scope of what urban agriculture is trying to accomplish or critically evaluate the projects themselves.

This study is meant to serve as a snapshot in time of the present urban agriculture movement in Cleveland, but a critical snapshot using a sustainable development lens. I created this sustainable development lens by examining the trajectory of the sustainability movement. I argued that the traditional sustainability three-legged stool oversimplifies or excludes some very important components of what it means to be sustainable. I used the work of a number of scholars, relying especially on Wangari Maathai, to develop an alternative three-legged stool which puts more emphasis on justice and democracy than the traditional stool. Justice means a more equitable distribution of resources to benefit

all members of the community. True justice requires a re-structuring of current economic and social systems. Democracy, on the other hand, is more about procedures. It means that everyone in the community gets a voice and is able to participate in the community and community decision making. It values local knowledge over outsider knowledge. Lastly, democracy puts emphasis on bottom-up, grassroots solutions to problems precisely because it uses local knowledge. Grassroots procedures therefore are more likely to create a solution that is appropriate and is owned by the community.

To see how both a traditional sustainability stool and an alternative sustainable development stool might apply to urban agriculture in Cleveland, I interviewed 21 representatives of farms and gardens in the city. I found that, when the traditional sustainability framework was applied to my interviews, urban agriculture could only be called "sustainable" in a limited sense. Urban gardens were using a variety of environmentally sound techniques and were building some level of social buy-in. On the other hand, the projects were not financially sustainable at all.

What is really notable about my interviews is how strongly the themes of justice and democracy arose on their own, indicating their importance to individual farms and gardens and to the movement as a whole. A wide variety of projects had goals and visions of improving food access and improving the financial status of people in their communities, both important features of justice. In terms of democracy, projects had goals to be more inclusive of the community. Some expressed frustration for organizations (especially local CDCs) when they were not inclusive. Many projects were based on bottom-up grassroots changes that would lead to larger city-wide changes. Underneath a lot of these desires were racial tensions. The strength with which these

themes came out in my interview suggests how much of a central focus they should take for sustainable development frameworks in general, or at the very least important components to keep in mind when analyzing urban agriculture movements in the United States.

After completing this study, I see a number of important areas for expansion in future research. First would be an empirical measurement of the extent to which gardens, farms, orchards, and vineyards in Cleveland are *actually achieving* the justice and democracy goals which they set out to reach. Second would be a follow-up of all of these projects in five years, at which time there would be the expectation that these programs are more established, more financially self-sufficient, and are known in their communities, among other things. It would also be a time to see if a larger movement for sustainable farming and food was forming. A third important follow-up would be a more in-depth look at the issue of race. I think race is playing a stronger role than virtually any scholars are giving it credit for, and devising methods to study it within the context of Cleveland would be very useful. Tackling racial tensions would be one way to improve the movement and make it both more inclusive and more empowering.

One final area that warrants more research is social networks. While initially I was not expecting to hear much on the topic of social networks, it ended up being something that I decided was crucial to the development of the urban agriculture movement. For example, most people I interviewed were not farmers by training and instead were doing farming on the side or had made a recent career change. However, they often had one foot in the door through their existing social networks in their previous jobs or hobbies. Farmers and gardeners would often mention other skills that

were not actually technique-related that helped them run their project, including being in the food service business for many years, having worked for OSU Extension, being a school principal, being a community organizer, being a journalist, and being a chef. These would often lead the farmer or representative to have, in addition to important management skills, strong social networks in these areas that would help them with their own project. For example, one man noted that, "I was in the food service business for 20 years. I know a lot of the chefs in the town. I know a lot of people in the food business." He explained that he knew a lot of chefs to whom he could now market his specialty products. In other words, his knowledge of things that were not specifically agriculture-related also helped his program. These skills speak to the fact that more than simply agricultural knowledge is needed to run a successful urban garden or farm.

Another compelling finding on social networks was that many farmers and gardeners desired stronger social networks for sharing knowledge, coordinating production, and saving money on resources. I believe that some of this desire came out of a recent trip organized by OSU Extension to Detroit to visit a few urban agriculture projects in that city. A number of individuals who I interviewed attended this trip. They compared Cleveland's lack of networks to Detroit's strong networks. For example, one female market gardener said she wanted to see collective marketing in a way that was happening in Detroit:

> I would like to see some type of cooperative at the Westside Market where we could figure out how to sell at the Westside Market. And we haven't figured that out yet. I went on that trip to Detroit…if we could combine some of what's happening in Detroit with some of what's happening in Cleveland I think we'd have the perfect mix because they've got a lot going on there. They've got kind of the growing network, that is, they've got a central group that can do a lot of seed starting and all of that. And sales and that part…I brought back with me

> from Detroit some of the charts and things that they use with the farmers and with the customers to show who is growing what, where, and when.

Another man who attended the trip saw stronger in-person community building in Detroit than in Cleveland. He lamented that the monthly networking events for Cleveland's local food scene had to stop, saying the following:

> You need an opportunity for people to share information...We visited Detroit recently...You know what I like about Detroit is so much of what they do is place-based. It's like show up and we're having a potluck or show up and we're having a meeting or some kind of a class or information sharing. Peter's [Local Food Cleveland, an online networking site] is virtual stuff and it's not the same. I was very impressed with their [Detroit's] boots on the ground.

A really interesting future study would be to see what types of networks for growing, marketing, networking, and sharing resources would be appropriate for Cleveland. Based upon the fact that Detroit's networks were so strongly admired, perhaps looking at how Detroit has been able to create such effective networks would be a great starting point.

While the trip to Detroit was an inspiration for those that attended, it was not only people who had visited Detroit who wanted to see more social networks. New farmers and gardeners saw how hard it was to work alone in a new environment. In the urban setting, they were limited by space and that meant you could only do so much by yourself. One man who grew produce on the east side of Cleveland put it very clearly when he talked about how he wanted to see more "worker-owned collectives": "That is how I see urban agriculture in this city working. I mean really working. Not by having some guy scratching out a quarter of an acre and trying to sell it at a farmers market. You're not gonna survive. Nobody survives a long time doin' that." He elaborated on the power of worker-owned collectives, saying the following:

> Now if you just grew them [a select few vegetables] yourself, you could probably produce a pound or two a week. That's not much and you're gonna end up

> having a hard time find a buyer. But if you grow two pounds, and I grow two pounds, and they grow two pounds, and you get ten people to do that, now you've got 20 pounds and that you could sell to a restaurant. That's something you could sell to a food service provider like Cleveland State, to one of the kitchens there. Or University Hospitals. Or Progressive Insurance and their food service program. You can start reaching into the larger buyers.

What is so important about making use of social networks is that it fits directly into the theme of democracy. Creating a social network is one way to build a just, grassroots movement that fits the needs of the community.

So why does all of this matter? What I hope I have shown is that urban agriculture in Cleveland is indeed, like urban agriculture in other places, working to achieve a variety of goals for individuals, communities, and the city. Many of these goals are related not just to the environment, but to justice and democracy. In other words, Cleveland's urban agriculture is just as much about people as it is about plants. While urban agriculture is often seen as a panacea for a city's ills, it should by no means be seen as perfect. Instead, it should be seen as a movement with room to grow, to continue working for better food access, more inclusivity, and more grassroots implementation.

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APPENDIX A

WRITTEN SURVEY QUESTIONS

1. What is the name of your farm or garden? *

2. Where is the farm or garden located? *
Address or street intersection.

3. When did the farm or garden come into existence? *
Please list the year.

4. How large is the farm or garden? *
In dimensions or square feet or acreage.

5. What items are grown in the farm or garden? *
Please list items grown in any significant quantity.

6. Who receives farm or garden produce? *
Check all that apply.

_____Farmers/Gardeners and their families
_____Other members of the neighborhood/community
_____People outside of the neighborhood/community
_____Other: _____

7. How is produce from the farm or garden distributed? *
Check all that apply.

_____Farmers/Gardeners keep the produce that they grow themselves
_____Farmers/Gardeners share their produce with each other
_____Farmers/Gardeners share their produce with community members
_____Produce is sold on site
_____Produce is sold at off-site farmer's market
_____Produce is sold at a reduced price
_____Produce is sold at market price
_____Produce is donated
_____Produce is distributed via a community-supported agriculture program
_____Other: _____

8. Does the farm or garden have a formal mission statement? If yes, what is the mission statement?

9. Does the farm or garden have a formal leadership structure? If yes, what is the leadership structure?
i.e., a formal leader, or a manager, or a committee, etc?

10. Does the farm or garden have a formal decision-making process? If yes, what is the decision-making process?
i.e., is there a method for resolving disputes, for changing existing rules, etc?

11. What is the farm or garden's organizational structure? *
Check all that apply.

_____Individual plots for farmers/gardeners/families
_____Large plot(s) tended to by all farmers/gardeners
_____Other: _____

12. Please check the box that most closely describes the farm or garden's organic status *
Please choose from this list.

_____The entire farm/garden is certified organic
_____The entire farm/garden is organic in practice, but not certified
_____Some of the farm/garden is designed organic, other parts are designated non-organic
_____There is no rule in place: different parts of farm/garden may or may not be organic
_____The entire farm/garden is non-organic
_____Other: _____

13. Does the farm or garden generate any of its own revenue (including expectations for 2012)? If yes, approximately what percentage of the farm or garden's operating costs does this represent? *
Please choose from this list.

_____No revenue
_____Revenue is miniscule (less than 10% of costs)
_____Revenue is less than 50% of costs
_____Revenue is greater than 50% of costs
_____Revenues exceed total garden costs (i.e., there are net profits)

14. Does the farm or garden receive donations (including expectation for 2012)? If yes, please list donors if appropriate. *

15. Are there any other sources of funding besides revenue and donations (including expectation for 2012)? If yes, please list them if appropriate. *
Ex: grants; membership fees

16. I would love to visit your farm or garden site later this summer. It should take an hour or less. Please provide your contact information below. *
Name, email, and/or phone number, and availability.

APPENDIX B

IN-PERSON INTERVIEW QUESTIONS

1. Can you tell me a little bit about the history of garden/farm? Who started it, when, and why? What kind of gardening/farming background do you have?

2. What are the goals of the garden/farm?

3. You mentioned in the written survey that the food is distributed to ____. Could you tell me more about the process of food distribution and provide a breakdown (in dollars or percentages) of where the food goes?

4. Who does the customer base appear to be in the food distribution? Can you accept food stamps/WIC?

5. What's the breakdown of revenue on your food distribution? And how much of your costs does that cover?

6. How many volunteers, how many paid staff? Where do these people come from (neighborhood, word of mouth, website, application, volunteering organizations, etc)?

7. What are other revenues besides selling food? How much of your total revenue is that?

8. What are your major program costs? (paying staff, farm infrastructure, etc.)

9. Are revenues going to go up in the future?

10. Can you describe some of the things that gardeners/farmers do for soil fertility?
    a. Synthetic fertilizer
    b. Organic fertilizer
    c. Compost (purchased)
    d. Compost (on site)
    e. Manure
    f. Cover crops
    g. No-till
    h. Raised beds
    i. Crop rotation
    j. Bees
    k. Mulch
    l. Other soil amendments
    m. Other

11. Can you describe some of the things that gardeners/farmers do for pest control?

a. Conventional herbicides, pesticides, insecticides
b. Organic herbicides, pesticides, insecticides (purchased)
c. Organic herbicides, pesticides, insecticides (created on site)
d. Scouting
e. Traps
f. Hand weeding
g. Releasing beneficial insects
h. Planting companion/intercropping
i. Attracting beneficials via planting
j. Row cover
k. Other

12. Other techniques used on site?
    a. Irrigation (rainwater, city hydrant, etc)
    b. Type of seed (saved, organic, conventional)
    c. Fossil fuel-driven machines?
    d. Re-using materials
    e. Hoops/tunnels

13. How would you define the success of your garden/farm? Are you meeting that definition of success?

14. If you could get your hands on any resources to improve your project what would you get to allow yourself to be most successful? These could be tangible or intangible resources.

15. What's your vision of success for urban agriculture as a whole in Cleveland?

APPENDIX C

SELECTED PHOTOS FROM SITE VISITS

All ReImagining A More Sustainable Cleveland grant recipients had a sign like this posted at their site.

This school garden, like many sites, is a former vacant lot nested between occupied homes.

Chickens are natural insect control and a source of fertilizer. I visited three different sites that had chickens.

Tires are abundant in Cleveland and can be re-used in creative ways.

SPIN, or Small Plot Intensive Farming, is a popular method to use on small lots. It emphasizes growing short-term, high-yield crops using sustainable practices.

Some sites use rain barrels for irrigation.

Farmers and gardeners in Cleveland often choose to grow unique varieties of plants.

One of Cleveland's largest farms is home to non-profit and for-profit operations.

Bees are a popular way for gardeners and farmers to improve fertility.

High tunnels are season extension mechanisms used at many different sites; many more sites plan to get them in the future.

Permaculture sites often differ in appearance from more traditional gardens. Two sites in this study practice permaculture intensively.

Many gardens and farms have to grow in raised beds because of contaminated soil; however raised beds are also used as a fertility and pest management technique.