ABSTRACT

Residents of the United States increasingly support organic and local food systems. New Social Movement theorists have described alternative agriculture as a social movement that transcends social class. Other scholars have critiqued alternative agriculture for catering to a middle-class, white public. Simultaneously, geographers have identified communities across the United States that struggle with reduced access to healthy fruits and vegetables. In some of these neighborhoods, known as “food deserts,” local groups are redefining an inequitable distribution of healthy food as a social injustice, and they have begun initiatives to practice “food justice.” The overarching research questions of this study are: 1) How do communities become food deserts? 2) How do food justice movements crystallize and communities practice food justice? 3) What are the social outcomes of food justice movements? Using an Ecology of Actors framework, this study analyzes the actors and operational scales of three food justice movements in Phoenix, Arizona. A narrative analysis of historical scholarly materials and other artifacts reveals that, for more than a century, some communities have tried to create minority-operated local food systems. However, they were thwarted by racist policies and market penetration of the conventional US food system. Interviews with residents, garden organizers and food justice advocates living and working in the city create a narrative of the present day struggle for food justice. Results of this work show that contemporary residents describe their foodscape as one of struggle, and carless residents rely upon social networks to access healthy food. Garden organizers and gardeners are creating networks of community gardens, market gardens, and informal farmers’ markets. They are actively transforming their communities’ landscapes with
sophisticated garden ecology in an intense urban heat island. However, the movement’s continued success may be threatened. Many new Phoenix-based local food coalitions and national alternative agriculture social movements are now working to alter Phoenix’s foodscape. Composed of well-educated professionals, who have adopted a justice-based language around food, these organizations may unintentionally co-opt the local food justice movements.
DEDICATION

For the Food Justice practitioners whose work changes lives.
ACKNOWLEDGMENTS

I would like to express my deep appreciation and gratitude for my adviser, Dr. Sharon L. Harlan, who guided this work from its inception through completion. Sharon’s willingness to listen to me ramble as I tried to find emergent themes and to read draft after draft of this, and other manuscripts were far beyond what a reasonable person should be expected to do. Her willingness to cross disciplinary boundaries and examine the unfamiliar demonstrated a revolutionary element that I have not commonly found in scholarship.

I would also like to thank my committee members, Dr. Bob Bolin, and Dr. Kevin McHugh. Bob taught me the invaluable lesson that scholarly critique is more than grumbling. Kevin’s inspired set of readings showed me that it’s OK to think outside the box, and to question if the box existed at all.

I would like to thank my parents, Tom, and Linda, for supporting me with room and board, allowing me to turn their backyard into a garden and put up with my occasional moodiness over the last seven years. I thank them also for proofreading many pages of manuscripts. All mistakes in the end are mine alone.

This work has been supported by National Science Foundation (NSF) grants: NSF Grant No. GEO-0816168, Urban Vulnerability to Climate Change, and by NSF Grant No. BCS-1026865, Central Arizona—Phoenix Long-Term Ecological Research. The views expressed here do not necessarily represent those of NSF. Further support was provided by a School of Human Evolution and Social Change dissertation completion fellowship. Special thanks to my community partners: St. Luke’s Health Initiative, Tiger Mountain
Foundation, New Roots FARM program, Phoenix Revitalization Corporation, and the Wesley/Amigos Center.
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CHAPTER 1
LET THEM EAT CAKE

Prologue: A Garden Party Near South Mountain, September 2013

It was a beautiful day and the relentless heat of summer in Phoenix, Arizona had faded. Carmella and I stood under a canopied farmers' market booth in the northwest corner of an acre-sized community garden. I tried to focus on the conversation, but was distracted by three dragonflies dancing on the breeze only a few feet away. Their red and gold bodies reminded me of precious gems as they flitted back and forth. Hayden, the garden organizer, was calling out to a group of volunteers to join his work party headed out to pull weeds at a nearby market garden. Carmella was describing to me the food available within the surrounding community,

We only have convenience stores; we don’t have a market here. So, you got to buy what you can. Whatever they serve. The vegetables aren’t that fresh cause it’s a convenience store. We don’t have a variety of different meats. The majority of the meats here are pork and bacon. You know, stuff like that.

Carmella turned to an approaching customer. The table in front of us was covered with stacks of fresh cut greens: collards, mustard, Swiss chard, and early lettuce set on the table amongst baskets of carrots, eggplants, and plums. Pointing at the greens, a customer asked, “How do you cook this?” Carmella answered, “I make it with eggs; I make it myself. I want to tell you something. Mix collards… mix all your greens, every green, all four greens.”

“I want my greens the old fashioned way. I am sorry,” the customer responded assertively. Carmella quickly came back with, “Well, girl, you got to try something new.” She called out to Hayden as he walked past, “Hayden… Hayden! Tell her! I was 200 some pounds and look at this,” gesturing to herself, “that’s from all them greens!” Hayden chimed in with, “You’re looking good, girl!” Carmella picked up again, “I am serious. My blood pressure has dropped and everything!”

Food. It is a simple sounding word for a seemingly simple thing. Food is so integrated into our day-to-day lives that we may take it for granted. That is not to say we don’t think about food. Food is always on our minds. We think about the cost of food and grumble when strawberries are twice what we remember paying last time. We prefer
some grocery stores for lower food prices. However, we go to other, more expensive, 
grocery stores for higher quality foods. We think about what we eat. We know that our 
health is affected by the quality of food and the kind of diet that we eat. We think about 
how food influences our physical appearance. We attempt to control our physical 
appearance by controlling our diet.

The Paleolithic dieter tries to replicate a diet that would be familiar to an ancestral 
hunter and gatherer. The Atkins dieter reduces carbohydrates by increasing meat and 
vegetable consumption to lose weight. That diet, during its height in 2003-2004, was 
criticized by some for a noticeable decline in US consumption of pasta and rice 
(Kaufman, August 3, 2005). The Mediterranean diet is associated with physical fitness, 
health and longevity. It is based around traditional eating patterns of Greece and, 
sometimes, specifically the island of Crete.

Dieting is one way many American’s regulate their appearance but others link 
their diet to a code of ethics. The vegetarian and the vegan have decided that they will not 
take part in the exploitation of animals. The environmental vegetarian gives up animal 
products because of industrial agriculture’s damage to the planet. For others, religion 
plays a role in what they eat. Personal choice in the contemporary food system allows all 
these different eaters to customize their diet around their life choices. Examining food at 
a personal, individual level may have become an obsession for many Americans. And, for 
many affluent North Americans, the ability to make choices about their diet may be taken 
for granted.

Affluence and seemingly unlimited dietary choices contribute to over-eating in 
many industrialized nations, including the US (World Food Program, n.d.). Roughly one-
third of North Americans are obese. Particularly affected by the US obesity epidemic are non-Hispanic black adults of whom 47% are obese. Forty-two percent of Hispanic adults and 32% of non-Hispanic white adults are obese (Ogden, 2014). The US Centers for Disease Control and Prevention (CDC) estimates that some 110,000 North Americans die every year from illnesses related to obesity and refers to obesity as an “epidemic” (CDC, n.d.). To draw a comparison, the annual number of US deaths linked to the obesity epidemic is roughly equivalent to the average number of US soldiers who died every year the US was engaged in World War II.

At the same time, malnutrition and under-nutrition are leading causes of suffering and mortality in the developing world today. The United Nations estimates that some 800 million people in developing countries do not have enough food to maintain a healthy life. Over the last two decades geographers have also identified areas across the US where healthy food choices are limited, commonly referred to in scholarly literature as “food deserts” and “food swamps.” Governmental institutions, such as the United States Department of Agriculture (USDA), use the food desert concept to identify communities with reduced geographical and economic access to nutritionally dense (in contrast to calorically dense) foods. In contrast, a food swamp, is an area with increased geographical access to calorically dense, but nutritionally sparse foods (Rose et al., 2009). These phrases, food desert and food swamp are simple metaphors referring to geographical areas in wealthy nations that have relatively less access to healthy food, and/or greater access to unhealthy food than surrounding areas. Despite being metaphors, these foodscapes may substantially affect the quality of life and health of residents living in the area of a food desert or food swamp. Health and dietary research shows that food
environments have a deep influence on over-nutrition (Cohen & Farley, 2008; Fielding & Simon, 2011).

Unjust access to nutritionally dense food has become a significant metric when describing the US food system. Despite that, the food debates that capture the public imagination in the US today are about understanding and defining what ‘healthy, ‘nutritious’ and ‘environmentally responsible’ foods are. The public debate is often framed broadly in terms of choices between alternative or industrialized food systems. One facet of the debate is over the distance between the producer and the plate. Should farms be local, both inside and at the periphery of our cities and towns, or should they be concentrated in rural hinterlands and use efficient transportation networks to supply cities and towns? Another facet is over the scale of farms. Should farms be small enough to be operated by a family, or should they be large and hyper-efficient, run by shareholding corporations? The debate is also about the merits of ‘natural’ or technologically-advanced farming. Should farms use natural composts and manures for fertilizers or their synthetic equivalents? Should they use heritage seeds our great grandparents might recognize, or hybridized seed with higher yield? Or, should we pursue a high-tech approach, taking advantage of the new genetically modified seed stocks in combination with artificial fertilizers and pesticides that may further increase agricultural yields per acre? These popular debates about food have placed low-tech, alternative, small-scale and organic food markets firmly in the public eye. The US public is increasingly supporting these types of alternative foods with their pocketbooks.

The market for certified organic food in America has increased rapidly since tracking began in the 1990s, growing an average of 20% per year through 2005 (Dimitri
& Oberholtzer, 2006). Organic milk sales have grown by as much as 50% per year (DuPuis, 2000). The Organic Trade Association (OTA) reports that in the United States sales of certified organic foods were slightly greater than $28 billion in 2010, up from $1 billion in 1990 (OTA, 2011). Likewise, the demand for locally grown and produced foods has also increased dramatically. In 1970, there were only about 300 farmers’ markets nationwide, but by 2001, there were over 3,000 (Brown, 2002). Far from seeing a decline in farmers’ markets during the recent recession, the USDA shows a steady increase and estimated in 2010 there were around 6,100 farmers’ markets selling chemical-free produce in the US (USDA, 2010).

**Background on Social Movements Concerned With Food**

The increasing public interest in consuming healthy foods has accompanied an increase in public involvement with social movements and social movement organizations that support alternative agriculture. For example, Slow Food, formed around “linking the pleasure of good food with a commitment to… community and the environment,” claims to have over 100,000 members in 1,300 chapters worldwide (Slow Food, n.d.). The NGO Organic Consumers Association (OCA) formed in 1998 says it now represents “over one million members, subscribers and volunteers, including several thousand businesses in the natural foods and organic marketplace” (OCA, n.d.).

Some scholars have argued that food-based social movement organizations have mounted a successful challenge to industrialized agriculture that is supported by dominant institutions (Dupuis, 2000; Johnston & Baumann, 2010; Lowe et al., 2008). From these authors’ perspective, the alternative food movement champions the belief that small farms, farmers’ markets, organics foods, and so forth are a rejection of top-down
control of food systems. However, other scholars have developed a rich critique of the alternative food movement, claiming that the mainstream alternative food movement is associated with the white, upper middle class (DuPuis & Goodman, 2005; Guthman, 2011). They point out that consumers consistently pay more for certified organic foods than for conventionally grown foods (Oberholtzer et al., 2005), and the higher price is beyond the means of many people. Further, the existence of an upscale clientele demanding organics has attracted the attention of international corporations and industrialized agriculture (Belasco, 2007; Guthman, 1998; Raynolds, 2003), which have responded by coopting organics, branding ecologically responsible business practices and legitimizing themselves through state-organized organic certification processes (see Belasco, [1988] 2007).

As the public and scholarly debates about alternative and industrialized agricultures have grown louder, richer and more complex over time, a new social movement has arisen. This new social movement is born from both the alternative food movement debate and also the critique of the profitable alternative food movement. Scholars and advocates have named this new movement Food Justice. Poor, minority communities across America are struggling to gain equitable access to nutritious food. In these neighborhoods, community-based social movements are mobilizing around local food initiatives and redefining inequitable food systems as an issue of social justice. With mounting strength, their collective voices call for a sea change in modern production, distribution and consumption of food.

The social change organization, Just Food, defines food justice as, "communities exercising their right to grow, sell, and eat healthy food” with an ethical approach to the
“well-being of the land, workers and animals” (food-justice [website], 2014). Just Food goes on to state that food justice groups, “increase awareness and action around food and farm issues and advance policies for a thriving local food system.” While describing what food justice is, and what it does, these powerful words also evoke an image of positive social change that may resonate with readers.

The goals of the food justice movement may seem similar to those of the mainstream alternative food movement – the creation of a local, sustainable and civic agriculture-based food system – but food justice begins from a very different set of initial conditions than the relatively wealthy, environmentally-minded consumers of organically certified foods. The food justice movement is primarily comprised of underprivileged, minority communities that struggle for access to nutritious food (Alkon & Agyeman, 2011; Gottlieb & Joshi, 2010). Examples of the food justice movement are community-based initiatives in vulnerable neighborhoods organizing around access to and production of high quality, locally sourced, sustainable and nutritious foods (see, for example, Gottlieb & Joshi, 2010).

**Purpose of this Study**

This dissertation is a study of contemporary food-based social movements that identifies and analyzes local food justice groups in Phoenix, Arizona. I argue that food justice groups draw inspiration from the larger alternative food movement; however, there are substantial differences that justify differentiating the new food justice movement from the alternative food movement. This is a case study of the local and of place. Nevertheless, the moments, events and processes that precipitated the small social movements in this study are anything but local and place-based. This story is unfolding in
multiple, ongoing food conversations at city, state, national and international scales. To contextualize and understand the contemporary food justice movement requires examination of larger dialogs about alternative agriculture and food-based social movements. These dialogs did not spring fully formed from the void. Rather, they have changed and become richer over time. To understand these local movements requires ranging across time and geography.

Food justice movements organize vulnerable neighborhoods to take control of their food systems (Gottlieb & Joshi, 2010). Despite that, little is known or at least little is written in the scholarly community about the most basic social mechanisms of how food justice movements operate day-to-day. This is important, because although food is a physical object, it exists and moves within a social context. The Phoenix community-based food justice movements are composed of diverse sets of actors and operate at multiple political scales. The theoretical and methodological framework of this case study is crafted to examine these movements across the three scales of political action. These scales include residents of the community, non-profit NGOs operating within the community and the local municipal government. This framework also examines change over time, which includes the history of production, distribution and access to food, and food quality. The historical dimension contextualizes the contemporary struggle for healthy food within the study area.

I develop a history of food in three communities of the city. I illustrate how race and social class have played a powerful role in the production and distribution of nutritious food in these communities over the 20th century. The bulk of this manuscript analyzes how food justice groups are constructing (and reconstructing) new local food
systems. My grounded fieldwork establishes how residents conceptualize their foodscape and how garden organizers establish a local food system that challenges both dominate industrialized food systems as well as the alternative food movement. Finally, I describe the social and physical outcomes that these food justice movements have had upon their communities.

Research Questions

My research questions were chosen largely through interaction with food justice practitioners and reading food justice and social movement scholarly literature. First, they were grounded in issues identified as important by both community organizers and residents in my early interactions with community organizers and gardeners. I attended community gardens events where I talked informally with gardeners. I also attended a number of garden strategy meetings that garden coordinators invited me to. From those conversations and experiences I settled on four questions that have guided my research.

First, how do communities evolve into contemporary food deserts? Hunger and malnutrition have been historically documented within two of the communities in my study area (Demas, 1999; Luckingham, 1994; McLoughlin, 1954). Sociohistorical processes have contributed to contemporary food deserts in two of these communities. This question creates a historical context for the movements and illustrates the magnitude of the challenges these communities face in overcoming a century-long history of racism, structural violence, and social exclusion. Though I began developing this question very early in my research, I have since learned that uncovering “silenced histories” of food access among poor and minority populations is part of a larger academic project among food justice scholars (see Alkon & Agyeman, 2011). Answering this question may be an
early step in overcoming the historical momentum that has contributed to the foodscapes that are contemporary called “food deserts.”

Second, how do food justice movements crystallize in disadvantaged neighborhoods? Contemporary studies have shown that equitable access to nutritious food in all three communities of the study area is problematic (Crouch, 2011a; Crouch, 2011b; FRAC, 2013; Taylor et al., 2011; USDA-ERS, 2014). Each community and Community Development Corporation (CDC) in the study area has developed its own small food justice movement; each food justice movement has grown up largely independent of each other. But, the resident experience of living in a food desert is roughly similar across communities. Residents’ interviews about living in a food desert make up the bulk of the data that answers this research question. Residents’ perspectives of their foodscape proved to be rich and nuanced. Some of the topics they talked about are reflected in the scholarly literature, but some surprising new twists that I have not encountered addressed in the literature emerged as well.

Third, how do poor, minority communities practice food justice? Food justice movements signify an important shift within food-based social movements away from traditional concerns of organic agriculture and towards just access to nutrition. However, on-the-ground practices of food justice movements are poorly understood. I unpacked this broad question into specific sub-questions to be deployed at or across the appropriate scales and groups. Example questions include: How do movement organizers frame their specific local food initiative? How do they choose strategic goals to pursue? How do they navigate around or negotiate governance barriers? How does the community perceive the movement?
Fourth, what are the outcomes of food justice movements for communities? Food justice movements have physical and social impacts on the community in which they are operating (Gottlieb & Joshi, 2010). Creating a description of those changes is important to begin to understand what such movements can and do provide for the community. Participant observation and interviews with community organizers allowed me to document physical changes in the neighborhoods such as increasing urban agriculture projects and green spaces and policy impacts upon their program. Policy makers and advocates provided interview data of local policy changes needed, underway or enacted, which may benefit or burden the local food justice movement.

**Importance of the Study**

This study makes several contributions to scholarship. First, food justice scholars have created a small but rich literature unpacking complex problems within the modern North American food system and linking those issues to existing social theory. This project joins that conversation by creating a grounded understanding of how poor, minority communities form local food justice movements, frame issues, set goals, and strategize around increasing geographic and economic access to nutritious foods. In this study, economically disadvantaged residents describe their understanding of food access, high-quality food and food justice as they experience it. The project develops a nuanced understanding of community organizers and how they create civic agriculture-based local food initiatives and bottom-up approaches to solving inequitable accesses to food. Policy makers and advocates who have addressed governance barriers facing these community-based social movements and have aided in developing creative solutions are also analyzed.
Second, literature about food deserts and food swamps has focused heavily upon community proximity and economic access to supermarkets. However, this literature has yet to focus upon the sociohistorical processes that have contributed to food desert formation. This project develops an understanding of those sociohistorical processes. The work takes an approach based in historical case studies of two communities in the study area currently identified as food deserts by the USDA and other independent researchers. The project then bridges the historical case study with a contemporary assessment of the community foodscape. However, while much of the contemporary food desert literature uses mapping and Graphical Information Systems (GIS) to understand community level access to healthy foods, this project takes an alternative approach. The project focuses on interviewing community residents living in areas that have already been independently identified as ‘food deserts’ to develop a residential perspective about their local foodscape. Residents describe their experiences with contemporary inequalities in food access.

Third, this study provides social movement scholars a grounded understanding of justice-based social movement outcomes in underserved, minority communities. The social movements in this study area use multiple techniques to create social networks that increase collective action around locally produced food. They also increase local access to nutritious foods and create community level food systems. This work examines how these small social movements achieve, struggle with or fail to achieve their goals and desired social change outcomes. This analysis can be used to understand some of the challenges that face food justice groups nation-wide and aid in creating strategies to overcome similar challenges in other communities across the US.
Finally, the conversation among climate change scholars no longer focuses on asking whether global climate change is happening (Maibach, Mayers & Leiserowitz, 2014). The conversation now is about estimating how severe the changes will be, how those change will affect different parts of the globe (Diffenbaugh & Giorgi, 2012), how to prepare for climate refugees (Arnell & Kothari, 2015) and how to rapidly adapt our supply lines to climate change. Essentially, this project conducts a ‘natural experiment’ by examining populations struggling to meet some of their nutritional needs through urban agriculture in one of the hottest climates; most intense urban heat islands known in the world today (Harlan et al., 2014; Hawkins et al., 2003). That is why, in part, this urban civic agriculture work was supported by the National Science Foundation grant, “Urban Vulnerability to Climate Change.” The project studies, in the present moment, what many cities are likely to be struggling with 30 to 50 years in the future (Lobell et al., 2008). The hazards literature has found that people who recover best from natural disasters are those with strong social networks: family, friends, and neighbors (Aldrich, 2012). The social movements in this study create and maintain social networks as a byproduct of their day-to-day operation. The results of this work will contribute to ongoing scholarly conversations about resilience and community building among vulnerable populations as an adaptation to climate change.

**Scope of the Study and Chapter Outline**

The scope of this project is ambitious and extensive. At the broadest and most abstract level, this work is a study of social movements. Starting with that in mind, in chapter two, *Gardens of Justice*, I examined social movement theory from the perspectives of classical social theorists such as Jürgen Habermas, Karl Polanyi, Antonio
Gramsci and Thomas Kuhn. I also considered contemporary New Social Movement (NSM) theorists and how they describe contemporary social movements as classless "revolutions." Drawing broadly from NSM theorists, I showed how, over time, the ideological and axiomatic split grew between industrial agriculture and alternative agriculture. This rift manifests itself physically in several ways across the United States: new and expanded organic aisles in supermarkets, a sharp rise in farmers' markets and community gardens and a growing interest among younger generations to "return to the land" and start small farms. NSM theorists describe this shift towards alternative agriculture as creating a new social "identity,” and they argue it is a "classless" revolution. Over the last decade, there has been an intellectual shift away from NSM theory’s depiction of alternative agriculture as a classless social movement. Social justice theorists and political ecologists argue that the classless alternative food movement has been coopted by corporate interests and government institutions. They further argue that the production, distribution and consumption of alternative foods are closely linked to both socioeconomic status and race. They state that no socially just alternative food system can exist without understanding the inequalities that already exist in the food system and reflexively creating a new, justice-based food system.

At the end of chapter two, I borrow a theoretical model used by sociologists to examine justice-based social movements in major urban centers around the world. The “ecology of actors” model is meant, in part, to locate important actors in a justice-based social network with community, intermediary and governmental actors. I have slightly modified the model by taking into account a political ecology perspective sometimes called “jumping scale” in which actors move up and down the scale delineations outlined
in the ecology of actors model. The combination of the sociological model as modified by the political ecologists has created a theoretical template on which I superimpose a “map” of the local food justice movements.

In the third chapter, *Navigating the Gardens*, I discuss the research methods used in this project. I describe the study area, which consists of three communities located in areas where multiple research groups have documented low access to healthy food in comparison to wealthier neighborhoods. The communities are predominantly minority and poor with many residents at or below the federal poverty line. Within each community exists at least one NGO that has established community gardens as the base of their urban agriculture project. Several of these NGOs also have small farmers’ markets operating in the community. I describe the participant observation, interviews, and historical methods used for data acquisition and analysis.

The fourth chapter, *Double Exposure*, provides a historical analysis of agricultural production and food access within two of the study areas. This chapter begins to answer the question: how did the communities become food deserts? While agriculture and food are the focus of the chapter, they are always enmeshed within a set of social relations. This becomes clear as we find land barons forcing Mexican grain farmers into sharecropping and racist practices shifting political power away from minority farmhands. Restrictive covenants limited minority farmers to living outside the city of Phoenix, while rapid increase of farm size created an even greater demand for minority laborers. This chapter goes beyond the work of other food justice scholars who have recreated “silenced histories” of minority access to food and the means of agricultural production. First, while the concept of a ‘food desert’ is relatively new, the phenomena
itself, minority and poor communities struggling with reduced access to nutritious food in the US may be quite old. Second, this history does not focus upon a single minority group. While Latinos made up much of the minority population exploited for inexpensive labor, there were also black or African Americans, Chinese and Japanese populations and white Okies escaping the Dust Bowl. Third, this chapter reveals that all these minority groups were agents of change in the Phoenix foodscape. Despite the almost overwhelming racist practices arrayed against them these groups worked to create a more just food system.

The fifth chapter, *Life in a Food Desert*, bridges the past to the present and begins a three-chapter case study of the contemporary communities. It focuses on the residents’ perspective of their foodscape and tells the story of food access as they experience it. It also begins to answer the question: how do food justice movements crystallize in disadvantaged neighborhoods? The interviews revealed that residents struggle with access to healthy foods in many ways but they have also developed sophisticated social strategies for locating fresh and desirable foods.

The sixth chapter, *Enter the Garden*, connects the residents with the community organizers and the local urban agriculture projects. This chapter starts by discussing how organizers and residents are enmeshed within a coupled human natural system, the ecology of a garden. Gardens are human maintained ecologies, and the chapter outlines some of the complex decision making required for such ecosystems to persist and the strategies garden organizers use to mobilize the community and garner support for their programs. Although civic-based urban agriculture produces locally grown food, in these communities gardening can also help address local, non-food related needs.
The seventh chapter, *And Then There Were Many*, bridges the organizers with citywide organizations such as other local food initiatives, umbrella organizations and national social movement organizations. This chapter also examines the social outcomes of the food justice movements starting at the community level and then branching out to include city of Phoenix policy outcomes, as well as strategic alliances with other organizations in Phoenix. It provides commentary on the larger political framing of the food justice movements and the sudden growth of interest in local food production in the Valley of the Sun from many quarters in the region, state, and nation. The chapter ends with an analysis of a recently proposed legislative bill, which, if passed, would radically alter Arizona’s foodscape, and of two social media based social movements that are using food justice language to support those bills, maybe to the detriment of the neighborhood movements.

The eighth and final chapter, *At the Gardens Green Edge*, summarizes and discusses the lessons learned from this dissertation. Here I examine the food justice movements from the vantage point of having answered my research questions and described many of their components. The complexity of these small movements is addressed. These movements operate at multiple political scales and often across political scale: they are a coupled human natural system. Although while the residents, gardens, farmers’ markets and organizers are local, the conversation and social milieu they are enmeshed within is national or global. The ‘solutions’ these communities have developed are sophisticated and rich, and cannot be thought of as ‘just another community garden.’ To understand these small movements require systems thinking; that is, consideration of
the multiple intertwined processes influencing one another and how the components of the system relate with each other as well as other systems.
CHAPTER 2
GARDENS OF JUSTICE

The root cause of hunger and malnutrition is not a lack of food but a lack of access to available food. For example, poverty, social exclusion and discrimination often undermine people’s access to food, not only in developing countries but also in some of the most economically developed countries where there is an abundance of food. (UN, 2010, p. 4)

[B]asically we are talking about our landscape… we’re saying that young farmers are people who have chosen to vote with their lives, and we are voting with our bodies. Not only by choosing what we put into our bodies… vote with your fork. But, also choosing to use our bodies to change the earth, and our cultivation of the earth. (Fleming, 2010)

This chapter examines social movements in the US that have organized around alternative food systems. For purposes of this chapter, social movements will mean “a collective, sustained, and noninstitutional challenge to authorities, powerholders, or cultural beliefs and practices” (Goodwin & Jasper, 2009, p. 4). A Social Movement Organization (SMO) is “a complex, or formal, organization that identifies its goals with the preferences of a social movement… and attempts to implement those goals” (McCarthy & Zald, 1977, p. 1218).

To analyze these social movements and SMOs I draw upon the scholarly literature that uses social movement theory to contextualize large, emerging alternative food movements (Allen, 1993; Barham, 1997; Cone & Myhre, 2000; DuPuis, 2000; Guthman, 1998; Hassanein, 1999, 2003; Lowe, Phillipson, & Lee, 2008; Raynolds, 2003; Tovey, 2002). Many of these scholars use New Social Movement (NSM) theory to guide their analysis of food-based social movements (DuPuis, 2000; Barham, 1997; Hassanein,
Jürgen Habermas, a creator and proponent of NSM theory, argued that new forms of social movements emerging during the 1960s were organized around fundamentally different issues than ‘old’ social movements, which were primarily based in class differences (Edwards, 2004). New social movements can be concerned with class interests, but also simultaneously organize around issues of “quality of life or democratic procedures” (Gamson, 2009, p. 383). In focusing upon specific, non-class related issues, NSMs attract diverse groups of devoted actors who identify with the movement for different reasons. The background of the actors is an important feature of the NSMs, which “stresses that what distinguishes the new movements is that the actors struggle to create new social identities, to open up democratic spaces for autonomous social action in civil society, and to reinterpret norms and develop new institutions” (Hassanein, 2003, p. 80). In particular, social movement scholars frame the “alternative agro-food movement—as a kind of new social movement—it is dynamic and multi-dimensional, involving various groups of people situated in particular places, who create and implement assorted strategies…” (Hassanein, 2003, p. 80).

Drawing from a broad selection of literature, however, I argue that in the course of identifying specific issues that will rally diverse actors, issue-based social movements may lose sight of larger systemic problems surrounding food systems. In focusing upon specific physical and environmental issues, such as emphasizing local production and organic certification, the alternative food movement largely overlooks how alternative food now privilege a white, middle-class, population. This has contributed to two unintended outcomes. By marketing to a relatively affluent population, organic produce has become a tempting target for institutional and corporate co-optation. Organic and
local food has also been increasingly linked with privilege and prestige, food for an elite class. These unintended consequences may hinder identity-based food movements’ ability to maintain their integrity and survive over the long term.

There is an emerging alternative to both identity-based food movements and the NSM theory used to describe them. Broadly defined, “food justice movement works to ensure equal access to the environmental benefit of healthy food” (Alkon & Agyeman, 2011, p. 8). Food justice takes an approach simultaneously based in alternative food systems as well as social class and race inequality, which may make the movement more resistant to hegemonic co-optation. While the alternative food movement has proven vulnerable to criticisms of elitism (Alkon & Agyeman, 2011, p. 12), the food justice approach may be less susceptible to that critique.

To understand how this new justice-based theory of food is challenging the industrial food production system as well as the alternative food system, I will structure this chapter as follows. First, the alternative food movement perceives and describes itself as a revolutionary movement based in counter-hegemonic discourse and action. This framing requires that the movement position itself as a counterpoint to the status quo production of food. To analyze how this contrast develops, I will briefly expand upon the historical development of modern industrialized farming and illustrate how it became the dominant form of food production. This section sets the conditions of the hegemony that the alternative food movement—and now the justice-based food movement as well—is attempting to overturn.

Second, while industrialized agriculture dominates the new food landscape, it also sets the stage for an alternative discourse and social movement. This chapter will create a
theoretical understanding of the socioeconomic and political factors that led to the alternative food-based social movement. Social movement theorists reference Karl Polanyi’s now classic book, *The Great Transformation* (Barham, 1997; Guthman, 1998; Raynolds, 2003), to describe alternative identity-based food movements (Barham, 1997; Hassanein, 1999; Tovey, 2002). I will briefly review this literature and expand upon it.

Third, I will clearly establish what the alternative food social movement is and what it is not. Viewed from afar it may seem the alternative food social movement is a coherent body; however, closer examination will uncover considerable diversity within the movement. The alternative food movement is not a single entity, but instead a composite of smaller, disparate social movements and organizations that at times may find allies in each other, local governments, markets and the state. The recognition of separate actors is necessary, but not sufficient to explain why they mobilize around a seemingly disparate set of issues, and yet still fall under the larger rubric of the alternative food movement. These issues include, but are not limited to: bodily health, environmental awareness, community, local economies, food quality and safety. To encapsulate the varied and broad interests of the movement, scholars have used Thomas Kuhn’s theory of the paradigmatic shift to distinguish the alternative food movement from modern industrialized agriculture (Beue & Dunlap, 1990). Though Kuhn’s paradigm theory may have lost favor lately, I will establish how actors within the alternative food movement set themselves in opposition to actors perpetuating industrialized and mainstream food systems.

Fourth, I will analyze arguments that illustrate how the alternative food movement, despite framing itself as revolutionary, has been co-opted by the State and
advanced capitalism. The institutionalization of a set of rules that define “organic” food production has opened the way for standardization of organic production and increasing economies of scale. This has allowed industrialized agriculture to modify their practices and begin to capture some of the substantial profits that organic branding can bring. Advanced capitalism has penetrated the organic movement and taken possession of large portions of the organic market. These critiques of the alternative food movement are coming from critical geography, sociology and justice-based literatures.

Finally, I will expand upon a theoretical model that shaped how this research on communities in Phoenix, AZ was conducted. The theoretical model was developed to describe small, urban justice-based social movements in cities around the world. Using a network analysis approach that borrows from sociologists and social justice theorists, the theoretical model predicts that justice-based movements are embedded within an “ecology of actors” (Evans, 2002). The ecology is made up of multiple scales, which means that although a justice movement may be localized in a small area, larger geographical and social scales must also be analyzed to contextualize influences upon the local. Actors in the ecology include active participants in the movement but they are also influenced, and they in turn influence, the communities, organizations and governmental institutions in which the movement operates. These justice movements, or the neighborhoods in which they are active, do not operate in a vacuum and the wider impacts must be analyzed.

A Brief Examination of the Roots of Industrial Agriculture

In the late 18th century, Reverend Thomas Malthus wrote *An Essay on the Principle of Population*. Malthus foresaw geometric population increases, but only
arithmetic increases in agricultural supplies: "The power of population is indefinitely greater than the power in the earth to produce subsistence for man" (Malthus, [1798] 2008, p. 13). Malthus foretold the result would be wide-scale starvation. The mathematical relationship Malthus predicted was flawed in many ways and he abandoned the argument in later editions of his Essay on the Principle of Population, (Trewavas, 2002). Despite Malthus himself retreating from his early mathematically based argument, it caught the imagination of laypeople and governments. By the early-nineteenth century, the intensification of food production per unit of land had become a priority for developing capitalist economies.

In 1840 Justus Von Liebig argued that plant growth is not controlled by the availability of total nutrients in the soil, but rather by the scarcest nutrient or limiting factor (Foster, 2000). Liebig’s approach created an axiomatic rift between older forms of agriculture, which adhered to the idea of humus, and modern agriculture, which was rooted in the idea of nutrient poverty and natural law (Heckman, 2005). Liebig prophesized the coming age of a science-based industrialized agriculture:

A time will come, when fields will be manured with a solution of glass, with the ashes of burnt straw, and with the salts of phosphoric acid, prepared in chemical manufactories, exactly as at present medicines are given for fever and goiter. (Brock, 2002, p. 145)

The scientization (treating with a scientific approach) of farming did not take place overnight. Fertilizers still needed to be augmented with organic sources of nitrogen. By the late 19th century bat and bird guano reserves (needed for nitrogen) had become an issue of strategic national importance for European and US Governments. In 1856 the US
passed the Guano Islands Act, whereby, “capitalists [aided by US military] seized ninety-four islands, rocks and keys around the globe” to secure agricultural fertilizer supply lines (Foster, 2000, p. 151).

During 1909 Fritz Haber and Carl Bosh developed a chemical processes that synthesized nitrogen from air. The “Haber-Bosh process” freed industrialized nations from the limits of naturally occurring deposits of nitrogen and provided the feedstock for synthetic nitrogen-based fertilizers. Furthermore, synthetic fertilizers eliminated the need to return nutrients to the field, thus removing the hand labor required for spreading manure, composting or temporarily removing fields from production by fallowing.

The basis for modern industrialized agriculture is the monocrop. If yield is measured in units of harvest for a single crop per unit of area then monocropping is very productive (Altieri, 2008). However, monocropping also provides an abundant source of food for more than just humans, but also for insects. Monocrops provides hectares of food plants creating near perfect conditions for agricultural pests to flourish. Fritz Haber, who co-developed the process of extracting nitrogen from air, also created some of the first synthetic poisons used in agriculture—and used as well in World War I to devastating effect—to combat infestations of insect pests (Szöllösi-Janze, 2001). Haber’s pioneering work seemed to solve the problem that monocropping created.

Agrochemicals, such as pesticides, fungicides and herbicides could reduce invasive species, which allowed for a further expansion in the size of the field by eliminating the need for hand removal of pests.

Artificial fertilizers increased farm yields per acre, and pesticides reduced crop loses, but mechanization allowed farmers to successfully open new farmlands in marginal
areas and replace human labor with machine labor. Machinery that performed repetitive
tasks such as tilling, seeding and harvesting further facilitated long row monocrops. In
1915, between 40 and 80 thousand, “farmers watched 30 tractor companies exhibit their
machines in field tests at Enid, Oklahoma… hundreds of sales were made on the spot.
Farmers pulled out their checkbooks and dropped down on their knees in the plowed dirt
to write their checks” (Wik, 1964, p. 81). The combination of the steel plough dragged by
tractor power soon opened up vast new tracts of prairie for modern agriculture. New
tractors were built and customized specifically to speed farming, reducing hand labor and
allowing individual farmers to increase the acreage they could productively work (Sahai,
1981). In the US, alone “from 1930 to 1980 land area per farm increased over 2.5 times,
while the number of farms decreased from 6.3 million to approximately 2.7 million”
(Kislev & Peterson, 1982, p. 578).

Synthesizing the new farming technologies, monocrops, artificial fertilizers,
pesticides, herbicides, fungicides and mechanization led to the birth of modern
industrialized agriculture characterized by large farms, using multiple strategies to reduce
human labor inputs (Gonzalez, 2004). Reducing human labor concurrently depressed the
cost of production by reducing wage-labor. Industrialized agriculture creates a
homogeneous, low cost product that can be exported to global markets (Gottlieb & Joshi,
2010, pp. 106 – 109). In 2011 American agricultural exports were projected to bring in
$135.5 billion (USDA, 2011). Motivation for scientizing agriculture is not simply to
avoid hunger. It is also good business! The state profits as well from agribusiness both in
the increase of taxable revenues and in securing food production to feed its populations.
The US is, at the time of this writing, the largest exporter of agricultural crops in the world.

Capitalist and State support for the scientization and automation of agriculture has led to a mechanized, agrochemical and export-based industrialized agriculture that has become the new normal for many developed and developing nations and the new, modernizing China. Yet, this agricultural hegemony does not exist unchallenged. Hundreds of nongovernmental organizations (NGOs) and smaller social movements have formed an “alternative food social movement” over the last fifty years that questions the legitimacy of industrial agriculture. The next section will present an identity-based explanation of how people mobilize in the face of dominant economic and political interests.

**A Polanyian Interpretation of Modern Social Movements**

In his seminal work, *The Great Transformation* (1944), Karl Polanyi argued that neoclassical free markets force populations to devise strategies to defend themselves and their environments against market exploitation (Polanyi, [1944] 2001, p. 136). Polanyi explained that two social movements were happening simultaneously. “[T]he dynamics of modern society was governed by a double social movement: the market expanded continuously but this movement was met by a counter movement checking the expansionism in definite directions” (p. 136). Using early development of English capitalism as his case study, Polanyi attacked the classic liberal economists’ claim that the free market self-organizes and increases the liberty of those existing within the economic system.
The road to the free market was opened and kept open by an enormous increase in continuous, centrally organized and controlled interventionism… Witness the complexity of the provisions in the innumerable enclosure laws; the amount of bureaucratic control over the New Poor Laws which for the first time since Queen Elizabeth’s reign were effectively supervised by central authority or by the increase in governmental administration entailed in the meritorious task of municipal reform… The introductions of free markets, far from doing away with control, regulation and intervention, enormously increased their range. (Polanyi, [1944] 2001, pp. 146 - 7)

Because markets exploit both communities and the environment for monetary gain, Polanyi illustrated case after case where social movements across a broad spectrum of socio-economic classes self-organized to protect themselves from the worst ravages of market exploitation. This, in turn, led to counter movements. “The great variety of forms in which the ‘collectivist’ counter movement appeared was not due to any preference for socialism or nationalism on the part of concerted interests, but exclusively to the broad range of the vital social interests affected by the expanding market mechanism” (Polanyi, [1944] 2001, p. 151). This sets the stage for counter social movements that work to protect themselves and society from the free market and lays the groundwork for the double movement. In times of market expansion, “social groups that appeared to hold divergent interests on the surface could… find it natural to cooperate, although at first glance there seems to be no reason for them to do so” (Barham, 1997, p. 239).

Polanyi distanced himself from a Marxist class-based market analysis of social movements as later New Social Movement (NSM) theorists did (Barham, 1997).
[C]lass interests offer only a limited explanation of long-run movements in our society. The fate of classes is more frequently determined by the needs of society than the fate of society is determined by the needs of classes. Given a definite structure of society, the class theory works; but what if that structure itself undergoes a change? A class that has become functionless may disintegrate and be supplanted overnight by a new class or classes. Also, the chances of classes in struggle will depend upon their ability to win support from outside their own membership, which again will depend upon their fulfillment of tasks set by interests wider than their own. (Polanyi, [1944], 2001, p. 159)

If Polanyi was correct and these movements are not class-based, then they are open to a multitude of disparate interests and actors that cross boundaries of socio-economic class and may lead to the impression that the movement lacks clarity (Barham, 1997). However, in a Polanyian scenario, dissimilar socio-economic classes with seemingly different interests but similar political issues could work together in a similar movement, which defends multiple socio-economic classes from free market exploitation. “The diversity of such movements--often considered their weakness--may in fact reflect their strength” (Barham, 1997, p. 240). If we accept Polanyi’s and the NSM theorist’s claim that most modern social movements are not based in socio-economic class, then disparate actors, such as social movements, NGOs and other social organizations can form bonds with communities, both wealthy and poor, working towards increasing a community’s quality of life. Jürgen Habermas describes the rise of new classless movements, or movements that transcend class interests, as beginning in the tumultuous 1960s and 70s (Edwards, 2004). The time period specified by Habermas
correlates with the origins of a sustained alternative food social movement. The next section will illustrate how the movement problematized industrial agriculture and framed itself in direct opposition to industrial agriculture.

**The New Left’s Paradigmatic Shift in the United States**

As early as 1966, social change groups began using food as way to increase awareness of agriculture’s role in human ecological relations (Belasco, [1988] 2007). In his book, *Appetite for Change: How the Counterculture Took on the Food Industry*, Warren Belasco argued that food and alternative agriculture held a deep appeal for the radical environmentalists of the New Left. “Unlike sporadic antiwar protests, dietary rightness could be lived 365 days a year, three times a day. The New Left always insisted that the personal was political. And what could be more personal than food? And what could be more political than challenging agribusiness, America’s largest and most environmentally troublesome industry” (Belasco, [1988] 2007, p. 28).

Prior to the rise of the New Left, organic farming had been largely ignored in the US. However, as the late 1960s politically radical groups, such as the Youth International Party (commonly called Yippies) and the counterculture, commune-living Hippies, swelled in numbers. Their interest in alternative agriculture meant the movement surged to new heights. Organic farming and eating organic foods became part of living New Left politics. Organic food cooperatives were integrated into the New Left as a form of daily, nonviolent protest. Publications in the US discussing alternative agriculture such as, “*The Whole Earth Catalog* and *Mother Earth News*… reached audiences of as many as 1 million readers” (see Gottlieb, 1993, p. 99). Rodale press’ *Organic Gardening and Farming*, which had been operating at a loss for almost 25 years, saw substantial

It has occurred to me that if I were a dictator determined to control the national press, Organic Gardening would be the first publication I’d squash, because it’s the most subversive. I believe that organic gardeners are in the forefront of a serious effort to save the world by changing man’s orientation to it, to move away from the collective, centrist, superindustrial state, towards a simpler, realer one-to-one relationship to the earth itself.

The New Left accepted a model of environmentalism based in alternative agriculture that would survive their movement. The New Left’s advocacy for anarchistic or socialist governments, rejection of scientific positivism and classical liberal economics proved distasteful to the rapidly evolving mainstream environmentalism. The Earth Day movement (1970) cast off New Left interpretations of government (Gottlieb, 1993). Mainstream environmentalism refused to risk alienating the middle class and, therefore, embraced the conservationist environmental movements, corporate sponsorship and assumed a policy-making role within government. However, the 1970 Earth Day also carried with it the seeds for the alternative food movement when, “Friends of the Earth issued The Environmental Handbook in time for Earth Day… [calling] for a decentralized food supply based on cooperative groceries, city gardens and organic farms” (Belasco, [1988] 2007, p. 19).
The mainstreaming of environmentalism carried with it the still embryonic alternative food movement, which the New Left had permanently wedded with ecological principles. By the end of the 1980s, social movement scholars began to take a deeper interest in a debate springing up between the alternative food movement and industrialized agriculture. The alternative food movement was successfully making inroads into popular culture and the Organic Foods Production Act, established in 1990, provided US consumers a federal guarantee that the food they were purchasing was exposed to a minimum of industrial inputs and grown with organic principles. However, close examination of conventional, industrial-based agriculture and alternative agriculture found a broad spectrum of seemingly intractable ideological differences between the two groups (Beus & Dunlap, 1990). The two competing paradigms create axiomatic divergences in understanding and framing between alternative agro-food movements and established, state subsidized industrialized agriculture, as seen in Table 2.1.

<table>
<thead>
<tr>
<th><strong>Conventional agriculture</strong></th>
<th><strong>Alternative agriculture</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependence</strong></td>
<td><strong>Independence</strong></td>
</tr>
<tr>
<td>Large, capital-intensive production units and technology.</td>
<td>Smaller, low-capital production units and technology.</td>
</tr>
<tr>
<td>Heavy reliance on external sources of energy, inputs, and credit.</td>
<td>Reduced reliance on external sources of energy, inputs, and credit.</td>
</tr>
<tr>
<td>Consumerism and dependence upon the market.</td>
<td>More personal and community self-sufficiency.</td>
</tr>
<tr>
<td>Primary emphasis on science, specialists and experts.</td>
<td>Primary emphasis on personal knowledge, skills, and local wisdom.</td>
</tr>
<tr>
<td><strong>Centralization</strong></td>
<td><strong>Decentralization</strong></td>
</tr>
<tr>
<td>National, international production, processing and marketing.</td>
<td>More local/regional production processing and marketing.</td>
</tr>
<tr>
<td>Centralized populations; fewer farmers.</td>
<td>Dispersed populations; more farmers.</td>
</tr>
<tr>
<td>Concentrated control of land, resources and capital.</td>
<td>Dispersed control of land, resources, and capital.</td>
</tr>
<tr>
<td><strong>Competition</strong></td>
<td><strong>Community</strong></td>
</tr>
<tr>
<td>Lack of cooperation; self-interest.</td>
<td>Increased cooperation.</td>
</tr>
<tr>
<td>Farm traditions and rural culture outdated.</td>
<td>Preservation of farm traditions and rural culture.</td>
</tr>
</tbody>
</table>

Table Continued on Next Page
| Small rural communities not necessary to agriculture. | Small communities essential to agriculture. |
| Farm work a drudgery; labor and input minimized. | Farm work rewarding; labor an essential to be made meaningful. |
| Farming a business only. | Farming a way of life as well as. |
| Primary emphasis on speed, quantity and profit. | Primary emphasis on permanence, quality and beauty. |

**Domination of nature**
- Humans are separate from and superior to nature.
- Nature consists primarily of resources to be used.
- Life-cycle incomplete; decay (recycling wastes) neglected.
- Human-made systems imposed upon nature.
- Production maintained by agricultural chemicals.
- Highly processed, nutrient-fortified food.

**Harmony with nature**
- Humans are part of and subject to nature.
- Nature is valued primarily for its own sake.
- Life-cycle complete; growth and decay balanced.
- Natural ecosystems are imitated.
- Production maintained by development of healthy soil.
- Minimally processed, naturally nutritious food.

**Specialization**
- Narrow genetic base.
- Most plants grown in monocultures.
- Single-cropping in succession.
- Separation of crops and livestock.
- Highly specialized, reductionist science and technology.

**Diversity**
- Broad genetic base.
- More plants grown in polyculture.
- Multiple crops in complementary rotations.
- Integration of crops and livestock.
- Locally adapted production systems.

Source: Beus and Dunlap (1990, pp. 598-9)

**Table 2.1. Key elements of competing agricultural paradigm.**

Establishing an axiomatic rift between alternative and industrial agricultural broadly illustrates how participants in the alternative food movement differentiate alternative agriculture from industrialized agriculture. They select components of modern industrialized agriculture, examine them, and then flip them on their head. For example, where industrialized agriculture is centralized, alternative agriculture moves towards decentralization; when industrial agriculture specializes, alternative agriculture diversifies. The paradigmatic differences laid out in the table broadly illustrate the boundary work performed by the New Left and SMOs to define differences between industrialized and alternative food systems. The multiple paradigmatic axioms outlined in **Table 2.1** give us a holistic ‘gods eye view’ of the social and intellectual landscape of the
alternative food movement. We begin to see that the alternative food movement is not a simple concept, but a sophisticated system of alternative social and ecological values that intertwine to create a powerful critique of modern economies and scientized, technocratic societies (Allen & Kovach, 2000; Beus & Dunlap, 1990).

The axioms in Table 2.1 may serve as the “root” for a broad alternative food social movement; they are sweeping in scope and blur a subtler and more nuanced understanding of actors within the movement. The paradigmatic shift gives the impression of a unified front, where all actors have agreed upon a set of problems and are now engaged in a social movement based upon creating a set of solutions collectively known as ‘alternative agriculture.’ Hassanein, (2003, p. 462) states, “Although these actors are not unified on a political agenda… there is a general sense of being on the same side of the social conflict over food and agriculture.” Upon closer inspection, however, the differences among supporters are starker. Allen et al., (2003), surveyed 37 California-based, alternative food initiatives and found that these disparate groups addressed distinctly different sets of issues surrounding industrialized agriculture. For example, a set of environmentally minded SMOs may focus on limiting the use of chemicals and Genetically Modified Organisms in industrialized agriculture, whereas another set of SMOs may focus on connecting residents to local farmers. The alternative food movement is less a single unified social project and more a collection of SMOs that sometimes work together and, at other times, do not work with each other. Simply because disparate social movements frame their work as alternative agriculture does not mean they should be easily lumped together. In general, the best that can be said for the multitudes of smaller, disparate groups that have taken up the cause of an alternative
agriculture is that they *may* all identify in some way with the movement, but they *may not* identify with other groups working in the same movement.

Many of the groupings in *Table 2.1*, such as “independence” and “community,” explicitly interweave both natural and social-cultural interaction as the bases for healthy agriculture and land. Food based social movements cross freely from the physical phenomena of food, and where we get food, from the ‘natural’ world to the human world of social interactions surrounding the procurement, shipping, processing and consumption of food. These interactions are messy. At any point where humans interact with the environment, there exists a *tangled web of socio-natural pathways* (Ingold, 2008). Nature, and how *humans* interact with each other and nature, is the focal point of the alternative food paradigm shift.

As outlined in the introduction, social movement theorists have largely used an identity-based analysis to describe the alternative food movement (Barham, 1997; DuPuis, 2000; Hassanein, 1999, 2003; Tovey, 2002). The alternative agriculture social movement came to popularity in the 1960s with the New Left. NSM theorists described alternative agriculture as a new social movement. NSMs were fundamentally different than ‘old’ social movements, which were primarily based in class differences (Edwards, 2004). The alternative agriculture movement, I argue, is not a coherent social project; it only appears to be so if viewed from a distance. To zoom in on individual SMOs operating under the rubric of alternative agriculture is to uncover considerable diversity among disparate groups within the movement. The argument that identity-based politics could transcend class interests to unite disparate socioeconomic groups in unity around an alternative food system was presumptive. With the subsequent passage of time, the
movement itself has become too diverse to be encapsulated by a single theoretical model. It is not a coherent social project, but rather is made up of many smaller social movements and organizations each with their own political agenda. The NSM argument that the alternative agriculture movement was a coherent project that would attract an identity-based, classless constituency was incorrect. More so, describing the alternative agriculture movement as classless revealed a set of internal contradictions that has in recent years earned it a sustained critique from other scholars.

**Politics of Scale and a Justice-Based Response**

Sociologists, political ecologists, geographers and justice scholars have critiqued the alternative food movement for susceptibility to co-optation and internal inconsistencies originating from politics of scale and promulgation of social injustices (Alkon, 2008; Brown & Purcell, 2006; DuPuis & Goodman, 2005; Guthman, 1998; also see Dupuis, Harrison & Goodman, 2011). In this section I will unpack these critiques and present a newer theoretical model of the alternative food movement based in justice theory, political ecology and critical geography.

Organic foods are widely accepted by institutions and citizenry and make up the “mainstream” of the alternative food social movement. Consumer interest in organic food has caused the agricultural industry and retailers to view certified organics as a profitable venture that attracts an environmentally conscious clientele (Belasco, 2007; Guthman, 1998; Raynolds, 2003). Certified organic foods can persistently demand and receive higher prices than more conventional produce can fetch (Oberholtzer et al, 2005). Legitimizing themselves through organic certification, international corporations mainstream organics through branding of ecologically responsible business practices,
which lie at the root of the alternative food paradigm. However, far from the movement’s ideal of decentralized production (see Table 2.1), mainstreaming organic food has centralized production and extended supply lines around the globe. The large-scale, corporatized organic food industry has become embedded within globalized markets (DuPuis, 2000; Raynolds, 2003; also see Guthman, 1998). As the profits of organic agriculture have soared, so has the tendency for organic agriculture to look increasingly similar to industrial agriculture. Scaling up organic agriculture may contradict the alternative food movement’s paradigmatic split from industrial agriculture, but production and consumption of organic food at local scales also brings its own host of issues.

The alternative food movement views localism as a rejection of globalized capitalism and hegemonic top-down manipulation of food systems. However, critical geographers argue that scale is socially constructed and not a reflection of any inherent reality. Ascribing inherent qualities to scale (for example, the alternative movement’s predilection for local-scale agriculture) is a political choice. Purcell & Born (2006) state it this way, “localizing food systems… does not lead inherently to greater sustainability or any other goal… It leads to wherever those it empowers want it to lead” (p. 196). The movement’s partiality to small-scale and local enterprises—small farms, farmers markets, local food sheds, etc.—creates a “local trap” (Brown & Purcell, 2005; Purcell & Born, 2006).

Critical geographers describe the local trap as the inclination of scholars and alternative agriculture SMOs to assume that local-scale is somehow more socially just than larger-scale food systems. Essentially, they are arguing that the scale of the food
system has little to do with social justice. The two are, or can be, mutually exclusive. The entanglement between small-scale and social justice is a construct of the mind, not a reflection of reality. To blindly preference the local is to practice localism. And that, critical geographers argue, is a political choice that can empower some and disadvantage others. Specifically, “local food system movement members tend to be white, middle-class consumers and… the movement threatens to be socially homogenized and exclusionary” (DuPuis & Goodman, 2005, citing Hinrichs and Kremer, 2002, p. 362; Guthman, 2002). Localism may be a rejection of globalized capitalism. However, if there is nothing inherently socially just about the local-scale, then simply changing scale, from global to local, does not necessarily create a socially just food system.

Blind localism has another drawback. Local-scale food movements may be coopted as they struggle between markets, sustainability and access. Alison Alkon’s (2008) study of farmers’ markets in Berkeley and Oakland California argues that social justice concerns are often at odds with increasing profits. For example, a local, small farmer is likely to want to maximize the return for the produce. That may mean selling it to a relatively affluent set of customers instead of at a reduced price to poorer customers who are struggling for access to fresh produce. If profit margins are thin, even the socially conscious farmer may pay farm laborers less than a living wage. The affluent consumer may see the farmers’ market as satisfying social justice and sustainability priorities, but the farmer may have to sacrifice social justice for the sake of profit.

The exclusive focus on local food production may have other unanticipated and unwelcome outcomes. DuPuis and Goodman (2005) take the argument even further, reasoning that localism is an extension of globalization. Because of the perceived
problems of globalization and unbridled capitalism, localism creates a “scalar fix” which is to privilege local production and consumption of goods and services. In terms of food systems, globalization can be characterized as food that is grown on industrialized farms and then shipped thousands of miles to its final destination. Localism describes globalized foods as inferior to locally produced food. Further, they argue that localism may support the interests of an authoritarian elite. For example, localism allows interested parties to define standards of “good” agricultural practices. New entrees into these “alternative” agricultures will have to replicate “good” practices to become competitive with existing local standards. Thus, approved practices are both socially constructed and reproduced; they lead to domination of the local and resist opportunities for change. Essentially, localism happens in response to globalization and is therefore an extension of globalization. And, localism, taken to the extreme, can become authoritarian and elitist.

Justice-based scholars, then, have two main critiques of the alternative agriculture movement. First, organic certification has provided a mechanism by which alternative agriculture can be scaled up to corporate farming. This has resulted in organically certified foods being globalized in that they can be grown anywhere in the world, using marginal land, scarce water and inexpensive labor. Organic food is then shipped thousands of miles to the consumer. Organic certification has not had the effect of decentralizing food production and increasing independence (outlined in Table 2.1). Rather, it has had the effect of centralizing production, maintaining supply line distance, dependence upon external sources of energy and material inputs, and exploitation of labor. In addition, because organic produce can get a higher price than conventionally
grown food, consumers of organic food tend to be affluent and white (Guthman, 2011). Second, localization of food production may seem at first to create a scalar fix for the sustainability issues brought about by organically certified foods. Supply lines are shortened, corporate farms cannot take advantage of inexpensive land and labor conditions can be better monitored. However, localism is an extension of, and happens in response to, globalization. Unbridled capitalism forces even socially conscious local farmers to weigh social justice against profit.

The food movement is currently in an intellectually precarious position. There is no obvious way to resolve continued growth of the alternative agriculture movement without exacerbating its scalar issues. The more successful the movement is (for example, creating the highly lucrative organic food market), the more inviting the movement becomes to institutional and corporate cooptation. The more the movement tries to stay true to its ‘roots’ of decentralized and localized production, the more likely it is to extend the reach of globalization, pit social justice against profit, and create a local, authoritarian elite. Social justice, then, is not to be found by simply changing the scale at which the food system operates. Nor, is it to be found in simple replication of a more environmentally friendly agriculture system (organic agriculture). Instead, creating a socially just food system requires examining a food system that places social justice issues on equal footing with other alternative agriculture movement priorities as outlined in Table 2.1.

**Contemporary, Urban Food Justice Movements**

This section considers theoretical concepts drawn from critical geography and food justice scholarship that describe how placing justice in the center of a food-based
social movement can begin to address the issues scholars have brought up with the alternative food movement. The theoretical concepts addressed here lead to the conceptual frameworks that underpin this dissertation.

There is no clear evidence that food justice movements challenge the basic assumption of the alternative food movement; that is, agriculture should be decentralized and community-based (see Table 2.1). That may be problematic because the food justice movements could also be falling into the local trap. Gottlieb and Joshi (2010) assembled numerous case studies of food justice movements. Examples include, farm to school cafeteria programs in Los Angeles, increased wages and better working conditions for migrant tomato pickers in Florida, and bolstering farmers’ markets in low-income, minority neighborhoods of Santa Monica. These were case studies of local food justice movements addressing local issues and working toward local solutions.

Or, are they? None of Gottlieb and Joshi’s case studies is a scalar fix that propagates existing injustices in the US food system. Each issue they is based first in social justice and each is an entry point that local food justice movements have used to enter into existing, or create new, regional and national dialogs about food-related social justice issues. Observing a local justice issue and making it part of a larger, regional or national dialog is an example of jumping scale (Brown & Purcell, 2005). Working at the local scale, a social movement may not be able to overcome a local justice issue. Therefore, the social movement takes the local, social justice issue and publicizes it, scaling it up to larger regional or national arenas so everyone is aware of the local issue. The balance of power shifts because the struggling community gains external allies,
meaning the scale of the movement widens and the community is no longer trapped in local politics (Brown & Purcell, 2005).

The local issue becomes, more broadly, an example of injustice in the existing US food system. This strategy creates pressure from larger regional or national scales for systematic change at the local scale. In addition, while the food justice movement is addressing a local issue, such as prevalence of junk food in a particular school cafeteria, bringing regional or national attention to the local issue increases overall awareness of junk food in school cafeterias. It creates a renewed interest at larger scales in the dialog around healthy eating options for school cafeterias. It may also spur interest in seeking justice-based solutions to unhealthy, school cafeteria food.

Individual food justice social movements may be small, which, to some degree, necessitates working at local scales. Many food justice movements operate in a set of neighborhoods, which residents define as their community. Although it would seem that the impact a small food justice movement is negligible and limited to the community scale, critical geographers argue that communities are “nested” in a larger set of social and political scales (Swyngedouw & Heynen, 2003). For example, in the US urban context, a set of neighborhoods can make up a distinct community and that community will be part of a city. The community elects local politicians that represent their interests in the city and state. But, the community is obligated to work within the governance frameworks created by the city and state. Similarly, the city is ‘nested’ within the state and so on. This means that small food justice movements operating in urban communities will also have to work with the larger political and social scales than the community. To some extent, the work of the food justice movement must ‘scale up’ to the larger social
and political scales. Food justice movements, even small community scale movements, will cause ‘ripples’ in the larger social and political milieu that surrounds them.

Critical geographers have provided an intellectual vocabulary (e.g., jumping scale and nested communities) that describes how a food justice movement can address local issues and local solutions without falling into the local trap. As long as the food justice movement is not attempting to create a scalar fix by assuming the local level is inherently more just (Brown & Purcell, 2005; DuPuis, Harrison & Goodman, 2011), but rather is seeking to address food-related social justice issues, they may not propagate the systematic social injustices that have haunted the broader alternative food movement.

Recently critical geographers Marston, Jones & Woodward (2005) have suggested abandoning the concept of scale entirely. Scale, they argue, is an imagined categorization of seemingly fixed social phenomena. For example, under the old regime of scalar categorization and description, a city that exists within a state would have a hierarchical scalar relationship. Actors within the city might have to jump scale to the state to surmount problems within the city, as the state’s interests would override the interests of the city. The new scheme suggested by Marston, Jones & Woodward would be to, “invent—perhaps endlessly—new spatial concepts that linger upon the materialities and singularities of space” (p. 424). That is, a new and novel ordering of special relationships would have to be created to describe individual case studies. Social and natural sites, such as examined in this case study, would “require a rigorous particularism with regard to how they assemble precisely because a given site is always an emergent property of its interacting human and non-human inhabitants” (emphasis in original, p. 425).
Despite the call for original non-scalar descriptions of interaction between groups of people and nature, this study uses a more conventional style. Elinor Ostrom (2009) suggests: “So long as theorists use a consistent language to describe their structure, much can be learned from single case studies over time or comparative case studies of action situations” (35). To that end this work uses a standardized set of conceptual scales found in many other studies of justice-based sustainability movements in cities around the world. Geographers examining urban agriculture analyze how local actors use and construct scale (Ernwein, 2014; Smith & Kurtz, 2003) and that is an important component of this study. The scalar description and analysis used in this case study also examines how actors in Phoenix’s local food movement employ the local trap and scalar fixes on the ground, which is a vital component of contemporary scholarly critique of alternative agriculture and can help clarify whether local food justice movements also utilize scalar fixes.

To some extent, scholars and alternative food movement advocates may need to abandon the idea that a perfect, utopian food system can exist at all. Rather, they may need to work towards a food system that does not reinforce social inequalities (Dupuis, Harrison & Goodman, 2011). Starting from the assumption that no utopian solution exists, food justice practitioners, advocates and researchers can carefully deliberate who is affected, and how agricultural production and consumption might affect different consumers. Morales (2011) argues that food justice movements focus on, “issues of racial inequality in the food system by incorporating explicit antiracist messages and strategies into their work” (p. 150). In other words, food justice is not simply an issue of organic, or locally produced, or seasonal, or environmentally friendly foods, though those are
important. Food justice scholars, advocates and practitioners must also consider social justice such as race, social class, equality and access to healthy food.

An important theme in food justice scholarship is that minorities in the US have been largely deprived of the means of producing food for home consumption or to sell for profit (Green, Green & Kliner, 2011; Minkoff-Zern et al., 2011; Norgaard, Reed & Horn, 2011). In the context of owning and operating farms for profit, US minority populations have lost the ‘means of production.’ Food justice scholars call historical accounts of minority populations losing ownership of food systems “silenced histories” (Alkon & Agyeman, 2011, p. 4). They have begun to analyze the historical socioeconomic processes and institutionalized racism that deprived minorities of ownership over food production in the US. These silenced histories create the context for existing injustices in the contemporary US food system. They also create understanding of why race, class and social justice must be the focus in the creation of a socially just food system.

Another important theme in food justice scholarship is that many food justice movements are actively working towards reestablishing local food security by cultivating food in, and for, their communities (Mares & Peña, 2011; McCutcheon, 2011; Morales, 2011). Essentially, many food justice movements are taking back the means of production by recreating local food systems. These food justice movements are creating food systems founded on their perception of how a justice-based food system operates and are a way for food justice movements to explore and eventually perfect a socially just food system.

The concepts outlined above—nested communities, jumping scale, silenced histories, and creating a just food system—underpin my research on three economically
disadvantaged, minority communities that have formed their own local food justice initiatives. What follows is a theoretical framework that will allow me to contextualize the interactions between the people in those communities, the NGOs who organize the local food initiatives and the larger organizations, alternative food social movements and institutions of government that support or obstruct these communities’ efforts.

Sociologists, working with community-based justice movements, have developed the concept of an “ecology of actors” to describe disparate groups working across scales in a contemporary city (Evans, 2002). The ecology of actors model has three scales. The first scale, community, is place-based; that is, people who are affiliated through shared geography and environment. Intermediaries, a second scale, are defined as social movements and NGOs. Intermediaries operate at larger political scales than communities, playing a crucial role in helping communities connect “with the surrounding political and social milieu” (Evans, 2002, p. 229). The intermediaries under discussion in this project are NGOs that both coordinate and support the community’s food justice movement. The NGOs in this study are, or operate similarly to, Community Development Corporations (CDCs). CDCs have a similar set of characteristics. They have IRS 501(c)(3) nonprofit status, volunteer boards and emphasize the physical redevelopment of communities “devastated by capital disinvestment” (Stoecker, 1997, p. 2). C) The city is the third scale of analysis in the ecology of actors. Examination of local governance structures regarding civic agriculture, city support of CDCs and city initiatives to increase community food security is necessary to understand how the city and food justice movements interact with each other. In addition, this study also focuses on other alternative agriculture social movements that operate inside the city.
CDCs operating within communities have similar goals of revitalizing neighborhoods and they have also developed sophisticated patterns of interaction with private businesses and charitable institutions to find new streams of funding that allow them to serve their communities. Access to funding has created large variation between CDCs and has resulted in vastly different strategies and framings when it comes to revitalizing and redeveloping the communities they claim to represent (Dorius, 2006; Kirkpatric, 2007; Stoker 1997). Lumping these organizational groups under a single umbrella in this study would forfeit the detail needed for comparisons between different communities and CDCs.

Specific historical processes have created sets of conditions that have left particular groups of neighborhoods with relatively less economic and geographical access to nutritious food than other neighborhoods. Each cluster of neighborhoods is geographically linked and hereafter called a community. In each community, a nonprofit organization or CDC has established itself with the intention of helping the community economically revitalize itself and increase access to social amenities. Each CDC claims to represent the goals and desires of its community, has established a civic agriculture program and operates at the intermediary scale. Local government has at times aided these civic agriculture programs but has just as likely inhibited the success of these programs with restrictive policy, for example, zoning ordinance or policy changes that may thwart civic agriculture programs (American Community Gardening Association, 2003; Schmelzkopf, 2002). The local government operates at the local governmental scale. The system, as a whole, represents the local food justice movement. This simplified model illustrates the functional relationships, and scales between actors in the
ecology of actors framework. It shows each neighborhood population as a single entity. In *Figure 2.1* the political scales represent different actors who participate in the food justice movement. Filled arrows represent how different scales affect each other. Line arrows show how the study will look across scales.

*Figure 2.1. Political Scales.*

Drawing on the ecology of actors framework, nested communities and jumping scale outlined above, I created a conceptual model of social relationships between expected actors in this system, including flows of information and resources that form the foundation of the food justice movement (*Figure 2.1*). This map informed my methodology for how research was conducted, including decisions about which groups to interview and how to analyze the case study in Phoenix, Arizona.
Conclusion

The three scales - community, intermediary and city - are what I see as the most interesting actors and set of interactions taking place in the local food initiatives. To understand these interactions it is necessary to contextualize them within the larger theoretical works describing food movements. In this chapter I have very briefly examined the material history of industrial agriculture, illustrating how the alternative food movement has formed itself in opposition to the norms and values it ascribes to industrial agriculture. I have addressed how social movement scholars once framed the alternative food movement as an extension of New Social Movement theory: a classless and largely uncritical utopian paradigm shift. Political ecologists, critical geographers, sociologists and justice scholars have been deeply critical of inconsistencies within the movement, which they argue further shifts the balance of power towards elites. I outlined a new kind of justice-based social movement that may challenge some of the tensions within the larger alternative food movement. These shifts over time in food production, consumption, popular dialog and social movements alter more than agricultural practices. They are a set of sophisticated social relationships that change how we interact with both our physical environment and the rest of society.

However, these coupled agricultural and social systems are simply too large and have too many multi-tiered variables and scales for exhaustive analysis. A thorough review of mainstream industrial agriculture would be a lifetime of work in and of itself. We can simplify these massive coupled human and systems by working with local food initiatives in small communities. Working at these small scales we can capture a microcosmic snapshot of the larger image that makes up the alternative food social

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movement. Ostrom recommends a “carefully crafted case study” for “analyzing more complex action situations and their linkages” (Ostrom, 2009, 35). It is here, in these intimate microcosms, using multiple case studies with a limited set of variables that a researcher can begin to compare and contrast small social movements and small NGOs and true analysis can begin. In the next chapter, *Navigating the Gardens*, I will describe creating just such a case study that is the focus of this project.
CHAPTER 3

NAVIGATING THE GARDENS

Prologue: One afternoon, July 2013, in a Community Garden Near South Mountain

It was a hot day, though not for a Phoenix, Arizona summer; 113°F according to my truck’s external thermometer. We had gathered at the edge of a heavily trafficked street in south Phoenix. Kids and teenagers were coming to the community garden from all directions, darting across the street when there was a lull in traffic and walking along the scorching sidewalks. The garden was located next to a closed community center. Weedy, abandoned lots and rundown apartments bordered the other three sides of the garden. I wandered into the garden with the other gardeners while the garden organizers chatted away with everyone. I was drawn to a stand of sugarcane. Sugarcane grows well in Phoenix and this sugarcane along with the other produce grown here, I was told by a gardener, was intended for the kids to sell at farmers’ markets. The kids kept the money they made. One of the garden coordinators called us together to discuss what we were to do today: watering the squash, watermelon and sweet potatoes and pulling weeds, mostly Bermuda grass. After a half hour of doing these tasks, another coordinator began showing us how to collect hollyhock seeds. The hollyhock flowers in that garden were beautiful reds, pinks and yellows, sometimes all on the same stalk. After we had accumulated a softball-sized paper bag of seeds, the organizer told us that he would give the seeds to whomever could sell them for the most money. The kid's hands went out, though not my own or the other garden organizers, for a chance to earn the money. The organizer handed the bag to a thin, African-American teen whom looked like he had lived a hard life already. One of the youth’s, perhaps 11 years old, sighed exasperatedly that he hadn’t gotten the seeds. The teen turned and handed the bag of seeds to the youth so he could earn the money instead.

The work presented here cannot be easily categorized into a single, specific paradigm. For myself, the beating heart of this project is based in pragmatism. I have focused on a real-world problem: reduced access to nutritious foods in disadvantaged, minority communities and examined how they cultivate social systems to create local food systems. My focus has been on examining how these communities create social systems that improve their access to healthy foods. I examine what these local food movements struggle with and how they navigate their way around barriers. To develop
the story of food access and the social systems created within the community to address local food security, I have included as many perspectives as I could gather within a reasonable time frame. That data and the resulting story is being used to help local community organizers to understand and create more robust social mechanisms that perpetuate their desired social outcome of increasing community food security.

This research has been participatory. Many of the questions used in interviews were developed through talking with community organizers and attending their meetings about creating local food systems. To the extent that I was successful in capturing the meaning and spirit of those conversations and observations the clear distinction between researcher and ‘subject’ was broken down as those ‘researched’ defined what mattered to them. In several cases, the relationship between the research subject and me was established years before interviews for this project began. Establishing a social network of garden organizers, policy advocates and gardeners before starting interviews has yielded high quality ‘insider knowledge’ to which someone viewed as a relative stranger may not have had easy access.

The historical work I did for the project was intended to create a materialist history of food production and access within two of the communities. I felt that the contemporary conditions within the study area could be better understood by creating some historical context. However, I was not entirely prepared for what I found. I had not realized that the two communities had formed largely through historical racist practices. I did not know that Phoenix had had Jim Crow laws. I did not know that one of the areas was considered to be one of the “worst slums in America” during the 1920s and 30s. I did not know of the multiple starvation events in that community had occurred during those
times. I had no way to know that while one community became, in many respects, a ‘reserve army of labor,’ the other was the farm fields in which much of this labor force toiled. Unexpectedly, as my research for the chapter evolved, it became clear that that chapter had to be rooted in critical race theory. It became clear that the reality of study area had to be understood in terms of its historical connections to power and racism as well as food production, distribution and access.

To the best of my knowledge no food justice scholar has sat down and discussed the optimal methods to use while examining a food justice movement. With no clear precedent, I have adopted methods and approaches from disparate academic fields that applied to my research questions. This included ethnographic field notes, participant observation and informal interviews in a style that anthropologists use. I did archival research for primary sources, a review of scholarly historical research for secondary sources and the analysis of those sources as a historian would do. I engaged in interview coding and theme building to create a grounded theory of small social movements and outcomes as a sociologist would. Finally, I integrated all those components and wove them into a landscape, a description of place, while maintaining a sense of shifting social and geographical scale and change over time like a human geographer.

My research questions have driven the eclectic nature of the paradigm and the methodologies used to answer those questions. The mixed methods used here—historical research, participant observation, interviews with key informants and residents—are all intended to develop a rich and holistic description of what has transpired within the study area and to describe what is happening now. Coding interviews and theme building has allowed me to analyze multiple community scale social movements, food justice groups
and describe community driven, bottom up solutions used by these neighborhoods to increase access to high-quality fruits and vegetables. The data presented in this dissertation may be generalizable and applied to other communities that are struggling with foodscapes similar to the ones described here. I am documenting my methods carefully here so that later researchers who work with food justice movements can see what has been done and, hopefully, improve upon this approach as well as develop quantitatively testable hypotheses.

This chapter discusses the methods used in the research project, including how I selected important actors to interview, and how that interview information was analyzed and compiled. The framework used here, ecology of actors was vital to the project. While the community food justice movements may be small when compared to national or city-wide movements, there are still enough individual actors playing disparate but vital roles that I could have easily tripled the population of interviewees and still not reached everyone involved with any single movement. The ecology of actor's model allowed me to map out important sets of actors before interviewing began and become more selective of the actors I needed for a robust data set. The ecology of actors provided a way to create a mental map of important flows of information. Mapping also allowed me to understand the informational and material flows between the social movement and the organizations that have played vital roles in developing and sustaining these movements.

**Data Sources**

The primary data sources used in this for the contemporary case study project are from three communities that have begun to organize food justice movements in Phoenix, Arizona. The city of Phoenix calls these planning districts Central City Village, South
Mountain Village and Maryvale Village. The three villages serve as home to the largest populations of predominantly Mexican American minorities in Phoenix (Luckingham, 1994; Oberle & Arreola, 2008). All three communities have newly formed (ranging from three to seven year old) local food initiatives organized and funded by separate CDCs. The local food initiatives are constructed around community gardening programs. Community organizers describe the garden programs as the first step in creating local, civic agriculture projects, which will in the long term result in farmers’ markets, mobile produce trucks, community supported agriculture drop-offs and other, larger urban agriculture projects.

Because all three communities exist within the city of Phoenix, there is little variation in governance between them or in the city’s interaction with the movements. Unlike some older cities with long-established traditions of civic agriculture (see Lawson, 2005), it is only now emerging in Phoenix, making this an ideal place to study governance obstacles faced by newly emerging civic agriculture-based food justice movements. In 2002, Phoenix voters approved a reform of existing zoning ordinance that included an environmental planning element requiring policy makers to “develop guidelines that encourage community gardens and community farms” (Environmental Planning element, 2009, pp. 268-9). However, the existing zoning laws regarding community gardens or any civic agriculture program have never been addressed. Carol Johnson of the city planning department better states the reality: “Our regulations are a mixed bag… We have addressed the [community] gardens in a piecemeal way so far” (Clancy, Sept. 11, 2010).
The individual history of each community in the study area has given rise to the particular CDC that now supports the local food initiative. For example, as early as 1918 a medical survey of the area now known as Central City Village linked malnutrition to high rates of disease (Luckingham, 1994, p. 36). During the Great Depression, the community was declared the “worst slum in America” (McLoughlin, 1954, p. 41). To offset suffering and disease, an activist priest founded a successful hospital. During the 1970s, minority-owned neighborhood grocery stores in the Central City South community were driven out of business by larger retail supermarkets. By the 1980s, the Phoenix Memorial Hospital formed a CDC mandated to “reduce blight” within the village. That CDC now funds and organizes the community’s local food initiative including 5 small community gardens.

In contrast, South Mountain Village was once home to much of the commercial agriculture that Phoenix’s economy was founded upon. Unstable cotton prices led to farmers refusing to pay immigrant farm labor and this led to starvation amongst the workers. South Mountain was also the area that hosted the Japanese flower gardens from the late 1930s through 2000. At one time, these flower gardens were extensive enough that the perfume could be noticed all the way across the Salt River and in Central City Village, and the gardens became a tourist attraction during the 1950s. My informal discussions and interviews with longtime residents of South Mountain Village have revealed that many remember growing food in backyard gardens. They also remember vast citrus orchards, chickens and horses, and milking cows, and catching fish and crawdads out of the once extensive canal systems. This agricultural landscape is now gone, but the memory persists among longtime residents. Recently, a community
organizer and native son of this area has founded a civic agriculture-based nonprofit as a platform for addressing multiple justice issues in the community (Ross, 2011, pp. 224-6). The program has spread rapidly and includes multiple large gardens along with hosting informal local farmers’ markets and joining with larger and more formal farmers’ markets around the Valley.

In the third case, Maryvale Village absorbed a large population of Mexican Americans from Central City Village during the 1970s who were forced to relocate because of airport expansion in central Phoenix (Dimas, 1999). Popular perceptions of poisoned water, cancer clusters and successive waves of gang violence have eroded property values in Maryvale, causing some local supermarkets to abandon the neighborhoods and galvanizing residents to create a CDC to address gang activity. A large grant funded two Maryvale Village CDCs to create community gardens. That same grant hired professional community coordinators to organize its local food initiative and also influence policy makers to create new zoning and city policy regarding civic agriculture. A third organization, operating at the international level relocates refugees into Maryvale and runs an urban farmers program, which some of the refugees participate in. In this program refugees have a chance to make a small income while learning some English. They learn how to conduct their own business in an advanced capitalistic society and to create local social networks. Some of these urban farmers have become quite successful running acres of gardens and small farms at the periphery of the city.

However, considering the topic of my research, there was a complication. None of the organizers or residents I met referred to their work as justice-based or a social movement. To begin to understand how these food justice groups practice, I had to take a
small step backward and examine the phrase “food justice.” Gottlieb and Joshi in their book *Food Justice*, mentioned creating a “new language” around food justice. They hit upon a key concept, but they did not elaborate much further (p. 232). Simply put, while some advocates and scholars have already been introduced to the language of food justice, it may be that the majority of practitioners do not identify with or use the name.

What needs to be kept in mind here is: that in many communities, minority populations are mobilizing around the creation of equitable food systems linked to a system of environmental and social, ethical frameworks (Gottlieb & Joshi, 2010). Multiple parties have observed this phenomenon repeatedly across the U.S. To conceptualize that phenomenon, groups of people have named it ‘food justice.’ However, for those who are wrapped up in the phenomena every day, they may not know of that name. Or, if they do know of the name, choose not to add it to their daily vocabulary. Many of the practitioners I worked with generally know about the larger food justice movement, but none of them has ever self-identified as being involved with the movement in any way. I think, more commonly than not, many ‘food justice’ practitioners can only be identified through a process of examination and questioning. As I had to act as my own guide in identifying if these groups were practicing food justice, I drew up a list of questions that could help me identify if they were food justice groups. This list is only meant to be suggestive and is not exhaustive:

1) Is there reduced access to nutritious food within the geographical area that the group exists?

2) Is the group creating a system of local food production and, if so, is it based in some ethical framework, such as environmentally-friendly or helping to meet the need of an underserved population?
3) Are they working towards increasing the distribution of healthy food within some geographical area, such as farmers’ markets or grocery stores?

4) Is the group trying to mobilize the local population around creating a more equitable food system within their geographical area?

I believe there are many groups practicing every day what academics and advocates would describe as food justice, but these practitioners may not use the phrase ‘food justice’ to describe themselves. Therefore, it is important to describe briefly the process of how I discovered the groups in this chapter that I have identified as food justice practitioners. The phrase ‘food justice’ came to my attention while co-authoring a publication about community gardens in an underserved and largely minority set of neighborhoods in central-south Phoenix. We had set out to determine what motivated this population to join a community garden and what barriers kept them out of the gardens (Bleasdale, Crouch & Harlan, 2011). The study was based upon a community that I now realize was actively creating their own food justice movement. Meanwhile, my co-researcher, Crouch, was doing an independent study of the same area in central-south Phoenix. She used the Nutrition Environmental Measures Survey (NEMS, n.d.) to examine community food access and the results of her work showed that our research area had less access to high-quality foods compared to other Phoenix communities (Crouch, 2011a, 2011b). Upon examining the United States Department of Agriculture—Economic Research Service (USDA-ERS) online food access research atlas (USDA-ERS, 2014), we discovered that USDA-ERS classified our research area and many surrounding areas as having reduced access to grocery stores. Crouch’s research now had independent corroboration, and other students approached her to launch a second study in west Phoenix (Taylor et al., 2011). West Phoenix, I now also realize, is creating its own
food justice movement. Further corroboration of low food access in these areas came from the Food Research and Action Center (FRAC). They used data from the Gallup-Healthways Well-Being Index to determine which congressional districts across the U.S., were contending with, “food hardship, [that is] a marker for household struggles with hunger” (FRAC, 2013, p. 1). FRAC rated what was then Arizona’s 4th district (since redistricted), which included most of central, south and west Phoenix, as the 6th least food secure congressional district in the United States in the year 2012.

There were three independent sources showing reduced access to nutritious food within geographical areas in which I knew minority organized and run community gardens and farmers’ markets already existed. I also knew garden organizers were working in these neighborhoods to mobilize their community in support of these garden networks. I could give a strong “yes” answer to the four questions I outlined above. My preliminary investigation into the three communities illustrated that they fit well within the scholarly description of the food justice movement, and the diverse histories of these communities sets the stage for developing a rich understanding of the complex interactions that make up a rapidly evolving group of small movements. This early work in the communities also proved important in establishing this project’s research questions and in creating a social network of organizers, activists and community members who helped me with coordinating and attaining interviews. All the CDCs who helped in this project have worked closely with many other Arizona State University students in documenting inequalities in community-level food access.
Qualitative Methods for Contemporary Study

Interview data made up the bulk of the study of the contemporary social movements. These political scales identified as important in the framework for this study; the community scale, the intermediary scale, and the local government scale determined which groups and individuals were included in data collection. Furthermore, I had training and experience in both interviewing and participant observation and used these extensively for data collection in my pilot study of the Central City South community gardening program.

For participant observation, I attended community gardens events, garden parties and workdays. There I talked informally with gardeners and introduced myself to garden coordinators. I attended a number of garden strategy meetings in the fall of 2010 which garden coordinators invited me to. The strategy meetings were funded by the Maryvale On the Move grant that ran from 2010 to 2013. Part of that grant was intended to create substantial change in city policy around local, civic agriculture projects. One of the results of those early 2010 meetings was coordination between gardening programs in the study area. Through their efforts and working with policy advocates, a new and progressive zoning code around community gardens was created (Bleasdale, 2014). From the my conversations and experiences at garden events and in strategy sessions, I created a set of ethnographic field notes, and from those notes I created sets of interview questions for both residents and garden organizers and policy advocates.

Semi-structured interviews and participant observation were chosen to play a central role in data collection. Interviews were used because they yield high-quality textual data and, if done well, the clearest picture of what was happening on the ground
Interviews of residents were coordinated through Respondent Driven Sampling (RDS). RDS started with a few informants acting as seed interviews in the community. Each seed interviewee was paid a small sum ($15) for their time and given three coupons with which to recruit members of their social network for the study. Those who responded with a coupon were interviewed, given $15 and three coupons for further recruitment. RDS sampling is considered an ethical way to gather respondents in vulnerable populations as it is always up to the respondent to voluntarily contact the researcher (Bernard, 2006, p. 194). Using RDS, interviews were distributed across the populations of all three communities, with a maximum of 20 resident interviews in each community. This maximum was chosen as it is a reasonable amount of interviewing time over a year and a half of gathering, transcribing and coding interview data. In total, 20 interviews were conducted in South Mountain, 20 interviews in Maryvale and only 13 interviews in Central City South. In all, 53 residents were interviewed across the three communities.

Interviews with residents gathered their perspectives on the food justice movement and provided context for a contemporary understanding of food access and the food environment. To increase the range of interview data, several specific criteria for included in the interview study were established. First, the interviewee had to be living in the community being surveyed. The neighborhoods are made up of a wide array of individuals with varying levels of knowledge and interest in the food justice movement. To capture some of the neighborhood diversity, two sets of interview protocols were conducted for resident populations. Residents who knew of the gardening program received one set of questions that focused on the local foodscape and the gardening
program. Interviews with those participating in the program allowed me to gain an insider, or emic, residential perspective of the program. Residents who did not know of movement received a second set of questions that focused on the local foodscape, but the second half of their interview was focused upon the barriers between them and participating in the local food movement. Interviews with those who did not know of the urban agriculture program allowed me to gather an outsider, or etic, residential perspective on the program. Because there were two sets of interview protocols, a second criterion was added. At least five residents in each community’s interview sample had to be active community gardeners. At least five others in the sample had to be largely unaware of the local food movement. I did not create an interview quota to determine the racial composition of the interviewees. However, in the end, only two of my interviewees were white; the other 51 resident interviewed were a diverse mix of minority groups with African American and Latino populations heavily represented.

In consultation with garden organizers, I created maps of the study area. The garden organizers outlined the geographical area in which they felt their garden program and their non-profit had influence (included in appendix 2). In effect, it was the garden organizers who defined the geographical boundaries of the community. This was an important step, so I could gauge who should be considered a resident of the community and who was outside of the community. It also allowed me to define which corner markets or supermarkets were considered inside the community and which were outside the community. Each resident interviewee was provided with a map of their area so we could pinpoint important locations such as community gardens and food sources. If time allowed, I asked resident interviewees if they felt the map was representative of the area.
they thought of as their community. All interviewees felt the boundaries of the map were a fair representation of the geographical area they defined as their community.

Before residential interviewing began, I used the interview protocol on three volunteer nonresidents to test whether the questions were clearly worded and gain an estimate on the amount of time an interview would take. There were relatively few questions in the final interview protocols (included in appendix 1). Interviews with residents were asked: 1) how did they view their access to nutritious food; 2) how did they view their foodscape; 3) did the local food initiative encourage them to participate; 4) how effective was this encouragement; 5) what could the initiative do to improve communication with residents; 6) what barriers did they face in participation with the local food initiative; 7) what could be done to reduce those barriers? I did not always strictly follow the interview protocol or exact wording of the questions. If the interviewee mentioned something that was relevant and interesting, I would follow up with further questions about the divergent topic. I would also reword questions when it seemed that would help the interviewee better understand the meaning of the question. This interviewing technique is less about standardization of questions and categories, for which a survey might serve better, and more meant to tailor the interview to the interviewee and increase the depth and quality of the information gained from any single interview (Weiss, 1994). It is intended to give the reader a nuanced understanding of the respondent and their perception of their world. The open nature of the interview allowed the interviewee to examine self-reflectively their neighborhood foodscape, talk about the existing food justice movement and imagine an ideal neighborhood-based local food system. At the end of the interview, if time allowed, I would summarize what we had
discussed to see if I had missed anything they felt was important. I would also inquire if there were, “something I should have asked about food, but didn’t know enough to ask?” The open nature of the questions, diverging into related topics, encouraging the interviewee to speak openly, and the final brief summary of our discussion created a relatively lengthy interview. Residential interviews ranged widely in time with a few being only about half an hour long to several approaching two hours. The average residential interview time was around 55 minutes.

Twelve of the interviews conducted with residents of Maryvale were translated. Two of the interviews were conducted in Burmese, and a third was in a dialect of Burmese, the name of which I did not learn. For these interviews, the Maryvale On the Move grant kindly provided funds for professional translation, and the International Rescue Committee provided the translators who were fluent in both English and Burmese. The remaining nine translated interviews were conducted in Spanish. Experts who have worked with Maryvale residents for many years recommended not using professional translators, because residents might become intimidated and shy away from doing an interview with another unknown party present. Instead, they recommended that I use translators who the residents would be comfortable talking to. In the end, the Maryvale experts helped arrange for bilingual family members to be present at the interviews. I compensated the bilingual translators as well as the interviewee with $15 each for their time. While these Spanish to English translations may be less precise than the professionally translated interviews, Maryvale experts felt that the simple nature of the interview content, questions about foodscapes and urban agriculture, would not provide a real barrier to communication for a nonprofessional translator.
The population of community and garden organizers across the three communities was small. I did not have the luxury of a large population to sample. My interview strategy changed to doing in-depth interviews. Instead of a single interview, I spoke with most garden organizers in three sessions each lasting about 90 minutes. There were exceptions to this. One garden organizer had just started his garden program in the weeks before the interview. I only conducted a single interview with him. Another organizer had very limited time, and I had previous interview material from my pilot project. She also only had a single hour-long interview. Another, relatively new, garden organizer took over an abandoned community garden late in the study. I helped at many of her garden events, and invested time teaching her gardeners how to garden and discussed organizational strategies with them. The dialog became an extended email; sometimes dinner conversations in which different strategies were weighed and the garden organizer would choose what she liked the best. In the end, interviews were not the only data I collected from garden organizers. The interviews were expanded upon by participant observation and dialog over the duration of the project. In total, I collected around 11 hours of recorded interview material from four organizers.

Another complication of placing interviews into exclusive categories of resident or garden organizers was that some of the residents (some of whom were gardeners and some whom were not) were very influential in the creation, maintenance and vision of the urban agriculture program. It became clear during my interviews with these residents that they did not fit neatly into the category of a resident interview, despite not being the official organizer for the urban agriculture programs. These interviews proved very valuable, and I combined their data set with the community organizer data set when
Examples of questions asked of community organizers were: 1) how did you learn what the community wants from the food initiative; 2) how did you communicate a vision of the initiative to the community; 3) how did you determine if alliances with other groups will benefit their own community; 4) how did you cultivate community level, government level and nonlocal support systems; 5) how did you develop motivation, vision, and strategies for food initiatives; 6) what were your aims, goals and objectives; 7) what do you feel you have accomplished?

A small set of local urban agriculture policy advocates were interviewed as well. Members of this group were key actors in the local urban agriculture scene. They often represented the entire city of Phoenix rather than just the communities in the study area. Two of these interviewees worked directly with city policy makers to guide the creation of new city policy surrounding Phoenix urban agriculture. Two other interviewees worked with a federally-funded governmental institution that assists farmers and urban agriculture practitioners. While these latter two interviewees do not create policy directly, the city of Phoenix policymakers considered their recommendations to be expert opinions. Beyond these interviews, I also regularly attended meetings from January to October 2014 with urban agriculture policy advocates, garden organizers and policymakers in attendance. The focus of these meetings was the upcoming policy additions to the Phoenix City code that will impact Phoenix urban agriculture for the next two decades. This group of experts provided recommendations for city of Phoenix policymakers about what was needed for urban agriculture expansion and long-term sustainability.
Interview Analysis

I transcribed about half the interviews myself using transcription software and a pedal. The other half was transcribed using a transcription service. I double-checked all transcriptions handled by the transcription service to guarantee a high level of accuracy. As the transcription process wore on, it become clear that some resident interviews were of higher quality than others. I switched from doing verbatim transcriptions, to abbreviating unessential parts of the transcription and making notes to myself when the interviewee wandered off track. Eventually, I began separating interviews into categories. The interviews with the best quality information, that is, the interviewees who gave a lot of detail and were carefully thinking through the questions received a near-verbatim transcription. A few residents struggled to maintain focus for the duration of the interview, and their answers to questions sometimes bordered on unintelligible. Interviewees who consistently gave short answers and were not really engaged in the interview received an abbreviated transcription and notes. In total there were about 750 pages of transcribed and encoded interview data.

Food justice movements’ research is still in its early days, so I used inductive techniques to discover, explore and document emergent themes in the data aimed at answering the research questions. I also used inductive coding instead of trying to fit the interview data set into a predetermined codebook, theory or framing (Charmaz, 2006, p. 46). I let the codes develop from simply reading the text and observing what was there and interesting. I coded the data manually. I did not want the data to conform to the dictate of a computer program, but instead focused on learning all I could from the data set. I typed the transcriptions into word processing software, which I then marked up with
the codes. I developed spreadsheets as I went along to mark what codes I had found in any particular interview and to keep some very basic demographic information on the interviewee.

All the coding done in this project is a hybrid of “structural coding” (Saldaña, 2009, pp. 66-70). I did not break the transcription down line-by-line or word-by-word. Instead, I examined the interview in small segments of text. The smallest text segments are about a sentence in length with the longest being about a paragraph. Structural coding is an effective way to handle large quantities of transcriptions such as gathered in this project. While this coding method is less refined than others, the scale of this of project was quite large and the questions were broad. Structural coding is considered robust enough for thematic analysis and grounded theory (Saldaña, 2009, p. 69). I did not code my field notes or documents generated by the nonprofits, organizations or institutions that were subjects in this study. Field notes were expanded upon and rewritten, often the same day, and were used in this project as examples of what I observed in order to augment my textual analysis. I made that decision in part for time constraints, and in part because I felt the data pool was so large that adding another set of analytical data would add little and possibly muddle the project.

The process of developing themes from the data set was straightforward. I read the transcriptions, identified specific segments of text as relevant or interesting and labeled that segment of text with a descriptive sentence. This initial read and identification of important ideas began to structure the data. When I ran into another segment of text, either in the same interview or another that was similar to a previous label, I tagged it with the same descriptive label. This process resulted in creating a series
of descriptive labels that identified reoccurring themes that ran through the interviews. I developed many, many labels that repeated themselves through the interviews. To reduce the number of descriptive labels identifying specific segments of text, I began to create categories that would contain multiple labels. For example, many residential interviewees mentioned different kinds of education. They talked about education regarding gardening, cooking, budgeted shopping, shopping for healthier food, identifying healthy food, nutrition and exercise. These eight descriptive labels for text segments were found repetitively across the interviews. However, they all can be lumped into one larger category: education about gardening, food and exercise. Categories are the sum of many similar and recurring text segments found throughout the interviews. The themes were based upon the categories that resulted from analysis of the data set. Table 3.1 below shows the process I used to take raw textual data and draw it into a coherent set of themes rooted in the interview data.

<table>
<thead>
<tr>
<th>Identify a specific segment of text and create a descriptive label for that text segment.</th>
<th>When a similar text segment is found it is tagged with the same descriptive label.</th>
<th>Similar descriptive labels can be grouped together into a larger category.</th>
<th>Categories become the emergent themes from the data set.</th>
</tr>
</thead>
</table>

Table 3.1. Converting Textual Data into Emergent Themes.

The themes that emerged from the interviews tell the story that answers the research questions. What surprised me was the consistency of the themes running through the interviews. For example, I identified about 70 recurring text segments across multiple resident interviews. As coding continued, it became clear that theoretical saturation was being reached with fewer and fewer new descriptive labels needed to describe text segments emerging from the interview data set. The text segments also fit well into larger
categories. I never tried to force disparate textual labels into a category. It was obvious that some textual labels were closely related and needed to be grouped together. The categories that emerged were sometimes surprising to me. While I expected categories about food access, I never expected a category about food and health related education. In retrospect, it may seem obvious, but it simply never occurred to me earlier in the project. I interpreted these surprises, of which there were many, as a sign that the work was progressing well. It seemed I was interpreting the data set on its own terms and not forcing it to fit what I expected, or hoped to find.

The resident respondents and organizers who participated in this project gave me permission to record and publish private parts of their lives. That raised some very legitimate ethical concerns. All interviewees first read a disclosure document that identified what the project was about and how the data would be used. Data results were given in aggregate. However, interview quotes were used extensively, so the voices of the respondents were not lost. I have removed identifying markers in any quotes used that might be traced back to a particular interviewee. All names are computer-generated pseudonyms that only identify the respondent's gender. In some instances, interviewees openly discussed information that might negatively impact public perception of their urban agriculture program. When using that particular material, I speak as abstractly as possible to protect the interviewee and their program. No one under 18 years old was interviewed for this project. This study protocol was approved and declared exempt by the Arizona State University Institutional Review Board (IRB Protocol #: 1301008757).
Qualitative Methods for Historical Work

Many of the communities in which food justice movements originated struggle with equitable access to nutritious food and are often called “food deserts” (Gottlieb & Joshi, 2010). A food desert is a measurement of relative, community level, geographical and economic access to nutritious and affordable food. Organizations, such as the USDA, use the food desert concept to identify communities in need of nutritionally dense (in contrast to calorically dense) foods. Until recently, the existence of food deserts was heavily debated, but a contemporary review of 49 studies “found clear evidence for disparities in food access in the United States by income and race” (Beaulac, Kristjansson & Cummins, 2009). Food desert scholars Zenk et al. (2005, p. 600) argue that: “analysis of the role of race without regard to poverty and of poverty without regard to race offers an incomplete picture of the potential importance of these factors in shaping the spatial accessibility of supermarkets.”

From a practical standpoint, identification of existing populations that need immediate attention is both urgent and laudable. Nevertheless, studies of contemporary inequities lack the explanatory power of historical or longitudinal analysis to understand how a community’s access to nutritional food evolves over time. Sociohistorical and political processes shape the existing distribution of urban infrastructure such as supermarkets, grocery stores or food outlets, but few scholars connect this body of empirical work with the powerful explanatory traditions emanating from their intellectual disciplines (Adams, Ulrich & Coleman, 2010). Food justice scholars have begun to fill this gap by analyzing how historical socioeconomic processes and institutionalized racism have created injustices within the contemporary food system (Green, Green &
Kleiner, 2011; Minkoff-Zern et al, 2011; Norgaard, Reed & Van Horn, 2011). Calling these accounts “silenced histories,” they argue: “race and class play a central role in organizing the production, distribution and consumption of food” (Alkon & Agyeman, 2011, p. 4). To understand what is happening currently in communities labeled as food deserts, I contextualize several contemporary movements within their past, which allows me to connect contemporary social movements with sociohistorical processes.

Historical narrative is used to contextualize the trajectory of these communities that are, in this case, closely entwined with their agricultural origins. This narrative describes the socio-economic and political processes that shaped both large and small scale Phoenician urban and peri-urban agriculture and develops an explanation of why the study area came to be a food desert existing at the heart of a severe urban heat island. To capture the sophisticated mélange of events, institutions and actors require ordering the narrative into subsections roughly divided by both time and scale of agriculture production taking place in the region. As large scale cash cropping altered the physical and social landscape, it also changed the neighborhoods that are the focus of this study. However, the relationship between commodity agriculture and neighborhoods in this study area was reciprocal. Just as often as the agricultural practices shaped the South Phoenix area, the communities therein also influenced Phoenician agriculture. When large-scale agricultural practices did not provide nutritious food for the communities, they would began to (and still do to this day) work towards reshaping their local food production and distribution processes.

The historical narrative is drawn from a mixture of primary and secondary source materials. Historical data for Maryvale before the 1940s was sparse. I decided not
to include Maryvale and focus fully on Central City South (CCS) and South Mountain where there was ample historical documentation to make the critical connections and points that interested me. I constructed the historical narrative from a mixture of primary and secondary source materials from scholarly literatures that have established social variables or processes associated with food deserts, urban heat islands, and food justice activism.

The social variables and processes I used to flag relevant historical documents for this historical narrative are as follows. Food access is strongly correlated with race and socio-economic status (Beaulac, Kristjansson & Cummins, 2009; Walker, Keane & Burke, 2010), and with structural violence (Lane et al., 2008), and with social exclusion (McEntee, 2009). I also included a fourth social variable to identify historical incidents in CSS and South Mountain of disempowered populations creating local food systems: food justice activism. For purposes of this work, structural violence will refer to inequitable “distributions of power and resources” that are recognized to create modern food landscapes (see Lane et al., 2008, p. 417). Social exclusion, broadly defined, refers to a situation in which an individual or group faces exclusion from the mainstream due to “‘discrimination, poor skills, low incomes… or poor housing’” (see McEntee, 2009, pp. 350-1). Finally, food justice activism is, “low-income communities and communities of color [that] seek to create local food systems that meet their own food needs” (Alkon & Agyeman, 2011, p. 5).

I read as much of the historical literature surrounding my study site as I could find, taking notes from the source material as I read. I made a list of the discrete historical events categorizing them by variable. For example, the Salt Rivers “Great Flood” of 1891
washed away homes and farms and caused extensive damage in the study area. Scholars describe the flood as a pivotal event in the creation of CCS because relatively wealthy Whites could afford to move northwards, away from the river. Minorities either could not afford to move or may have faced racial restrictions that disallowed them to leave CCS (Dean & Reynolds, 2006; Dimas, 1999; Luckingham, 1994; Lukinbeal et al, 2010). The Great Flood was categorized as social exclusion. The minorities living in CCS at the time faced discrimination and substantial economic burdens that forced them to remain within the “disamenity zone” (Lukinbeal et al., 2010, p. 20). The Great Flood then becomes an event that can be analyzed as a factor for historical malnutrition in early CCS.

Each time I found a source in historical materials relating to the social variables or processes, the source was added to a list. This process continued until all reasonably accessible source material had been exhausted, or repetition between source materials indicated saturation had been reached. Using social variables and processes to differentiate between relevant and irrelevant historical material, I constructed a chronological and thematic narrative of food access, minority operated food systems and agriculture in Central City South and South Mountain.

Notes on Terminology

Marion Ernwein (2014) has rightly pointed out that the term “urban agriculture” is politically charged in that, “framing can be surprisingly complex and subject to power relationships, and that the word ‘urban’ itself can be delineated differently among urban agriculture projects” (p. 77). However, my intent is not to politicize the words urban agriculture or urban gardening here. It is also worth mentioning that none of my interviewees ever used either of those terms. Most often gardeners and garden organizers
would use the phrase “garden” or, much less frequently, “community garden” to refer to their various urban agriculture projects.

I used the term “urban agriculture” to encapsulate the mixture of resident-operated backyard gardens, community gardens, market gardens, urban farms, farmers’ markets and locally-operated Community Supported Agriculture programs (CSAs) in the study area. I do not pretend that urban agriculture is an apolitical term, and I discuss the movement’s political framing in chapter six, *Enter the Garden*. Undoubtedly, representatives of the city of Phoenix and other groups would frame “urban agriculture” quite differently than the food justice movements. However, as the term simply was not part of the food justice movement’s vernacular, it seems pointless to try to unpack how their framing of the phrase would differ from the city or other groups.

I also used the term “garden” throughout the dissertation. Residents and garden organizers would unproblematically refer to every agriculture project as a “garden.” This phrase could mean home garden, community garden, market garden or urban farm. For example, in two of the communities in the study area, community gardens, market gardens and urban farms exist within a few blocks of each other. However, all were commonly referred to as “the garden” without direct reference to ownership or distributional mechanism; such as a community garden is a community ‘owned’ agricultural project and food produced is kept by the gardener. An urban farm is conventionally thought of as being owned by an individual who sells the products/produce. Further complicating the blanket phrase “garden” as it is used here is that the organization and distribution of some community gardens was unconventional. Some of these gardens had individual plots assigned to individual gardeners. However,
some of the larger gardens were organized with a communal ideal in mind. That is, while
there were many large garden beds, none of them were assigned to individual gardeners.
Rather, the community gardeners and volunteers worked the garden beds as a group. A
resident could simply walk in during operational hours and harvest the produce they
needed for the kitchen. On the other hand, there was often a surplus of produce beyond
what residents harvested. Extra produce was communally harvested and sold at farmers’
markets, and the profits were divided among active community gardeners. These gardens
transcended the normal classifications of “community garden;” that is, individual plots
for individual gardeners on a commonly held piece of land. Instead they used communal
land and labor, which any resident could turn into individual gain, and gardeners profited
from the sale of excess produce.

My classification of market garden also transcended conventional descriptions of
market gardens. The market gardens were a collection of garden plots assigned to
individual gardeners, situated on a single piece of land held in common, much like the
conventional description of a US community garden. However, the plots were rented (for
a nominal sum) to individual gardeners. Gardeners could harvest what they wanted from
their individual plot for home use, and the rest was harvested and sold at farmers’
markets or through CSAs with the proceeds going back to the gardeners.

The urban farm is another classification I have created to describe what the
gardeners simply referred to as a “garden” that they cultivated for both home use and
profit. Two of my interviewees maintained “gardens” that were acres in size. They rented
these plots and access to flood irrigation for a nominal sum from one of the food justice
movement organizations in the study area. The excess produce was sold to local corner
markets, local CSAs and at farmers’ markets. When the interviewees mentioned the size of their “gardens” and the volume of produce they were selling (measured in the thousands of pounds per week during the peak harvest seasons), I exclaimed, “That’s not a garden, that’s a farm!” The two interviewees seemed flattered by my surprise, but continued to refer to themselves as gardeners who happened to maintain very large “gardens.”

The distinctive vocabulary that residents, gardeners and garden organizers used to describe their urban agriculture systems is important, but is also likely a local linguistic pattern. I have chosen to expand the vocabulary by adding my own terminology of ‘market garden’ and ‘urban farmer’ to clarify variability in the sizes of the garden and the distributive mechanisms, either for home use or for market (often a combination of both). Perhaps as these systems mature, residents will develop a more sophisticated and nuanced language to describe their considerable urban agriculture achievements. On the other hand, anyone familiar with the neighborhoods and the local agriculture initiatives will understand the colloquialisms used to describe these systems. Developing a more sophisticated vocabulary to describe their ‘gardens’ would only be for the benefit of outsiders; it would add little to the existing neighborhood conversations and may come across as pretentious to residents.

A final note on my choice of vocabulary: I do not directly deploy a systems analysis of the gardens. However, I sometimes utilize systems language when describing and analyzing the gardens because I do not know of a more concise and explicit language to describe the phenomena under observation. To that end, I use the word complex to denote a complex system. That is: (1) a system that exhibits properties not obvious from
observing the individual interconnected parts that comprises the system (Lansing, 2003); (2) a system that fails when one of the interconnected parts is removed (Miller & Page, 2007); (3) components of the system can be roughly grouped through identification of conceptual scales, “based on functional relationships rather than on a spatial or temporal scale” (Gibson, Ostrom & Ahn, 1999, p. 221). The conceptual scales I use are described in detail in chapter two, Gardens of Justice, where I outlined the Ecology of Actors framework.

I also use the phrase “coupled natural and human system” similarly to how the National Science Foundation defines the phrase. That is, a system that contains the following four components: “(1) the dynamics of a natural system; (2) the dynamics of a human system; (3) the processes through which the natural system affects the human system; and (4) the processes through which the human system affects the natural system” (Dynamics of Coupled Natural and Human Systems [website], n.d.). The coupled natural and human systems I discuss are the gardens and social systems gardeners and garden organizers have developed around the gardens. There is also a sophisticated set of environmental feedback loops between the neighborhoods in the study area, the gardens and the gardeners. These feedback loops are discussed in detail in chapter six, Enter the Garden. I also used the phrase coupled natural and human system interchangeably with “socio-ecological system,” This was not an attempt to enter in the contentious debate over correct systems terminology but a stylistic choice in order to not wear down the reader through repetition.
Conclusion

This research project contains several sophisticated frameworks and multiple, different methodologies intended to gather and analyze several data sets. I am very purposefully taking a broad and sweeping approach to answering the research questions I asked in the introductory chapter, *Let them Eat Cake*. At the time of this writing, the concept and scholarly descriptions of food justice movements is still fairly new. Arguably, the idea of North American cities maintaining self-sustaining, local food systems fell out of popular imagination at the conclusion of World War II (see Lawson, 2005, pp. 170–202). The idea of creating local, food systems in US urban centers have only recently become popular again. I believe that before scholars can answer specific, quantitative, hypothesis driven questions about local food production and food justice, they first need a broad overview of the grounded reality.

Too many popular articles and books boil down to almost utopian descriptions of local, urban agriculture systems and food justice movements. Too many scholarly works focus almost exclusively on linking local urban agriculture systems and food justice movements to larger theoretical constructs such as social justice, anti-globalization and critiques of capitalism. That’s fine, for as far as it goes. However, if we cannot describe what is happening, in the day-to-day and on the ground, if we cannot describe and analyze the desires, struggles, triumphs and losses that face groups trying to establish local urban agriculture and food justice-based social movements, then how are we to know the mechanisms of these social systems?

As a researcher using qualitative methods, I was both the instrument of data collection as well as the interpreter of the data set. I was as prone to laziness, internal bias
and error as anyone else. The process was messy. I often found myself thinking I wanted to write about one topic, then realized that it wasn’t as interesting as I had assumed or the data set did not support it, and I needed to move onto another subject. But, somewhere between the popular utopianism and the scholarly theory, there exists reality as the subjects in this study have experienced and still experience it. I have done my best to describe and analyze the data they have provided me about their lived reality.
CHAPTER 4

DOUBLE EXPOSURE

Prologue: One Morning in a South Phoenix Community Garden, March 2013

We sat on benches hastily constructed five minutes before with cinder block legs and broad slabs of concrete for seats. They had been arranged in two columns so that a group of about 25 people could assemble. Next to me were two African American teenagers. A baby burbled and cried from another bench while her dad fussled over her. Shortly a Phoenix Master Gardener would talk to us about growing produce in the sticky, beige clay that comprises the alluvial plain of the Salt River and the five-acre community garden nearby. Before the class began, the garden coordinator stood up and introduced us to the garden itself. A few months earlier it had been an empty field, sited between a rubber factory and a large shipping company and backing onto a residential street. Two drug overdoses and a grisly double homicide had taken place in and around the field over the last few years. The owners of the lot had decided to lease to the local community gardening program to discourage further crime. Illegal trash dumping in vacant fields had become more popular since the 2008 economic downturn. It had taken some 600 volunteers and a dozen large trash dumpsters to clear the lot of debris. The coordinator spoke with pride about clearing the old Santa Fay Ditch, freeing irrigation water for the fields to move through it again for the first time in decades. Later, an African American resident would tell me how he and other teenagers used to hunt for crawdads in the ditch in the late 1960s: “We would get a bucket of them, pick some oranges (from citrus groves, now gone), take it all home and boil the crawdads up. We used to be able to get good food everywhere!”

Urban agriculture is used extensively for food provisioning and ecosystem management in some societies (Deelstra & Girardet, 2000; Wright, 2009). It can provide a host of benefits to cities around the world including increasing food security and expanding economic opportunities (Redwood, 2012). Urban agriculture will become an increasingly important component of future urban design because of the ecosystems services it provides: biodiversity, increased air quality and water flow regulation (Lin, Philpott & Jha, 2015). Local food supplies may increase resilience to climatic extremes and potential future food shocks (Dixon et al., 2009; Okvat & Zautra, 2011) as global climate change increases temperatures and contributes to long-term droughts in the
hinterlands where most agriculture is now concentrated (Parry et al., 2004). Urban agriculture shortens food supply lines, increases the abundance of CO$_2$ consuming flora and creates shade that helps regulate local climatic extremes and reduces the Urban Heat Island (UHI) effect. Local community-based agriculture systems, more so than longer agricultural supply chains, may also be superior adaptation strategies for climate change (Thornton et al., 2009).

Interest in community gardening is rapidly rising in North American cities (Birkey & Strom, 2013). Gardeners use phenological observation (Lawrence, 2009; Miller-Rushing & Primack, 2008) and management (Carroll & Salt, 2004, pp. 163-4) to grow a diverse set of crops under challenging climatic conditions. Barthel, Folke & Colding (2010) developed the concept of “social-ecological memory” to describe how urban allotment gardeners in Stockholm, Sweden, use communication, mimicry, ritual and habit to share local ecosystem knowledge. Urban gardeners constantly engage in ecosystem management. The more they are in contact with each other, such as in a communal garden setting, the greater the reservoir of shared knowledge about successful phenological management strategies, which can increase local crop resilience to climate change.

The urban community garden provides an iconic image of the growing interest in decentralized, democratically organized and civic-based agriculture in the United States (Lyson, 2004). What may be less obvious to a casual observer is that the urban community garden is part of an urban “political ecology” (Guitart, Pickering, & Byrne, 2012), which is intimately connected to the environment and the socioeconomic processes on the ground. By this I mean that local food systems are heavily influenced by
geographical, social, political, economic and environmental changes happening at larger regional, national and global scales (Ericksen, 2008) and that local food systems are embroiled with social justice issues at the local scale (DuPuis, & Goodman, 2005; Purcell & Born, 2006).

Scholars have begun the important work of deepening our understanding of popular food movements by placing them within their historical context (Belasco, 2007; Johnston & Baumann, 2010). Examining the many and various civic gardening movements within the U.S. over the last 130 years has shown that “[communal] urban gardens [are] rarely… simply a place to grow food and flowers: rather… a way to address much larger social concerns, such as economic relief, education reform and civic accord” (Lawson, 2005, p. 287). Recently food justice scholars have begun analyzing how historical socioeconomic processes and institutionalized racism have created injustices within the contemporary food system (Green, Green & Kleiner, 2011; Minkoff-Zern et al, 2011; Norgaard, Reed & Van Horn, 2011).

Calling these accounts “silenced histories”, they argue: “race and class play a central role in organizing the production, distribution and consumption of food” (Alkon & Agyeman, 2011, p. 4). To better understand urban, civic-based gardens of today we can examine them in situ, that is, within the context of the community and the history of that community. From that examination we can begin to assemble a coherent image of changes in community food security over time and why some communities struggle with inadequate access to nutrition and their strategies for increasing access. In this chapter, I will answer the research question, what socio-economic and political processes shaped urban agriculture systems over time in Phoenix, Arizona? I use this example to show how
export-driven, commodity agriculture drove out Mexican American and Native American small farmers from the region, marginalized Asian immigrant farmers, was responsible for the migration of poorly-paid domestic and foreign workers to central Arizona, and has contributed to reduced nutritional access and increased vulnerability to climate change in predominantly ethnic minority communities.

This narrative describes the socio-economic and political processes that shaped both large- and small-scale Phoenician urban and peri-urban agriculture and develops an explanation of why the study area came to be a food desert existing at the heart of a severe urban heat island. Capturing the sophisticated mélange of events, institutions and actors requires me to order the narrative into subsections roughly divided by both time and scale of agriculture production taking place in the region. As large-scale cash cropping altered the physical and social landscape, it also changed the neighborhoods that are the focus of this study. However, the relationship between commodity agriculture and neighborhoods in this study area was reciprocal. Just as often as the agricultural practices shaped the south Phoenix area, the communities therein also influenced Phoenician agriculture. When large scale agricultural practices did not provide nutritious food for the communities, they began to (and still do to this day) work towards shaping their own local food production and distribution processes.

The Study Area

Phoenix lies within Maricopa County in central Arizona at the northeastern edge of the Sonoran Desert. It is the largest city in a greater metropolitan region of 4.3 million residents sometimes known as the Valley of the Sun. Historically, the warm climate, long-growing season and steady source of water from the Salt and Gila may have been part of
the original attraction for farmers. However, like many US cities with agricultural origins, Phoenix has prospered in the modern, globalized economic system by distancing itself from its original agriculture-based economy. The succession of land uses in Phoenix has been to replace sustenance-based farming with monocrop-based industrial farming (Dean & Reynolds, 2006). After World War II, residential and commercial land uses began to replace farm fields and pastures on the urban fringe of the city (Redman & Kinzig, 2008). In an accelerating shift in land use since the 1960s former farmlands have been replaced with housing developments, and crops with pavement and tile roofs.

Records of elevated winter temperatures over the city of Phoenix start as early as 1921 (Chow, Brennan & Brazil, 2012). Climatologists have demonstrated an increase in nighttime temperatures as much 10° Celsius over the last century (Brazel et al., 2000) and “pronounced divergence” between temperatures in the Phoenix core and surrounding desert by 1970 (Ruddell et al., 2013). Within incorporated Phoenix, land that is currently being used for agricultural crops has appreciably cooler microclimates, by 5-8° Celsius, than residential, commercial or industrial land uses (Grossman-Clarke, 2010; Stabler, Martin & Brazel, 2005). However, Phoenix may now have one of the most intense UHI effects in the world today (Hawkins et al., 2003). Higher-income households have migrated to the more desirable urban fringes of the metro area that have retained some farm fields and native desert vegetation (Ross, 2011). Affluent neighborhoods closer to the urban core are likely to have greater amounts of vegetation and lower surface temperatures than nearby poorer neighborhoods (Jenerette et al., 2007). Since 1980, the correlation has increased significantly between high neighborhood socioeconomic status and more abundant amounts of vegetative land cover, which in turn affects temperature
variability in the urbanized area (Jenerette et al., 2011). Residents in inner-city Phoenician neighborhoods with little vegetation and warmer microclimates have higher risk of heat-related stress and death (Harlan et al., 2006, 2013).

The predominantly Hispanic and African American communities that are the focus of my study are historically rooted in small farms that produced food for local people and some exportable cash crops in the 19th century. By the 1930s, large-scale cash cropping intended for national export had transformed the landscape and the human settlements patterns within these communities. Central City South became home for thousands of agricultural laborers while South Mountain became the fields in which many of those laborers toiled. Today only remnants of these once verdant agricultural landscapes exist and these communities have been identified as food deserts by independent researchers: (Crouch, 2011) using the Nutrition Environment Measures Survey and the United States Department of Agriculture Economic Research Service (USDA-ERS) food access research atlas (food access research atlas, n.d.). Both the USDA and United States Department of Health and Human Services define a food desert as a: “census tract with a substantial share of residents who live in low-income areas that have low levels of access to a grocery store or healthy, affordable food retail outlet” (USDA, n.d., p. 1). Improving food access in communities identified as food deserts is a research priority and the subject of policy debate by institutions such as the USDA (Walker, Keane & Burke, 2010). Having once been food provisioners and exporters, study areas Central City South (CCS) and South Mountain now have extensive community gardening programs that garden organizers describe as a way for residents to increase access to nutritious food (Bleasdale, Crouch and Harlan, 2011).
Early Phoenician Agriculture

The Sonoran Desert, in which Phoenix is located, has many climatological advantages for agriculture. With 340 frost free growing days and a winter similar to spring in temperate climates of the U.S. Midwest and East Coast, successive crop planting is possible year round. The Salt River, which flowed freely 200 miles westward from the White Mountains into the central Arizona basin, provided perennial water for irrigation. Remnants of a massive system of irrigation canals were left by a First Peoples tribe known as the Hohokam who had flourished in the area between the 7th and 14th centuries (Plog, 1997). The Akimel O’odham meaning “river people” and Xalychidom Piipaash meaning “people who live toward the water” (once known as the Pima and Maricopa) successfully farmed and sold crops in the area now known as Phoenix as early as the 1850s (DeJong, 2007; Royce Manuel, personal communication, May 15, 2014). The U.S. military identified the Akimel O’odham and Xalychidom Piipaash peoples as strategic allies during the American Civil War. The tribes had a small volunteer army and sold grains and cloth to U.S. troops during and after the war. Nearby U.S. military outposts and mining camps were established, creating a demand for local, inexpensive crops for soldiers and miners along with grains and fodder for horses and pack animals (Luckingham, 1994). When Mexican and Anglo farmers arrived around this time they only had to clear and re-excavate the old Hohokam canals and open the water channels once more for irrigation of their farm fields.

Mexican farmers in South Mountain struggled to retain their farms in the face of aggressive Anglo land acquisition practices. Beginning in 1873, aspiring capitalist and land baron, Michael Wormser, proved particularly adept at turning independent Mexican
farmers into Mexican sharecroppers. Wormser advanced seeds and equipment needed by poor Mexican farmers to grow wheat and barley if they mortgaged their crops to him (Goldberg, 1973). If a Mexican farmer could not produce the crop, Wormser could “seize the grain” or “sue for his money plus interest” (Goldberg, 1973, p. 185). Later, Wormser “insisted that the Mexicans get legal title to their farms. When they did, he acquired almost all of their land as well as the Ditch [aka the San Francisco Ditch that now waters the five-acre community garden described in the prologue] in return for wiping out their indebtedness” (Goldberg, 1973, pp. 185-6).

It is estimated that by using this strategy Michael Wormser accumulated around 9,000 acres (just over 14 square miles) of arable farmlands from the original Mexican owners between the 1870s and the mid-1890s (Goldberg, 1973; Ryden, 1989). As Wormser stated, “I furnish them water, lands, animals and tools… That is the advantage they got, and that is the reason they stick with old Wormser” (Goldberg, 1973, p. 189).

The newly created class of Mexican sharecroppers exchanged their fall and winter plantings of barley and wheat with Wormser for use of land, seed and agricultural water. In summer they cultivated market gardens of corn, beans, watermelons, pumpkins, greens, sweet potatoes, and onions.

Wormer’s single massive farm dominated South Mountain but that was not typical for Phoenix, where farms tended to be smaller and average around 108 acres in size by 1890 (Newell, 1900, p. 4). However, advertising in the late 1880s stated that smaller farms would be highly profitable, “every fifty acres of [farm], on average, would be a fortune to a family” (Farish, 1889, p. 21). City boosters from the period promoted Phoenix as the “Garden City of Arizona” in pamphlets distributed across the nation to
white audiences, while downplaying the role that Mexican American and First People populations had as farmers and farm labor (Luckingham, 1989, pp. 29-35). Many of these pamphlets suggested new farmers should work on small acreages and be as independent as possible. For example, “the Valley is especially adapted for [implied white] men of industry who have been wage-earners in large cities and manufacturing centers of the country to become possessors of small parcels of land and be self-sustaining and independent individuals and farmers” (Rio Verde Canal Co, 1896, p. 7). During the late 19th and very early 20th centuries much of agricultural labor was largely met with householders or residential farmhands (See Dean & Reynolds, 2006, 37).

When a Phoenician farmer needed extra labor they were advised that ethnic minority field hands were both available and inexpensive. Luckingham (1994), quotes a Phoenix promoter in 1878 stating, “Our unskilled ranks are filled by Mexicans who work for one dollar and one dollar and a half per day” (p. 20). The Phoenix Chamber of Commerce used paternalistic language to describe the Akimel O’Odham and Xalychidom Piipaash: “[they] are self-sustaining and industrious beyond the generality of their kind, constituting a labor reserve that will be appreciated by the valley orchardist” (Phoenix Chamber of Commerce, 1891, p. 42). Later, in 1894, the Phoenix Chamber of Commerce described socially excluded Mexican American groups as: “A small and scattered Mexican population… found near the cities and villages. They live mostly by themselves, and are a peaceable people, and very valuable to the country as laborers” (Phoenix Chamber of Commerce, 1894, p. 20). However, the Mexican laborer population was not scattered, but rather was concentrated at the southern edge of Phoenix just out of sight of wealthier Anglo populations.
In the 1880s Central City South (CCS), isolated on the other side of the Salt River from Wormser’s farming empire, was an ethnically diverse area of residences and small farms. At that time it was still a rural community that also included white settlers. However, the epic 1891 flood of the Salt River created a “classic disamenity zone” (Lukinbeal et al, 2010, p. 20), reducing property values for fear of further flooding damage. Many Anglos who could afford to move to higher ground relocated northwards away from the river, selling or renting their farms and homes to minorities (Luckingham, 1994, p. 25). Because much of the CCS area was outside the city limits (and would only become part of the city of Phoenix as late as 1959 and 1960), poor residents didn't have to pay for the social services they would have within city limits and, therefore, could afford to live in CCS (Lukinbeal et al, 2010, pp. 20-3). CCS lands being comparatively inexpensive had no racial restrictions on ownership (Luckingham, 1994) or building codes, and it became a place that poorer minority immigrants could make a start. Lot sizes tended to be very small and houses were built with materials that were immediately available (Dimas, 1999, p. 62). Building materials were so inexpensive that some households could avoid getting bank loans.

During the late 19th century, a new immigrant ethnic minority began to drastically change how CCS residents procured food for themselves. In 1880 there were more than 100 Chinese sojourners (men intending to retire to China after making their fortune in the US) living in Maricopa County (Luckingham, 1994). Most of the Chinese began vegetable gardening, which proved a successful strategy for making a living because many Anglo Phoenician farmers were engaged in more profitable grain production (Murray & Solliday, 2007). Within a few years of starting market gardens, the Chinese
sojourners were supplying fresh produce to Phoenicians, which was described as “an industry that will prove highly profitable in… [Maricopa] county… Most of the residents of the valley and some surrounding mining camps are supplied by them” (Phoenix Daily Herald office, 1886, p. 24). However, Chinese interest in market farming and gardening crumbled in the face of new national and local policies.

The U.S. Chinese Exclusion Act, signed into law in 1882, denied Chinese laborers entry into the U.S. and banned naturalized citizenship for all Chinese immigrants. The Act was the first in the U.S. to restrict immigrants by both race and class. While prohibiting laborers from entering the country, it still allowed passage for “merchants, teachers, students, travelers and diplomats” (as cited in Lee, 2002, p. 36). This placed Phoenix-based Chinese sojourners in a precarious position. As laborers, they did not have the means to return to China to marry in their own culture. Furthermore, within Arizona there existed a set of anti-miscegenation laws already passed in 1865 (Hardway, 1986). Chinese Sojourners who did not already have a wife in the U.S. were effectively reduced to permanent bachelorhood. They began to give up their market gardens and small farms in Phoenix to become merchants so they could return to China, marry and come back to their homes and businesses in Phoenix (as cited in Murray & Solliday, 2007).

These new merchants were able to obtain lines of credit from Chinese benevolent societies (Luckingham, 1994) and began to establish their own independent grocery stores, which proved popular with local residents. Sojourners had “experience as cooks, gardeners, and vegetable peddlers and they were knowledgeable about every aspect of food distribution” (as cited in Murray & Solliday, 2007, p. 14). A network of small Chinese grocery stores was established throughout the entire Central City South and on
the periphery of South Mountain. While there also existed African American and Mexican American owned and operated small grocery stores within CCS (Dean & Reynolds, 2004; 2006), historic property surveys have directly linked Phoenician Chinese grocers to the purchase and distribution of local fruits and vegetables. Location of many of the Chinese grocery stores outside the city limits and in CCS may have been in part because “deed restrictions, local ordinances, state and federal laws, and the general practices of the time prevented them living in most parts of Phoenix” (as cited in Murray & Solliday, 2007, p. 21). The Chinese grocery stores served a patchwork of settlements in CCS, ranging from rural to semi-urban neighborhoods, referred to as barrios by Spanish-speaking residents.

After the Chinese were established in their economic niche, a later wave of Asian immigrants arrived in the South Phoenix area around 1910. Japanese male immigrants (sometimes referred to as Issei) came to Maricopa County as paid laborers to grow sugar beets (Murray & Solliday, 2007; Walz, 1997). By 1915 the sugar beet industry had collapsed, but a few Issei remained and started their own small farms. The Japanese immigrants faced considerable barriers to entering farming. Arizona already had passed an Alien Land Law in 1913 forbidding first generation Asians from owning land. By 1921 the law was amended to disallow Asians’ to lease land (Luckingham, 1994). Issei farmers largely managed to avoid this legal pitfall by having their American-born children or friendly non-Japanese sign the lease agreements.

The Issei, like the Chinese sojourners three decades before them, did not try to compete with Anglo farmers who had invested heavily in large-scale commodity production of grains, citrus and cattle aimed at national distribution. Instead the Issei
experimented with alternative crops that had been seen as too labor intensive or difficult to grow in the summer heat: lettuce, cantaloupes, tomatoes and strawberries. The Issei’s timing couldn’t have been better. In 1918 the Maricopa County immigration officer released a pamphlet stating: “The commercial possibilities for growing vegetables has never been fully developed [in Maricopa county]… there [are]… [State wide] markets now supplied almost wholly with fruits and vegetables grown in California” (Immigration Officer, 1918, p. 5). Issei experimentation with fruits and vegetables proved very successful and they sold much of this produce to local Chinese and other minority-owned local grocery stores.

Some barrios (neighborhoods) in CCS were comprised of ethnically mixed populations while others were less diverse (Dean & Reynolds, 2006). Wealth was not evenly distributed, and although a few attained middle class, most remained working class, largely employed as service workers or farm laborers (Luckingham, 1994). The early agricultural origins of the barrios were sometimes reflected in their names. By the early 1920s, a successful Mexican family had found its wealth in farming 40 acres of land and built a tin gate at the entrance to their lot. For less fortunate Mexicans, the gate came to represent the family’s success, and the barrio became known as “puerta de oro” or “Golden Gate” (Dean & Reynolds, 2006, p. 32). Shortly thereafter the Cuatro Milpas barrio formed southwest of the Golden Gate barrio (Demas, 1999, p. 60). The Cuatro Milpas barrio, or “four fields,” was originally dominated by four large farms owned by local Mexican farmers but also contained smaller cornfields and a small dairy (Dean & Reynolds, 2006, p. 33). The El Campito barrio, or “little camps,” formed in 1927 and was populated by poorer Mexicans and hobos who resided in tents living on what they could
grow (Dean & Reynolds, 2006, p. 34). Money was scarce; in fact, medical professionals linked nutritional deficiencies to high rates of illness in south Phoenix as early as 1918 (See Luckingham, 1994, p. 36). Despite this, many went to work at local farms growing cotton or wheat and some Mexican residents “did not much notice the difference between the barrio and Mexico” (Dimas, 1999, p. 61).

In this early phase of Phoenix agriculture, several important developments were taking place at once. First, farm labor was becoming racialized. White farmers were exploiting minority populations for inexpensive farm labor. Second, minority populations were being systematically segregated, pushed to the edges of the city to live in small enclaves away from white populations. Third, white landowners were gobbling up minority-operated farms and minorities were increasingly facing a set of regulatory policies that barred them from easy access to farming. These three processes began with the origin of Anglo farming in Phoenix but they accelerated rapidly over the next century.

**Export-driven Agricultural Expansion**

In the decades that the CCS barrios were developing an evolving system of local food production and distribution were a tumultuous time for large Phoenician farmers supplying national markets. By the 1880s, conversion of the desert into agricultural lands was well underway with estimates of 40,000 acres of watered land and another 150,000 acres available to be farmed (The Garden of America, 1885). Agricultural exports intensified and demand soared for alfalfa (the primary cash crop of early Phoenix agriculture), used as feed for horses, cattle, burros and other draft and work animals.

On Independence Day 1887, the first train rolled into Phoenix and farmers quickly began to take advantage of new national markets available to them. Luckingham
(1989), states that, “outbound traffic was mainly agricultural, and it reflected the area’s reputation as the ‘Garden of the Territory’” (p. 31). Rapid and reliable long-distance transport allowed for more cash crops such as grain, dried fruit and cattle to be shipped out of the Sonoran desert and across the nation (*Figure 4.1*).

With a growing set of cash crops and an effective mechanism for moving the crops around the country, new collaborations between influential Anglo Phoenician farmers, local government, and at times, the national government began as early as the 1890s. The massive flood of the Salt River in 1891, which destroyed much of the CCS area, as well as droughts later in the 1890s, encouraged farmers and the local government to investigate flood mitigation and water storage solutions (Honker, 2002). To protect their profitable commercial enterprise, influential farmers formed the Salt River Valley Water Users Association in 1903. “With the endorsement of most residents, in June 1904 [the association], negotiated a contract promising to repay the federal government the cost of building Roosevelt Dam” (see Luckingham, 1989, p. 44). Farmer’s pledged their lands, an estimated 200,000 acres, as collateral for the federal loan.

In *Figure 4.1* (as seen on next page) is an early map counting train carloads of agricultural products leaving Phoenix and illustrating the national and international reach of Phoenician agriculture (Immigration Commissioner, 1929).
Due to continued irrigation Phoenix had become a new agricultural empire by the second decade of the 20th century. The list of environmental changes made to power Phoenix’s agricultural-based economy was impressive. Extensive canal systems, a new water storage system including dams and reservoirs and a network of trains’ linked Phoenix to markets across the country were definitive achievements. The importance of the dam cannot be overstated for Phoenix agriculture: “the completion of Roosevelt Dam in 1911 [allowed] production of cash crops [to]…really take off… With a secure water supply now practically guaranteed, crops like cotton, citrus, and lettuce began large scale production in earnest” (Dean & Reynolds, 2006, p. 37). Estimates of total irrigated Phoenician farmland during the early part of the 20th century are around 250,000 acres.
(around 400 square miles) of an agriculturally diverse set of crops that included alfalfa, grains, citrus, some cotton and others (Luckingham, 1989).

The loan for Roosevelt Dam, however, came at a heavy price that changed the trajectory of farming in Phoenix for the coming century. The original projected cost of the dam was $3.75 million, but it ballooned to almost $10.3 million (Logan, 2006, p. 75). Despite the cost overruns, repayment of the reclamation project had to be completed in ten years (Lukinbeal et al, 2010). Although Phoenician farmers had some of the highest average crop values in the U.S., they faced a “double financial burden,” which was to repay the reclamation project while simultaneously prices for staple crops such as corn and wheat were decreasing (Smith, 1986, p. 108). Farmers had to scramble to pay the debt or face forfeiting their lands.

They had to revisit what and how they farmed in the face of crushing debt from the new dam and the plummeting price of staple foods. Phoenician farmers had begun to experiment with cotton cropping, and as early as 1912 some 572 acres of long staple cotton had been planted in Phoenix (Brown & Cassmore, 1939). Between 1910-20, long staple cotton prices were rising rapidly from $.28 to $1.35 per pound, an almost 500% price increase (to give a comparison in 2013 currency, $0.75 per pound or higher is considered a “good” price for Phoenix cotton [Personal communication, Phoenix Extension Agent, August, 2013]). There were three reasons for this increase in cotton prices. During this time the boll weevil, an insect that feeds on cotton buds and flowers, began to decimate cotton crops in the southern states, decreasing U.S. cotton supplies. The outbreak of World War I cut off the U.S. from long staple Egyptian cotton imports (Luckingham, 1989; Lukinbeal, Arreola & Lucio, 2010). While supplies of long staple
cotton were plummeting, demand was peaking. Long staple cotton was used in the manufacture of early automobile tires and airplane skins. Between 1916 and 1918 cotton acreage had increased by almost 950%, from 7,400 to 72,000 acres in Phoenix and was as valuable as “white gold” (Luckingham, 1989, p. 74). By the time of the U.S. entry into the war, Phoenix had established a proven track record of successfully growing long staple cotton (Dimas, 1999).

With the coming of the new cotton industry, the need for farmhands and cotton picking laborers exploded. Phoenix farmers formed a new partnership to deal with the financial burdens of hiring more laborers, paying down the mortgage on the Roosevelt Dam, and the plummeting values of export crops other than cotton. Securing a massive and inexpensive labor force (Dimas, 1999, 25; Lukinbeal et al., 2010; Smith, 1986) to harvest cotton was a major challenge and finding enough cotton pickers became a frenzied new occupation in Phoenix agriculture. White farmers created organizations to look “after the labor situation,” as cotton cropping in and around Phoenix reached a feverish pitch. They formalized collaboration between themselves and other groups with associations intended to increase inexpensive farm labor (Table 4.1). As a representative of one of the cotton picker recruiting associations stated in 1920 and quoted by Brown, & Cassmore (1939), “If the association had not protected the valley in the matter of picking price… each farmer would have been bidding against his neighbor for labor and the price [of labor] would have jumped and jumped” (p. 65).

The demand for labor in Phoenix was seasonal: a labor force numbering in the tens of thousands was needed only between October and February (Dean & Reynolds, 2006). There was little to no farm work available for the rest of the year. The racialization
of agricultural labor had begun early in Phoenix with Mexicans as the predominant labor pool, but the full ramifications of that exploitative system come to fruition during the cotton era. What had been a seemingly haphazard set of events leading to discriminatory practices began to take on a much more calculated air at it was scaled up to include tens of thousands of new laborers a year. The creation of a “perfectly elastic supply” of labor proved highly effective at suppressing workers’ wages. In 1878 unskilled minorities’ wages were around $1.50 per day (Luckingham, 1994, p. 20). Sixty years later in 1938, the arguably skilled laborers (cotton pickers), whether they were minorities or not, were still paid around $1.50 a day (Brown & Cassmore, 1939, p. 2). Truly, as a representative of the cotton picker recruiters claimed in 1920:

 Thus in the face of the greatest demand for labor the world has ever seen… The cotton growers of the Salt River Valley maintained as perfect as elastic supply of labor as the world has ever seen and maintained an even low level of prices for wages throughout its territory. Outsiders looked, studied, and went away amazed at the accomplishment of such an organization. (See Dimas, 1999, p. 26 and also Brown & Cassmore, 1939, p. 65)

 With a formalized, and systematized method of labor recruitment that carried on for close to three decades, white Phoenix farmers recruited laborers from access the US, into Mexico and as far south and east as Puerto Rico. In the late 1910s-20s (during and immediately after the Mexican Revolution), cotton picker recruiters in Mexico boasted of a good life to be found cotton picking in Arizona, earning them the nickname, “enganchadores… (literally those who ensnare)” (Peterson, 1974, p. 116; Dimas, 1999, p. 25; also see McWilliams, 1942, p. 77). During the 1930s recruiters turned their
attention to white and African American Dust Bowl refugees (Okies) moving across the country to California. The pattern that emerged was that labor recruiters preferred displaced and distressed populations (see push/pull factors in Table 4.1).

<table>
<thead>
<tr>
<th>Years Active</th>
<th>Name of Recruiting Organization</th>
<th>Affiliation with other institutions</th>
<th>Groups Recruited</th>
<th>Push/Pull Factors and Notes on Recruitment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1912-13</td>
<td>The Salt River Valley Egyptian Cotton Growers Association</td>
<td>No known affiliations at this time</td>
<td>500 Akimel O’Odham &amp; 500 cotton farmers from southern states</td>
<td>Advertisements placed in 20 Southern newspapers; local reservations canvassed</td>
</tr>
<tr>
<td>1914-15</td>
<td>Association Dissolved</td>
<td>N/A</td>
<td>N/A</td>
<td>Low cotton prices reduced labor needs</td>
</tr>
<tr>
<td>1916-17</td>
<td>The Salt River Valley Egyptian Cotton Growers Association</td>
<td>No known affiliations at this time</td>
<td>Texas farmers &amp; Mexicans from Tucson &amp; Mexico</td>
<td>Texans farmers stricken by drought &amp; Mexicans fleeing civil war (1, 2)</td>
</tr>
<tr>
<td>1918-20</td>
<td>The Salt River Valley Egyptian Cotton Growers Association</td>
<td>U.S., Department of Labor, Railroad and Coal Mining companies</td>
<td>Estimated 35,000 Mexicans brought in on special trains</td>
<td>Recruiting agents sent to Los Angeles, Nogales, El Paso, San Antonio &amp; Mexico (1)</td>
</tr>
<tr>
<td>1921-25</td>
<td>The Salt River Valley Egyptian Cotton Growers Association</td>
<td>No known affiliations at this time</td>
<td>Unknown number of Mexican &amp; Southern Farmers Recruited</td>
<td>Mexican recruitment in danger, begin to create mailing lists of Southern Farmers (1)</td>
</tr>
<tr>
<td>1926-27</td>
<td>The Salt River Valley Egyptian Cotton Growers Association</td>
<td>Department of the Interior &amp; Dpt. of Labor of Puerto Rico</td>
<td>1,500 laborers from Puerto Rico.</td>
<td>Recruiters sent to Puerto Rico. Riots break out on docks as laborers compete for work (1, 3)</td>
</tr>
<tr>
<td>1928-29</td>
<td>The Salt River Valley Egyptian Cotton Growers Association</td>
<td>No known affiliations at this time</td>
<td>Some Mexicans, but moving to southern states cotton pickers.</td>
<td>Fliers mailed to Southern states and advertisements placed in newspapers (1)</td>
</tr>
<tr>
<td>1930-33</td>
<td>Arizona Cotton Growers Association</td>
<td>U.S., Department of Labor,</td>
<td>Estimates of around 400,000 Okies migrating through AZ (1930-9) to California.</td>
<td>Great Depression &amp; Dust Bowl force hundreds of thousands of farmers migrate westwards (1, 4, 5)</td>
</tr>
<tr>
<td>1934-39</td>
<td>The Farm Labor Service</td>
<td>U.S., Department of Labor, Works Progress Administration.</td>
<td>Estimates of around 400,000 Okies migrating through AZ (1930-9) to California.</td>
<td>Recruiters sent to Oklahoma &amp; Arkansas; signs posted at Arizona ports of entry (4, 5)</td>
</tr>
</tbody>
</table>
Workers along with their families were moved into “cotton camps” in proximity to the cotton fields (Lukinbeal et al, 2010). This was the beginning of an important trend that needs to be recognized to understand how agricultural labor moved across the Arizona landscape and how it crystallized in particular areas of the landscape and the long-term impact upon human settlement patterns that led to the formation of communities in this study. While cotton camps were located around Phoenix, CCS became one of the largest. The fields in which imported laborers worked the land were often at the foothills of South Mountain. The Great Depression accelerated this process.

**Surviving the Great Depression in Central City South**

During the 1930s the population of Central City South continued to expand as the Phoenix business establishment tried to divest itself of its “cow-and-cotton town” image by “shunting across the tracks the immigrants from Oklahoma, Arkansas and Texas” (McLaughlin, 1954, p. 41). As with Mexican cotton pickers, the “Okie” pickers who ended up in Phoenix were pushed into the Mexican barrios. Farm labor camp reports about Maricopa County describe some of the barrios in CCS as “shacktowns” where “1,166 white families, 1,566 Mexican families, and 912… [black] families” of migratory cotton pickers lived (see McWilliams, 1942, p. 86). Cotton picking and processing was the primary source of income for some in the barrios in the 1920s, but by the 1930s it seems that male residents had resorted to picking cotton *en masse.*
Investigative journalist McWilliams was in CCS for a short time during the late thirties. I quote from him at length:

[About] 3,000 workers are transported, during the season, to and from the fields by trucks… Near 16th and Jefferson streets, in Phoenix, the trucks line up at 5 A.M. and the drivers blow their horns and yell “Cotton hands!” In a few moments the trucks are loaded and on their way to the fields. They return to the corner around 9:30 or 10 o’clock at night. No one sees this daily occurrence, for it begins and ends in the slum quarter of Phoenix, in the early morning and late evening hours, when the shadows are upon the land. (McWilliams, 1942, pp. 87-88.)

The location specified by McWilliams placed this day labor pick-up location squarely in historical Central City South. Though CCS did not originate as a cotton camp, and many residents were in fact service workers (Luckingham, 1994, p. 37), it is clear that the barrios increasingly came to serve as a semi-permanent cotton camp for both migratory laborers and some long-term residents.

The living conditions in depression-era CCS reflect incredibly low wages, discrimination and mirrored the conditions of the many cotton camps scattered around Phoenix. Predictably, nutritious food was as difficult to come by in the barrios during the 1930s as it had been in the teens and 1920s. Although residents of CCS may have geographical access to Chinese and minority operated grocery stores, they did not necessarily have economic access. Some residents of CCS during the Great Depression were living in absolute poverty. As they had before, many residents continued to maintain animal stocks and vegetable gardens (Luckingham, 1994, p. 40) to supplement
what they little could get afford at local grocers. The canal and ditch systems watering the farms may have also augmented some residents’ food supplies [as quoted by longtime resident in the prologue]. At that time the waterways hosted fish, waterfowl and small game (Redman & Kinzig, 2008, p. 250). However, backyard gardens, stock animals, fishing and small game hunting may have all been necessary but insufficient strategies for preventing severe malnutrition in the area. It is worth noting that the records of poverty diets from the time reflect popular descriptions of the kinds of foods commonly available in contemporary urban food deserts, such as, fatty meats, fried foods, processed grains and few fruits and vegetables.

McLoughlin (1954), an activist priest whose mission was located in CCS during the Great Depression describes how children in the barrio “survive[ed] on sow belly, chitterlings, and grits” (p. 47). Although McLaughlin’s recount of food availability to the poor in Central City South is anecdotal, it is also reflected in government reports describing the living conditions of cotton camps around Phoenix: “The diet of the pickers and their families correspond closely to typical poverty diets. It consists almost entirely of cheap, filling, starchy foods. Meat, except for an occasional chunk of “fat-back,” and vegetables are rarely seen… greens, is nearly always absent” (Brown & Cassmore, 1938, p. 9). In CCS food was obtained and distributed from multiple food pantries within the community. McLoughlin recounted how food might be donated to his mission for distribution. A wealthy parishioner who remembered his “soup kitchen days” and donated “[a] truckload of premium ham and bacon. Southwest Phoenix—poor, diseased and ostracized—ate high off the hog for several days” (McLoughlin, 1954, p. 54).
Despite the poverty in CCS during the Great Depression, the population continued to swell with the influx of Okie cotton pickers. Networks of family-run Chinese grocery stores continued to grow throughout the area and expanded into South Mountain. The Chinese grocers often lived in an apartment attached to the store or house located next to it (Luckingham, 1994). By 1929 more than 60 independently owned Chinese grocery stores existed (Murray & Solliday, 2007, p. 19). However, the number of Chinese owned grocery stores might have been higher as some memories of the Chinese grocery store businesses conflict with what is documented in the Phoenix City Directories (Nagasawa, 1986, p. 41). The very success of the Chinese grocery stores gained the attention of competitors and soon the grocers found themselves embroiled in new racially motivated conflict.

During the Great Depression chain grocery stores began a racially charged advertisement campaign against the Chinese grocers. These attacks came in the form of full-page ads in local newspapers stating: “Don’t patronize the Chinese merchants because they sleep behind the store… and they live like pigs” (Luckingham, 1994, p. 107; Murray & Solliday, 2007, p. 20). In 1938 a bill implicitly aimed at shutting down the Chinese grocery stores was proposed. The grounds were sanitation and the proposed law made it unlawful to reside on premises of a store that serves food to the public (Murray & Solliday, 2007). That same year Chinese community leaders formed their own Chinese Chamber of Commerce to protect all Arizonan Chinese business interests (Luckingham, 1994; Murray & Solliday, 2007). The new group successfully lobbied to defeat the “sanitation bill” and became an important new institution for the Chinese community in Phoenix. Although the blatantly racist attacks on Chinese grocers from
large chain groceries seem to have subsided after that, the competitive pressure continued to escalate.

Japanese farmers also faced a series of challenges during the Depression. *Issei* experimentation with fruit and vegetable crops that didn’t compete with Anglo farmers had proven successful. Early lettuce and cantaloupe crops were so productive that they quickly exceeded local demand and had to be marketed outside of Phoenix. Anglo farmers, noticing the success of *Issei* farms, followed suit and by the 1930s both lettuce and cantaloupes had become a major export (as cited in Murray & Solliday, 2007, pp. 40-1). Local sales of *Issei* produce were common. Interviews with *Issei* done in the 1930s showed that “produce managers at local grocery stores often stocked their shelves with *Issei*-raised vegetables,” which could also be found at roadside stands and farmers’ markets (Walz, 1997, p. 8; also see Walz, 2000). *Issei* farming success was perceived as a threat by some white farmers and in 1934 the situation came to a head. A group of white farmers formed the “Anti-Alien Association” and “demanded strict enforcement of the law” (Murray & Solliday, 2007, p. 41). Legal proceedings against Japanese farmers were already underway when violence broke out. Japanese farms were bombed and Japanese homesteads were shot at and barns burned (Sato, 1973). National and international scrutiny of events taking place in Maricopa County created enough political pressure that local law enforcement with the help of agents from the US Department of Justice ended the violent streak (Luckingham, 1994, p. 109). Later the “Arizona Supreme Court dismissed every case… brought against Japanese growers” (Murray & Solliday, 2007, p. 41).
Minority farmers and grocers owned and operated local food systems in Phoenix, and those food systems were concentrated in the study areas of South Mountain and Central City South. However, at the height of the Great Depression, hunger, malnutrition and cases of starvation were still common in CCS. Residents living in abject poverty could not afford to buy food, let alone nutritious foods such as “greens” outlined by federal reports at the end of the 1930s. Overtly racist politics also thwarted minority farmers and grocery stores and attempted to disrupt minority control of their local food system. These processes were taking place simultaneously at local, city, regional and national scales. The local farmers coopted Issei successful vegetable crops and sued Issei for owning land. White-operated regional grocery store chains launched negative add campaigns and legislative action against CCS Chinese grocers. Meanwhile Phoenician labor recruiters had developed, over decades, a formalized system that allowed them to continuously generate a reserve army of farm labor. Thousands of displaced minorities and Okies were recruited for cotton picking and moved into cotton camps, including CCS, to work in the cotton fields and orange groves of South Mountain and other peri-urban regions of Phoenix.

**Post-War Disappearance of Local Food in Central City South**

Shortly after the end of World War II much of the institutional racism and overt structural violence aimed at minority organized local food systems began to subside. However, competitive pressure on local grocers continued to erode the number of local stores supplying local produce. By the 1950s, the peak of the Chinese grocers, there numbered some 200 stores, still largely clustered within CCS with outcroppings in South Mountain and north into Phoenix (see Chinese Historic Property Distribution, 1946 -
2000 map in Murray & Solliday, 2007, p. 98). However, by the 1960s, successful Chinese grocers began to sell their stores and expertise to larger franchises, and many smaller grocers “started looking for a new line of work” (Murray & Solliday, 2007, p. 31).

By the late 1930s Japanese growers were experimenting with a new crop—flowers. World War II interrupted these newly established Japanese farms. Relocation camps for Japanese citizens living along the Pacific coast were created and the U.S. Highway 60 bisecting Phoenix was the dividing line between Japanese considered to be on the Pacific coast and those considered to be living inland. Japanese citizens living on the ‘wrong side’ of the Highway in Phoenix were sent to the Poston Relocation Center (Murray & Solliday, 2007). When the war ended many Phoenician Japanese farmers returned to find their farms ransacked, but the Alien Land Law had been overturned and they quickly rebuilt their farms and began to expand again. Many chose to relocate to South Mountain as the elevation and slope of the land reduced winter frosts (Murray & Solliday, 2007). During the 1950s, South Mountain became a renowned tourist destination for the “Japanese Flower Gardens” (Walz, 2000, p. 415). The flower gardens were extensive, with residents of neighboring CCS remembering the fragrance: “we could smell the perfume from the Japanese gardens all the way downtown…” (Vega, 2003, p. 28). The farmers planted flowers facing streets but also maintained a diverse range of edible crops in vegetable fields behind the flowers (Murray & Solliday, 2007). Most of the vegetables were sold to local grocery stores because “they had good quality products that were well-packed and easily sold” (Murray & Solliday, 2007, p. 59). By the 1960s, however, the hard work and small wages of farm life persuaded the new
generation of Japanese to find more lucrative sources of income and in the 1970s land values in South Mountain were also on the rise, making it far more attractive for the older generation of Japanese farmers to sell their land to real estate developers and retire. By 2000 the last of the Japanese flower gardens and truck farms were gone (Murray & Solliday, 2007), replaced by new suburban housing developments. Large-scale commodity agriculture to this day is a significant presence on the urban fringe of Phoenix and adjoining municipalities. Within Maricopa County, of which Phoenix is the largest city, agricultural production peaked between 1950 and the 1960s (Figure 4.2) and has since been in rapid decline. Nevertheless, the 2012 Farm Census estimated that there are 222,000 acres (about 345 square miles) of cropland in agricultural production in the county along with some 12,600 acres of vegetables and 5,400 acres of orchards (p. 271) with a combined market value around one billion dollars in annual exports (p. 227).

Figure 4.2. Farm census data for Maricopa County from 1925-2012.
Conclusion

Examination of 19th and 20th century agriculture in Phoenix allows me to reconstruct a “silenced history” in which structural violence and social exclusion simultaneously restricted racial and ethnic minorities’ access to nutrition and constructed a built environment that makes the South Mountain and CCS communities vulnerable to climate change. This chapter illustrates how an agricultural settlement in a semi-arid region of the U.S. Southwest was never intended to provide local food security but rather to profit from exported crops, notably grain and fiber.

This historical research produced a parallel, lesser known, narrative that examines the starting conditions for a small scale, local and urban agriculture that residents developed to feed and financially support themselves. This chapter identified several critical points in the evolution and loss of minority operated local food systems: 1) First, Wormser forced Mexican American grain farmers out of business and took possession of their land and canals in South Mountain. 2) Second, late 19th century Chinese sojourners created an extensive system of market gardens and vegetable stalls, but the Chinese exclusion act forced them to abandon their gardens and become merchants. Many opted for opening grocery stores in areas where they were legally permitted to own land, primarily in CCS. The Chinese grocers survived racially motivated add campaigns and legislative action, but eventually gave up their stores as regional chain supermarkets begin to dominate. 3) Third, stock animals, small farms and backyard gardens were established in CCS barrios to ward off hunger before and during the Great Depression. These systems disappeared largely without trace (and without a solid explanation) after the Great Depression. 4) Early 20th century Japanese Issei established successful small
farms based-on experimentation with vegetable crops. They, in part, supplied the network of local Chinese-owned grocery stores. The Issei survived a series of racist policies and political acts, from land restrictions to bombing their farms in 1934, to removing them from their land during World War II. However, eventually land developers gave the Japanese farmers offers they could not resist and they sold their flower farms.

At each point when a local economy based in creating a small scale and local urban agriculture began to take shape, international, national or local events and processes have damaged or destroyed minority-operated local food systems. It is in large part because Phoenix agriculture was export-centric that the slums formed in CCS and deprived laborers of income that, in turn, drove the malnutrition and hunger found in the 1910s-30s. In the construction of an inexpensive workforce of cotton pickers we see how private organizations and public institutions have influenced socio-economic and political processes that ultimately worked to the detriment of community residents. Cotton picker recruiters made a series of what seemed to be “good business” decisions that kept the cotton industry functioning for decades and culminated in systemic worker exploitation. Each phase of worker exploitation ended by creating deep inequities in both built environments and access to nutrition.

Some communities that have struggled with unjust access to food in the past, such as Central City South, continue to struggle during the present. Unjust access to healthy food, or at least a similar set of social processes that created the injustice, may persist over time and continuously renew the physical conditions we now identify as food deserts. Both the concept of a “food desert” and the methodological tools used to measure a community’s relative access to nutritious food are fairly recent developments in the
national discourse about food security. However, this historical account illustrates that unjust access to nutrition in Phoenix is not a new event. This may be true in many US cities: communities now labeled as “food deserts” may have struggled with just access to nutrition for a long time. Food desert researchers may be using contemporary tools to measure an old and persistent phenomenon. However, examining Phoenix history gave us glimpses of the struggles that local, urban, food systems have faced in the past, as well as hints of the political events and processes they may need to overcome in the future. Further, it reveals a largely forgotten record of minority-operated, local, urban food systems that have flourished here in the low desert. The communities in the study area have not been passive players. They have struggled for over a century to create a just food system. They managed to overcome repeated political challenges and currently maintain a ‘counterculture’ of small farms and market gardens in a city surrounded by, and politically aligned with, massive grain and fiber farms.

As agriculture was abandoned in Central City South and South Mountain, many of the ditches and canals that supplied inexpensive irrigation water were lined with concrete to reduce water seepage (Redman & Kinzig, 2008, p. 250). Prior to lining, these waterways provided riparian zones and life-giving water for some 50,000 trees planted alongside them (Redman & Kinzig, 2008, citing Gober, 2006). These riparian and treed ecologies were replaced with ‘sterilized’ waterways that no longer provide tree shade opportunities in the communities in the study area. As farm fields were replaced with paved streets, housing, and light industry, the communities have been left in a hotter and more arid environment. Interviews with homeowners and community organizers point to
the cost of tap water in these neighborhoods as a substantial obstacle to sustaining vegetative shade.

The communities discussed here are now doubly exposed to a scarcity of healthy food options and one of the hottest UHIs. As such, these neighborhoods may serve as indicators of the challenges of low-income communities affected by climate change and more positively, as potential models of community-based, local adaptation to climate change. Contemporary community organizers working in these neighborhoods are creating new local, food initiatives based in civic agriculture. These new local food systems benefit the communities by increasing vegetative land cover that regulates extreme temperatures and increasing local food security. However, there are still a host of contemporary challenges for these food justice movements to overcome. In chapter five, I examine residents’ perception of their community foodscape, including their strategies for overcoming problems with economic and geographical access to nutritious food. Chapter six examines the many ecological and social challenges facing garden organizers. Chapter seven examines both successful and failed alliances between justice movements and other organizations and Phoenix government. Perhaps now, after multiple attempts over the last 130 years, a just and local food system and economy may be emerging in the Valley of the Sun.
CHAPTER 5

LIFE IN A FOOD DESERT

This chapter examines the first level of the ecology of actors: the residents of the communities in the study area. It addresses the research question, how do food justice movements crystallize in disadvantaged neighborhoods? The material presented here is drawn from interviews with residents across the study area. The interview questions were designed to capture residents’ perspectives and voices about food access in their communities. This chapter is meant to invoke an image of both the foodscape as residents experienced it and to describe the food justice movements as resident’s thought of them. Not all interviewees participated in the food justice movements although many non-participants were at least familiar with them, so the sample includes both movement participants as well as nonparticipants.

Residents did not have a vocabulary that matches academic and institutional vocabularies for describing food access such as food deserts, food swamps, community food security or other terminology commonly used in food access literature, but they did have an informal vocabulary that described their food landscape. Few residents knew that scholarly research shows these communities are ‘food deserts’ but they were, overall, very well aware that shopping options were limited in comparison to other neighborhoods. They were able to articulate clearly their challenges in accessing fresh produce and other desirable food items. Many spoke of food items they wanted as being more expensive or difficult to find in their community or simply not available within the community at all.
After 53 resident interviews, it was very obvious that residents realized independently that access to nutritious food was problematic. Residents framed their food access, particularly when they tried to obtain fresh produce, in terms of struggle. Struggle to get to the store, struggle to find fresh and healthy food and struggle to afford high-quality food options. Although access to fresh produce was the priority, there was also a struggle among a subset of the population (about one-fourth of the population of interviewees) to gain access to food grown without commercial fertilizers and pesticides.

I do not use the word “organic” here, as it is too closely linked with the USDA definition of “organic food” and an institutional certification of Organic. Although these residents were interested in food that was grown without synthetic chemicals, few had the means to purchase certified organic produce. Many from this group were looking to local food systems to procure foods grown chemical-free produce. I never asked about popular food topics such as organics, pesticides, GMOs or industrialized farming; however, these topics were in the minds of some interviewees independently of my questioning.

The majority of residents framed their food landscape as one of struggle, but they were not passive observers. They actively engaged with their foodscape to attain healthier eating options or other desirable foods. They also had developed strategies related to increasing access to nutritious food in their community. Many had developed strategies to obtain the best food they could at the small markets within the community. Over multiple interviews, it became clear that residents had developed a sophisticated rating system of local food stores. They would order the desirability of food sources by distance, quality and price. Residents without cars had developed social networks revolving around transportation to grocery stores. For a few residents, their strategy
revolved largely around involvement with the food justice movement. Fresh produce would come largely from the community gardens and small farmers’ markets the food justice movement had established. For interviewees who had access to transportation and money, they opted to travel to other communities to do their grocery shopping. Although their foodscape may be one of struggle, it is also one that many residents have learned, out of necessity, how to navigate.

This chapter begins by describing how residents described and framed their foodscape in terms of struggle. The first section establishes the major obstacles that residents experience day to day in procuring fresh produce or healthy food. This section is the underpinning for understanding the next: the sophisticated strategies residents use to overcome barriers to obtaining healthy food that I have not seen described in food scholarship. Although the first two sections pertain almost exclusively to conventional shopping, the third and fourth sections delve into residents’ perceptions of the local food systems that the food justice groups are organizing within the community. Here we branch away from the story of struggle and begin to examine some of the less obvious reasons residents desire local food systems that are, surprisingly, not directly connected with access at all. Finally, the last section synthesizes what we have learned into a coherent image of how food justice movements crystalize within the study area.

**Struggle Within the Foodscape**

There were many obstacles residents in the study area needed to overcome when obtaining healthy food in the ‘food desert.’ I believe this section is important because, as academics, we may know generally the issues of living in a food desert but are still disconnected from the daily-lived reality that these residents experience. Although we
generalize, the residents of these communities must deal with the specifics of reduced food access in comparison to other neighborhoods. In examining some of the specifics on the ground, new intellectual spaces can be opened to understand and describe what is happening in these communities from a residential perspective.

From these interviews emerged a sophisticated and disturbing story. Some themes coming from these interviews are familiar in food scholarship: issues with transportation (Baek, 2014) and cost (Breyer & Voss-Andreae, 2013) are predominant. However, there were other themes as well that I have not seen in the food desert literature. For example, many residents felt that even large chain grocery stores in the community were inferior to the same chain grocery stores in Wealthier neighborhoods. What also surprised me was the ease with which many residents could speak about food related problems they were experiencing. It was obviously something on their minds and likely something they had discussed with others before.

About one-third of the residents I interviewed did not own a car. The lack of a vehicle was particularly prevalent among post-retirement age residents. However, some working age residents did not own a car either. The lack of a vehicle proved to be a defining problem for residents in their struggle to find high-quality food and also provided some of the most enlightening examples of their daily difficulties. As a carless resident, Carla, described the stores that she and her son could walk to:

Well, in this community particularly, there's not really any place where you can get quality produce other than the little store down the street called “Morten’s” market. Of course, they can't bring in a wide selection of stuff. It's pretty expensive. An avocado is $1.60 apiece. That's a lot of money... It's a little market,
and that's the only place that has any kind of [produce]. If you live right here and you needed or wanted a tomato, you have to go there, and it's pretty much $0.60 for a tomato. For our groceries, that place, and another little tiny store across the street. As far as for fresh, they're both very, very limited.

Some residents were even less mobile than Carla. I interviewed five residents who were wheelchair-bound. Although dial-a-ride was an option, they described having to schedule the ride two days in advance. Some drove their motorized mobile chairs to the grocery stores. Resident Kip described, “To get to these stores we need a car or taxi or some means of transportation because most of us don’t drive now. We are mostly seniors in this area… some people drive their scooters, their chairs, all the way there and back… it ain’t right handy.” Kip described stores within his immediate neighborhood as, “basically for candy, chips, ice cream, milk, sodas, cheese and hot dogs. Everything costs more cause it’s a neighborhood store… unlike a big market where they got it cheap.” Many of the carless residents tended to have bleak descriptions of their foodscapes. But, they also had developed coping strategies to overcome some of the obstacles they described.

With restricted options available in their immediate neighborhoods, a common food shopping strategy for those without cars and in wheelchairs was to go shopping with friends and contribute five or ten dollars towards gas money. As a carless resident, Marlin, who helps with food justice operated farmers’ markets, explained his shopping strategy to me: “Everyone has a friend. You got to have a friend!” Marlin was referring to the common practice of trusting in a social network of friends, neighbors and family to get to grocery stores.
Relying on friends and neighbors to get to grocery stores was an option for many, but it also meant that the choices in shopping destinations were limited to where their friend or neighbor wanted to go, even if other stores had better prices. Marianna, an occasional gardener, explained, “We don’t use dial-a-ride. Usually, when you ask somebody [they will take you to the store]. We have to pay a little money for gas, but it’s convenient because people are taking us. So that is why sometimes I have to go where [the food] is more expensive.” Relying on others for a ride to a supermarket could mean that they went to stores they perceived as more expensive. Nevertheless, it was still considered, by most, to be a preferable option compared to walking or bicycling.

Public transport, such as buses, had drawbacks for shopping as well. Once, while I was conducting an interview, we were interrupted and told, “the buses are on strike again.” Luckily for the residents, that bus strike cleared up fairly quickly. But only the next week Cyrus, who had just moved to Phoenix from the southeastern US, was describing his experience with riding the public bus: “I saw 111 [degrees Fahrenheit] last week when I had to go out to get my medicine. Man, if I had known it was gonna be 111 I never would of went out then. I was exhausted when I got back. [The heat] takes a lot of getting used to.” Carrying heavy bags of groceries through the summer heat and waiting for a bus seemed to be a less preferable option for many, though perhaps slightly cheaper in gas money and with better shopping choices, than riding with a friend. During the cooler months, public transport may become more attractive.

Another complication that came up in several interviews was the method in which government aid is distributed. As resident Carla described the difficulty of a fixed income: “Once a month during the cooler season, they have this truck from [a local
nonprofit]. We can buy 50 pounds of produce for $10. Unfortunately, they always do it towards the end of the month when nobody has any money around here. I mean it's $10, but still... a lot of us... get our checks on the first of the month. I'm on disability… so, I get my check until the 3rd, I don’t have any money on the 26th.”

For residents on a fixed income, their perception was that much of the freshest food became available after they had spent their monthly allotment. As a retired chef and resident, Samuel, explained, “one thing is [we] don’t have the big money to hit these big stores when it's fresh… We [are] the ones that get food stamps or are on a fixed income, but those [coupons] come out right when we don’t have the money.” Samuel’s perception was that grocery store coupons were most available when the residents surviving on a fixed income were running out of money.

Even after getting to a supermarket (both national and regional supermarket chains have some representation within two of three Phoenix communities in the study area), a new struggle began: finding what was on sale. As a single mother who did own a car, “Tere,” explained, “They're still too overpriced unless I'm budgeting and couponing and following the sales. But even if I was to just get the sales that I do need, I still have to travel to another [less expensive] store to get the rest of the stuff.” So, while supermarkets may exist and the resident may have access to transportation, many did not visit a single place to get all their food at once. “Following the sales,” meant going from supermarket to supermarket to maximize perceived value of different foodstuffs. For example, meat may be purchased from one supermarket and vegetables and milk from another. Price, distance and desirability of a particular item was always part of the mental
calculus required to eat well even for mobile and relatively affluent residents in the study area.

The price of particular food items deeply influenced what would end up in residents’ kitchens. I did not specifically ask in the interviews about food assistance such as charitable food boxes and USDA Supplemental Nutrition Assistance Program (SNAP), but some residents mentioned them independently during our conversation. On multiple occasions while interviewing residents at their homes, charitable groups such as Meals on Wheels would make a lunch delivery. Boxes stacked next to a wall might turn out to be from a local food pantry. Many who couldn’t afford to shop regularly received food boxes distributed by local food banks. However, health-conscious residents, such as “Madelyn,” described that food as sub-standard: “They can get all the free stuff they want in terms of bread, macaroni, beans and if they ate the stuff the food bank gave them exclusively, they would be very unhealthy people.” Madelyn was working towards creating a tiny food pantry that specialized in delivering both fresh and frozen vegetables, fruits and meats to about 150 aged residents. Madelyn was not the only one to point out that there was little fresh produce or fresh foods in the charitable food boxes. However, as I discuss briefly in chapter seven, many Phoenix food pantries in the study area are aligning themselves with local food coalitions with long-term plans of increasing locally grown produce to Phoenix communities with relatively less access to fresh produce. Madelyn’s comments have some validity and are more widely recognized in the area. However, for some residents’ charitable food boxes were the difference between eating and going hungry. The contribution food boxes made in some residents’ lives can be easily discounted.
Residents who could afford to independently shop at supermarkets within the study area often described them as sub-standard. Kathi, a retired African American woman who grew up on a homestead in Texas, reminisced about the fruits and vegetables she had then. She told me, “I buy fruits and vegetables [here]… and you can’t eat them right away cause they are so hard.” Produce was not the only food identified as being difficult to obtain during peak freshness. Many residents described local grocery stores as stocking spoiled food. Marianna, who gets most of her vegetables from the community garden said, “The stores around here… to me they are not good. Sometimes [when] you go to a store here most things are expired. So, [I am] not very interested in them.” A health conscious resident mother, Coral, described, “At the grocery stores I've experienced poor quality produce, like little flies swarming around it. The farther out you go from this community the better the quality is. Something is advertised, like organic berries, the local [national chain supermarket] will say, ‘we didn't get them over here.’ So, you have to [leave the community to] get them… But, overall it’s cheap, and it seems like the cheaper it is the worse it is for you, but the more of it that you can get.” Another resident, who uses cochlear implants for his hearing disability, claimed: “I smell the meat, and the meat can be of poor quality. You can smell it when you go in. The bread [also] needs to be checked into; it will be old. And you get some canned goods, like the menudo, and they are old. You open up a can, and you can see right away that it's old. Sometimes you can’t read the labels on the can.”

For many, leaving the community was the best way to obtain higher quality foods, but that also proved difficult. Kathi described how she liked to shop at a grocery store outside of her community, because they “had better vegetables and stuff.” Kathi didn’t
get to that grocery store as often as she would like because: “a lot of times they will charge you 20 or 25 dollars [to go the extra distance]. I don’t have that. But, yeah, I can just tell the difference [in the quality of the produce].” Another resident, Abbie, who grew up eating from her mother’s garden in south Phoenix, confronted a local grocery store manager to vent her frustration: “They had ham hocks in the frozen section where they serve the collards greens. I said, ‘can we at least have the choice? There are organic or leaner meat alternatives, turkey sausage as opposed to pork. You know, make it just real easy like, you know, when I was standing right here and had my heart attack, right here in the store.’” This fortunate resident did have a car and preferred to do most of her shopping in other communities at more health conscious grocery stores.

Examining the difficulties facing residents of these communities, there is a formidable set of barriers between them and obtaining high quality, nutritious foods. For residents without a car, grocery store shopping options were determined by what grocery stores they could reach and easily transport food back home. A cash-strapped interviewee might have a car, but still shop at the least expensive stores and “follow the sales” available at grocery stores in the community. Shopping for quality required money and often also required good transportation. Some grocery stores carried deeply discounted fruits and vegetables; however, they were often identified as being the least desirable grocery stores to patronize as they were noted for produce that was under ripe or overripe. These stores were described as where someone would go only to get produce that they were planning to eat immediately, before it spoiled, or the produce not yet ripe, and the resident would put it aside for a week or more. Other grocery stores had better quality produce, closer to peak ripeness and could be kept for a little longer, but these
stores tended to be more expensive and exist outside the community. Occasionally, store bought organic produce was mentioned, but it was described as too expensive and difficult to find in the communities grocery stores.

**Strategies for Coping with a Food Desert**

The first section was about the challenges residents face in gaining access to grocery stores, this section addresses the strategies they use to overcome those challenges. Residents did not explicitly describe to me the strategies presented here. They only emerged as themes across the interviews. Essentially, I had to work with the data set in order to identify these patterns. The first strategy residents relied upon was an extensive social network to navigate their way around the food desert. The second strategy involved creating a mental map of the community food sources, ordered by the attribute the resident was most interested in: distance, price or quality. The combination of these two strategies allowed many disadvantaged residents to keep food on the table and some limited access to fresh produce as well.

As I outlined in the last section, many carless residents relied on friends, neighbors and family to get to stores. The residents were creating a network of social bonds based on food acquisition. They were also creating a space where residents go on a social outing and have a common topic to discuss: food. These social networks are fundamental to the experience of living without a car in a food desert. However, the experience is not just limited to those in the community who don’t have vehicles. As Tere, a resident with a car described:

One neighbor, he was an older senior citizen. He was disabled, and he was on a breathing machine. It was hard for him to get around and find stuff, and it was
tiring for him. I would volunteer my time sometimes on the weekend when I was available, and take him to the store and help him shop. We would have to go to a store, like I said, up north or down south, that wasn't in our community. It was time-consuming just to get him a week's worth of groceries.

Shopping, for some residents in these communities, is less a personal activity and instead a social activity. For those without cars, it is a social activity by necessity. For some with cars, shopping may be a shared experience with others who are less fortunate. Food gathering is moved, from the domain of the individual or at most a nuclear family, to become an inclusive process involving friends, neighbors and relatives. Existence in the food desert has forged social bonds and networks based on procurement of food.

These bonds and networks, I found, are subtle. They are a phenomenon that seems simple enough, but also has a profound effect upon the daily lives of residents in the study area. Few residents were as conscious of these food-based social networks and the extent to which they relied on them as Lanny. He informed me, “Thank god, I will never go hungry. A lot of people… will ask, ‘you eaten yet? Come over here. You will get something to eat over here.’ Like, if someone is hungry, someone is going to feed you. You don't have to ask because they're going to ask you.” Although Lanny felt secure in his ability to eat well because of his social networks, others described their food quality and security in terms of struggling social networks.

When food-based social networks seemed in danger, it was a cause of grief for both the individual and the community. As resident, Kathi, described her wheelchair bound friend’s predicament:
She didn’t eat all day yesterday because she was waiting on her son to come in and bring her something to eat. Well, he never did come. ‘Bout 5 O’clock, Mr. Johnson, went out and got her a box of chicken. Son never showed up. She goes out into the garden. She goes out there and sits with Mrs. Harris. I guess… I don’t know how I should put it. I guess if I was abandoned and left here and my people don’t show interest in me, then your self-esteem, you lose that.

Thankfully, Kathi’s friend’s social network was resilient enough to see her through the day. However, it was a traumatic event for Kathi, who felt it was a good example of the struggle with access to food that residents face from time to time. Other residents fretted that their social network was not sufficient to get them through. A young, single mother Idella linked her anemia and exhaustion to a lack of protein in the food boxes that made up the majority of her meals at the time of the interview. Idella remembered growing up in a large household with extended family where she felt she had a higher quality diet because, “There was a lot of heads in the household. So, when there's a lot of heads there's more income and food stamps and what not, so that way we could get meat, vegetables, fruits, things like that.” These social networks are so intrinsic to food acquisition for less fortunate residents that they may seem to fade away into the background. However, when the network is jeopardized residents become alarmed.

These networks are fundamental for some to acquire fresh and healthy food. They are also, I found, one mechanism that creates a relatively common discourse about access to high-quality foods and food in general. The residents were well aware of problematic access to some kinds of food in their neighborhoods. They were articulate and could easily discuss the various kinds of difficulties they faced, because they had discussed
these issues before with their food procurement social network. The framing of struggle to access fresh produce or other high-quality foods is a common one, because it is a story that they have both heard and have told to others as they drove to grocery stores and shopped together. It is a story that is familiar to many residents.

There was a second strategy that residents used to procure fresh produce and higher-quality fresh foods. This strategy also may seem basic, but when combined with food procurement social networks it creates a common discursive story about particular stores within the community that, I think, is part of why residential descriptions of certain kinds of small markets and supermarkets were fairly consistent across interviews and communities. This strategy was subtle, and I only began to notice it after many interviews, but residents maintained a complex grading system of grocery stores and supermarkets. This internal organization created a hierarchical structure of preferred grocery stores based on the desired feature such as price, distance or perceived quality. Across the study area, residents had created an internal grading of different food sources and that grading of food sources was fairly consistent across the interviews. By creating a system of grades, residents maintained a mental map of food sources.

The lowest grade was the neighborhood corner market. As outlined above, corner markets in the community are almost universally described as the least desirable places to shop for groceries. They were regularly described as overpriced and purveyors of junk food. They were the place residents went shopping when they were out of time to find something better or when they did not have transportation options. These local corner markets were also the easiest to get to for carless residents, and they were sometimes described as the only option when transportation was unavailable.
The second lowest grade of food source was regional brand discount supermarkets. Residents regarded discount supermarkets as better than neighborhood markets. They were close enough that many residents with cars could reach them easily. As these were discount supermarkets, many residents considered the prices for produce to be reasonable. However, discount supermarkets also had some significant drawbacks. Fruit and vegetables were plentiful but were rarely near peak ripeness. The complaints were typically of produce that was overripe and would spoil in a couple days. Some residents described getting the produce only if they were planning to eat it immediately for dinner. The other complaints were that some produce was under ripe and still a week or more away from maturing. Also, the fruit was often bruised. If the produce was not remembered in time, then it could spoil suddenly, possibly because of bruising. Overall, a lot of residents identified discount supermarkets as places they shop, but with reservation about quality, if not price and distance. More affluent residents tended to avoid these stores when they could, but also described falling back onto them at times by necessity.

The third grade of food source was large, chain supermarkets that operate at national and regional scales. They were not always as close or as inexpensive as the discount supermarkets, but they were generally preferred over their less expensive counterparts. The produce was described as being nearer to peak ripeness, and the quality of food overall was less objectionable. However, there was a complication. The large, chain supermarkets inside the community were often described as inferior to the same brand of chain supermarket outside of the community. They felt the supermarkets outside the community had fresher produce, better selection and better sales, and they were generally more health conscious than the same brand supermarket in the community.
Although some of these national brand supermarkets carry organic produce, only a couple residents mentioned its availability, and all these residents said that organic produce at these supermarkets was too expensive.

The fourth grade of food source was supermarkets that specialize in organic and boutique specialty foods. None of these supermarkets existed in the study area. However, five of the resident interviewees mentioned they would regularly (once or twice a month) travel outside the study area to patronize these specialty supermarkets. Interestingly, in this small sample, all of the interviewees who would travel to these distant and expensive supermarkets were women, and four of them were also mothers.

The final and highest grade of food, and for many residents the hardest to get, was locally grown food. For the 20 gardeners I interviewed, community gardeners and several home gardeners stated that they preferred locally grown food, which may seem obvious, and my sample is definitely skewed in favor of gardeners. However, even among resident non-gardeners, locally grown food was commonly referred to glowingly. Many non-gardening residents remembered growing up on farms and in other rural settings, or sometimes in urban homes with backyard gardens or small urban farms that once existed in the study area. They would describe in some detail what they helped their parents cultivate and how favorite dishes were prepared with local ingredients. Longtime residents would also describe going to farmers’ markets and produce stands that no longer existed in the study. A very few non-gardening residents also described going to the remaining farmers’ markets or being given locally grown foods by relatives. As one resident, Agustina, summed up the residents’ descriptions of locally grown food, and the
fruit she anticipated coming from her newly planted backyard orchard, “Delish. It’s the best!”

This informal system of residents’ grading food sources moves beyond simple measurements of geographical and economic access (although those are always part of the mental calculus) normally presented in the food desert literature. Here we start to see a richer and more nuanced approach that shows the perceived quality of food sources must also be accounted for. I found this is a more complete description of how living in an area with reduced access to fresh fruits and vegetables is experienced in day-to-day reality. This system of food source grading and creation of mental maps of food sources both inside and outside the area surrounding the community had a sophisticated logic.

Not having a car created one set of shopping options that were limited to where the resident could reach either on foot, public transit or where a member of their food-based social network would take them. If mobility is the biggest problem, then local corner markets and food boxes may have to do. Having a car or a strong food-procurement social network gives a second, broader, set of options, but is still dependent upon money. That is, a poorer interviewee may still shop at the least expensive discount supermarkets, use food boxes and periodically ‘follow the sales’ to more expensive national chain supermarkets. A relatively wealthy resident with a car might choose to shop for quality instead of price and is more likely to leave the community rather than shop in the area. If the resident was very concerned with perceived quality of produce, and if the money and transportation were available, then traveling to distant supermarket specializing in organic and boutique food sources was a strategy for a fortunate few.
These mechanisms, food related social networks, grading and mental mapping of local food resources, are subtle. Few residents can describe them articulately, but they are absolutely fundamental for the less fortunate to eat well within the study area. The combination of these two mechanisms for carless residents results in a sophisticated system of food acquisition, based on knowledge of the geography, social networks for access to transportation and sharing of information about perceived food source quality.

The Call to the Garden

Figure 5.1 Gardeners eating lunch at the Garden of Tomorrow in South Mountain after working that morning. September 2011, photo by author.

This section speaks to some of the subtlest reasons for why residents in the study area think about and want local food systems. Up to this point in the chapter, I have discussed mostly about measurable qualities, such as distance between consumer and market, vehicular access, budgets and freshness. Geographical and monetary access to fruits and vegetables, as outlined in the first section, or perhaps the strategies that residents use to gain access to high-quality fruits and vegetables in the second section would seem to be enough to encourage residents to considering local food systems.
However, they are actually only part of the story. Residents think about local food systems for all those reasons, but they also think about local systems for other, less obvious, reasons.

About one-third of my resident interviewees were first-generation immigrants to the US. Among the sample, there was general agreement that supermarket fruits and vegetables tasted and looked different than the fruits and vegetables these residents remember from their country of origin. As resident, Alba, explained to me, “When I come here, it surprised me, the fruit is so big. The peach is big, the apple is big. You go, ‘I think this is good, very good.’ When [I take a] bite, oh, my gosh. No. No taste good! When I buy the vegetable, it's no good … it's no good. It's all bad for me…” Populations that had immigrated to the US almost invariably discussed the flavor differences between their country of origin and in the US. They felt the food in the US was safe to eat, but flavorless in comparison to their country of origin.

At first I thought I was hearing simple nostalgia for food that the population of non-native born interviewees remembered and associated with home. As resident, “Juanita,” explained, “We lived in [the tropics of Mesoamerica] where we could buy food from our neighbors. They had small farms.” She had spent the majority of her life around locally grown produce and I assumed that she might have an internal bias. But, as so many other interviewees, she started to explain what it is about US produce that was not as good. “The food is bigger here. But, it doesn't have any taste. The food from [where we lived] was smaller, but it had really good taste.” The frequency at which the internationally born interviewees mentioned size and flavor without any prodding from
me, made me begin to doubt my original assumption that I was running into simple nostalgia.

It would be difficult to identify exactly what factor might change the flavor profile these nonresidents tasted between the produce they experienced in their country of origin and US produce. The simplest assumption, and the one that many residents made, might seem that they were eating organically grown produce in their country of origin. However, scholars who studied organoleptic perception (sensory perception such as taste and smell) of organic vs. conventional food have uncovered that a general claim of “organic food tastes better” cannot be substantiated (Filion & Arazi, 2002, p. 1). Even when organic and conventional produce is grown in side-by-side plots, “[organic] vegetables did not show significant differences in consumer liking or consumer-perceived sensory quality” (Zhao et al., 2007, p. 1). Beyond that, there is no real way of knowing that the produce they were purchasing in their country of origin was organic.

A difference in size between organic and conventionally grown produce could imply a disparity in the amount of nitrogen in the soil that was available to the plant. That is, a smaller fruit or vegetable might indicate less use, or no use at all, of synthetic nitrogen-based fertilizers. However, reduced size of crops like tomatoes, from having less nitrogen available, does not necessarily mean the smaller fruit taste better than their larger brethren (Heeb et al., 2006). There is a host of other possibilities that may have influenced the taste of the fruits and vegetables they were eating in their country of origin. A couple other possible explanations of what these residents may be identifying in flavor differences. One reason could be as simple as the area of the world that the non-native resident was from grew different plant cultivars (through selective breeding and
hybridization there are often many ‘verities’ of any single crop species, for example, blue corn or ‘chocolate’ mint) than in the US. Or, the produce was grown a short distance from the kitchen, picked at the peak of ripeness and the time in transit was short.

Answering the question why the population of non-native born residents noticed a difference in flavor between US produce and fruits and vegetables available in their country of origin is beyond the scope of this dissertation. However, examining why residents claim there is a difference and how they change their behavior based on their perception of US produce is well within the scope of this dissertation.

When I asked non-native born interviewees why they did not like the fruits and vegetables available at large chain grocery stores, they universally pointed to one reason they felt US produce is not as good. Resident Tere explains, “The fruit and the vegetable and the meat, I don't think they come from the best place… the farm is not good quality [because they use] pesticides.” Many of the non-native residents associated flavorless fruits and vegetables with fertilizers, pesticides and industrial agriculture. But, they gave other reasons as well. Alma stated, "I prefer [produce] without pesticides… It tastes different than fruits and vegetables that have chemicals.” But, “where I used to go shopping [in Mexico] the fruits and vegetables were brought in right away, like immediately after they were picked. The fruits and vegetables were fresh from a garden.” The consensus was that US produce tasted poorly in comparison to produce from the country of origin because of how it is cultivated by conventional agriculture. Some non-native residents with transportation would drive miles out of their community to frequent supermarkets that specialize in organic produce. Though residents, such as Juanita, struggled with the prices because, “They cost a lot more! Just one pound of organic
tomatoes is four times more [then conventionally grown tomatoes].” Others would start home gardens and orchards. Others would simply put up with the produce they described as inferior. As Alma, explained, “I hear that [farmers’ markets] are more expensive than stores. People also tell me that [organic supermarkets] are more expensive… I have never gone to them. I don't know… where they're at or anything.”

Some residents’ linked health to eating organic produce. As Juanita stated, "I love to read. Every time I read something about food and what's better for us, they talk about pesticides and fertilizers harming our body and give us dangerous diseases. Genetically modified foods particularly.” However, taste or at least the perception of better flavor, was more commonly given for choosing to shop for organic food despite the increased cost. The perception that “organic food tastes better” may not hold up to scientific scrutiny, but the perception among residents that organic tasted better was unquestionable. Nevertheless, in my sample of residents, only five mentioned that they had ever shopped for organic produce. Around 20 residents worked at least part of the year in community gardens or had home gardens, so for them, shopping for organic food was far less common than local cultivation of desired produce.

The Garden Beyond Food

The previous sections set the stage for describing why residents may want a local food system. But, residents do not only think in terms of growing food. This section drawn largely from interviews with resident gardeners discusses other important features that the community garden space provides. In interviews, I did not ask specifically about benefits a garden could provide beyond food, but the open nature of the interviews allowed residents to discuss any attributes that crossed their mind. The community
garden literature is scattered with examples of benefits that gardens provide beyond the function of providing food for gardeners (Armstrong, 2000; Bleasdale, Crouch & Harlan, 2011; Kingsley, Townsend & Henderson-Wilson, 2009). Some of the topics discussed here are reflected in the literature, others I have not seen specifically mentioned. As community gardens are a communal space, and civic agriculture requires, obviously, civic participation, topics that are relevant to participants become an important way to validate and make relevant their participation. This section opens by discussing individual benefits residents said the community gardens could provide them. It then moves into analyzing benefits that the program brought to gardeners as a group and ends discussing benefits the food justice movement brings to the community in general.

For gardeners who lived within walking distance to large community gardens, there was a general feeling that these garden spaces provided both sanctuary and healing. One resident gardener, Ramona, described to me in these words at an event several years ago, “I had a nervous breakdown… if it hadn’t been for that garden, [my husband] making me go out there and pull the weeds and just sit there and watch him work, I don’t think I would have made it.” Gardens and gardening have often been associated with mental health and wellbeing (Clatworthy, Hinds & Camic, 2013). A few residents specifically referred to the garden as offering qualities similar to a sanctuary. The gardens were places of relaxation, self-reflection and at times solitude in a noisy and sometimes frantic world. A resident and gardener Marlin explained to me:

Every chance I get I go to the garden just to go. You can go down there some evenings just sit, chill and get peace of mind in the garden. It's peaceful, quiet; you can sit and just relax. Just me, by myself, take a bottle water and just chill…
at certain times, man, there is those smells that be coming out the garden. Man they be smelling nice… I don't know how to explain this note to you, but, it's a real soothing, peaceful sound and smell coming out the garden when you be out there. I am not going to eat nothing, I am not going to pick nothing, I am just going to get peace of mind. The garden for me is therapeutic.

Other residents also associated the garden with a sense of internal peace and calm and described the garden as “therapy.” One resident in particular, Burton, described himself as an introvert and stated, “For me people don’t even have to be [in the garden]. As a matter of fact, they are not there when I am out. Usually, I am by myself. [I go for] the atmosphere, the plants, [it is] peaceful, clean and fresh.” We think of the community garden as a place for community as is reflected in the name itself. A community garden may, by its nature, unintentionally limit participation to extroverts. For the introvert, the community garden may be most inviting when it is empty. The community garden can serve as a place for the introvert to go for reasons other than social engagement, such as drawing energy from ‘nature’ and solitude. Introverts find their way into the garden when everyone else has gone. Maybe to do some work, maybe to just sit quietly for a while and withdraw from the hubbub and frenetic activity of city life.

Although some residents valued the serenity of a vacant garden, others valued it largely for the other people they found in the garden. I was surprised at how emphatic residents were about children being involved in gardening. As a resident and long-time community gardener Deirdre explained, “What keeps me going is the kids.” Her perfect community garden would be designed specifically for child participation in mind, “[it would] have swings and things to keep the kids amused and also [the garden] teaches
them to have a work ethic, so they can be self-sufficient.” Although Deirdre’s sentiment was echoed in many interviews, there were also darker overtones to the reasons for getting youth involved in the gardens. As another resident, Samuel, explained, “Anytime you get a bunch of kids here in the ‘hood environment or the street environment they gonna do what the next people do. I seen ‘em out there. Ohh… Dozens of ‘em, sitting around and their sagging [clothes] and listing to bebop and stuff. So you get a group of them doing stuff [like gardening] instead, and they out there and learning good habits and getting their hands dirty.” Residents felt that children’s participation was, in part, to give them a new skill. But, it also revolved around teaching them the cultural value of hard work and provided an alternative environment to the danger they perceived in the neighborhood.

What may distinguish a community garden from other outdoor recreational spaces is that it created an activity that residents connected with good, moral behavior: gardening and work. The garden provided a place where ethics and values were passed on from one generation to the next, but that was not always from older to younger. The garden was also a space where adults could examine their morality and cultivate their behavior for the benefit of children. As gardener Carmella described, the children participating in the community gardens kept her on the ‘straight and narrow’ because, “I don’t ever want one of them to see me doing something and think it's OK. You know if I were out here smoking reefer, or drinkin’, or walking the street… It would influence them. So, I explain to them about my burns, I explain to them about my five years in prison, I explain to them everything, so they know this is no joke out here.” The moral lessons that residents connected to the garden: work, civic participation, socially
desirable behavior, seemed, in some cases, to be more important than the food that came out of the garden.

The community garden for these residents was a place of focused intergenerational cultural transmission with strong, moral messages that move both up and down the generational ladder. There is precedent for using gardens as spaces for transmitting moral behavior. As early as WWI, the United States School Garden Army (USSGA) was formed with funding from the Department of War with the intent to grow food for the war effort as well as to inculcate, “moral character… by instilling traditional values of hard work and thrift” (Hayden-Smith, 2007, p. 23). Community gardeners in the study area associated labor in the garden with “hard work and thrift,” but also saw the community gardens as way of liberating youth from ‘deviant’ activities and reinforcing positive behavior among adults.

Residents associated the gardens and the act of gardening with morality resulting from physical toil and labor. For them, the garden offered a space for personal growth and strengthening community bonds. Although the community gardens can provide solitude and mental rejuvenation for some individuals, residents also thought about the benefits that a garden could have upon the community at large. For these residents, the community gardens in the study area have opened new physical spaces where they can grow some food, but they have also opened intellectual spaces for other food-related topics. Residents have identified a community-wide lack of knowledge in several key areas and feel the gardens can improve lives as residents learn more about these particular subjects. I have come to think of the urban agriculture projects in the study area as “education hubs.” That is, for residents who participate in these projects may learn
multiple new skill sets, beyond gardening itself, such as identifying, shopping for and preparing nutritious food.

To a scholarly and an educated audience, it might seem fairly simple to identify nutritious food. But, it is not a scholarly population that lives within the study area. Some residents would freely volunteer that they were unable to identify nutritious food. As a resident and occasional gardener, Marianne, let on, “Well to me, my problem, I don’t look for nutritious food. I just see what I like, and I eat it! I don’t compare or know what [healthy] food is. I just don’t know.” Although few residents were going to admit to not knowing much about nutritious food, many were quick to point out that other residents lacked that fundamental knowledge. But, they also felt that they learned a lot about health, nutrition and food preparation simply by participating in the gardens. In effect, these topics are educational benefits that can emerge from participation in urban agriculture projects such as are happening in the study area.

Some residents were quick to point out that the children in the community were uneducated about eating healthily. As gardener Kip described, “Many of the kids today don’t know about nutrition, don’t know about gardening. The only thing they know is to go to the store, grab it, and it’s supposed to be good for them, so they take and eat it.” Kip's was a popular sentiment across interviews. However, the lack of education was also linked to parents having little nutritional knowledge or sometimes, the ability to provide healthy meals. As chef and gardener, Samuel stated it, “Most certainly, kids should be getting educated about [healthy food]… cause a whole lot of ‘em gets to the dinner table, and mom opens up a can of mixed vegetables.” Residents described this lack of
knowledge about identifying and preparing healthy foods as intergenerational, but also something that participation in the local food justice movement was helping to address.

I was fortunate enough to interview four residents who identified themselves as retired or working professional chefs, two of whom were also active gardeners. For these residents, first being able to identify healthy ingredients and then being able to prepare those ingredients were as important to the gardening programs as the cultivation of food. As Abbie explained, “[shopping and cooking] is coupled with educating people as to why they need a garden or to at least eat a certain kind of way.” Samuel described that the simple act of working in the garden could help residents begin to eat healthier because they would become accustomed to the entire process of food preparation. “But they see [the seeds] coming up, see them developing and learn the processes. If they don’t have that in their program, they should put it in. So the [residents] know how this all come about. The process that happens: It's picked, it's cleaned, prepared, cooked and then it’s preserved. They will learn and know what to shop for. Do you want frozen or do you want canned? You want fresh!”

Residents who were not active gardeners also were quick to link the urban agriculture projects with education about food in general. As resident Carla described how her perfect farmers’ market would operate, “they could actually be able to tell you how to pick the fresh vegetables, how do you know when something is ripe…. either from the community garden or from a market. Maybe explain to people how to preserve stuff once they get home, you don't necessarily use it right away and what's the best way to store it, so it will have a longer shelf life.”
Many residents are thinking about local food systems holistically. They are describing urban civic agriculture as spaces for multiple activities beyond growing food. It is senseless to grow food without knowing how to process and prepare it. Talking about access to healthy food is pointless if you cannot identify what is healthy in a grocery store. But, the garden spaces are stimulating those conversations as local, high-quality fruits and vegetables become available within the community. Residents are associating the community gardens with multiple functions beyond that of food itself, beyond seed to plate. The gardens offer sanctuary and solitude. They are moral spaces that emphasize the dignity of labor and thrift. They are education hubs that increase community residents’ ability to identify healthy foods when they shop and educate them about how to process and prepare those same foods.

**Conclusion**

This chapter about struggles, strategies and longing for local food begins to give us a hint of how a community starts to practice food justice. It begins with a community’s dialog about food and food sources within their geographical area. Multiple conversations surrounding residents’ struggle to obtain desirable food generates dissatisfaction with the local foodscape. That dialog is reinforced and expanded as some residents must work through their social networks for transportation to food sources. Further, all residents must maintain sophisticated mental maps and gradation of food sources. They have to constantly perform mental calculus of price, distance, and quality of food sources and continuously prioritize which of those three attributes they need to emphasize so they can eat well. These calculations become the subject of conversation among residents and also traverse social networks. The conversation intensifies as conventionally grown US
produce is compared with memories of living on farms, eating out of backyard gardens and flavor profiles of produce cultivated in non-native residents’ country of origin. Finally, for some residents who think about health in terms of diet, there is a continuous stream of information via TV and Internet about ill health effects associated with synthetic fertilizers, pesticides and herbicides and genetically modified foods. These dialogs may stimulate general discontent with the existing and dominant food system. Although these discourses could not be characterized as academic critique, the residents’ conversations are based on real world experience and are a reflection of the reality they face when searching for nutritious foods such as fruits and vegetables.

More problematic is showing cause and effect in these resident conversations. That is, did the residents notice the difficulty in getting high quality food and then start engaging in food justice practices, or did the food justice practice begin and residents began to notice their struggle to get high quality food? Although it can be difficult to show causality with qualitative data, there are hints that the community’s discourse around food access may have existed before any mobilization of residents related to food justice issues began. As one long-time resident, Kip, told me, “We didn’t have fresh vegetables and stuff coming here. You know what I mean? And, we had to pay to go get it if we went to [the grocery stores] way over on the da other side, [gesturing with arm] over there.” Also, the dialog of discontent may continue independently in the community amongst those who are unaware of the food justice group. Another longtime resident, Abbie, who sometimes runs a catering business and regularly discusses food with others in her community, was well aware of the neighborhood’s struggle to get high-quality food. “I was in the dollar store… and I am like, ‘there is nothing in your basket with
nutritional value. Soda, white bread, bologna and ramen noodles.’’ Even though she was very aware of food access issues in her neighborhood, she professed to know little about the gardening movement itself, “I couldn’t really describe [the local food group] except that I know it’s a big community garden. But, exactly what they do, and how they do it, I couldn’t tell someone that.” So, it seems that the conversation about food access exists in the community independent of the food justice movement itself.

My sense of it now, after analyzing the data from my interviews with residents, is that there exists a reciprocal relationship between resident conversations about their struggle with food access and the food justice movement. That is, as the community discusses issues about access to nutritious foods, they begin to establish a common discourse around, and common vocabulary based in, food justice. When some residents begin to mobilize to overcome the local problems with food access, then more residents become more aware of the food justice dialog. That sharpens and expands the general community discourse around food access, which in turn mobilizes more residents. That further focuses and expands community dialog surrounding food justice issues.

The food justice movement begins in conversation, but from there it starts to take form physically. Community gardens and small farmers’ markets are established. Gardening techniques become popularized and backyard gardens are created. Civic urban agriculture is, essentially, a third strategy for residents in the study area to acquire fruits and vegetables within the community. This third strategy fits well with the other strategies of food acquisition discussed previously: food-based social networks and maintaining mental maps and grades of food sources.
The community garden is, in no small part, yet another social network based around food acquisition. Locally produced food is not perceived to be ‘contaminated’ with pesticides, herbicides or GMOs and is already linked in many residents’ minds as the highest gradation of both perceived quality and taste. For residents who participate in the community gardens, it is added to their mental list of places they can acquire high quality food. Non-participating residents who are aware of the small, informal farmers’ markets associated with the community gardens in the neighborhood can acquire local produce for the ‘price’ of a voluntary donation to the non-profit organizing the garden programs. The farmers’ markets then become part of residents’ mental maps of neighborhood food sources. In effect, the food justice movement in these neighborhoods is an extension of residential thinking, dialog, and strategies surrounding the existing conventional food system with which they are already familiar.

Community members who are participating in civic urban agriculture begin to realize new benefits, such as the garden acting as a sanctuary, the garden as a ‘moral space’ for personal and childhood development and education opportunities around topics related to cultivating food such as processing and preparation. These conversations also spread through residents’ social networks and strengthened community dialog about local food, identification of healthy food and preparation of food.
CHAPTER 6
ENTER THE GARDEN

Prologue: Learning and Community Meeting, late November 2014

Sitting at picnic benches in a semicircle facing the speaker, we were shivering in the cold morning air. An Extension Agent was talking to us about planting winter gardens. She went through a selection of plants that would do well in Phoenix winter. No snow or heavy frost means year round gardening opportunities. Her presentation shifted to integrated pest management strategies; the garden coordinator had requested that the agent talk garden pests. The garden, like so many others, had struggled with pests during the summer. They came with the summer monsoon rains, many species, all at once. None of the gardeners wanted to use commercial pesticides, but watching their hard work consumed was discouraging.

When the Extension Agent wrapped up, the garden coordinator called the resident gardeners together. She was working with another food justice group that was putting together a neighborhood survey. The survey was to help identify what the neighborhood residents would like to see in the garden. About half a dozen residents sat down with the coordinator to discuss possible questions for the survey. I listened in. A Hispanic gardener came over and sat with me. I had been offering her gardening advice and tips for close to a year. We started chatting about saving seeds from her hot peppers and tomatoes as well as potential varieties of cool season winter vegetables she could plant. The Extension Agent and garden coordinator had laid out a large selection of seed packets for the gardeners. We began to select the leafy greens and onions that, among many other species, love the cool Phoenix winter.

This chapter focuses on the second level in the ecology of actors: the garden organizers of the community-based food justice movements in the study area. I have come to think of the task garden organizers have set for themselves as layered, like the layers of an onion: creating local food movements based in neighborhood participation and using local resources. By “layer” I mean that the social phenomena under examination, food justice movements, is made up of multiple components and those cannot be separated from the physical phenomena of creating a local food system. Further, the social and physical phenomena are taking place in the context of “place” meaning they are intimately entangled with the physical geography, climate, other
organizations and the resident population of the area. Each new layer reveals a sophisticated set of physical and/or social phenomena. Categorization of each layer is difficult because each layer is related to the other layers of the onion; in the end, it is the same onion. I cannot examine only a single “layer” of this system and walk away with complete or even satisfactory understanding of the whole.

My field notes and interviews are replete with examples of the complex physical/social decision-making and processes with which garden coordinators wrestle. The garden organizers face multiple, layered, issues. From the perspective of the garden organizer, this is part of what makes the system complex.

This chapter is arranged by scale, starting at the very center, inside a community garden, and spirals outwards to include the environment outside the garden and into the neighborhoods and communities to include many issues identified as important in interviews with garden organizers. The chapter also moves from the tangible, physical environment into the intangible social environment. It begins with the physical aspect of gardening that the garden organizer and resident gardeners must grapple with. I have chosen to supplement some of my research and findings here with ecological literature relating to gardening. The reason is simple: this work is to understand the social interplay of the food justice movements in the study area. But, that social interplay focuses upon and takes place in, the ecological context of a garden. Thus, the system the garden organizers work in is not only social, but a coupled human and natural system. To begin to understand the ‘nature’ of the complex processes that garden organizers work with all the time, it is necessary to know something about the physical ecology of the system that they work in every day and how the ecological component interfaces with the social
component. Topics here include: the garden as a human-created and maintained ecology, residents and organizers learning about and manipulating ecological systems, maintaining a dynamic ecological system over the long term and finally, how the garden organizers and gardeners grapple with the climate and heat island effect upon their gardens.

Moving out into the neighborhoods surrounding the gardens, the chapter shifts to the more obvious social components of the social movement. Food justice is not simply creating a local food system that supplies inexpensive and healthy food options to poor and minority residents’ communities. To make food justice a social movement, urban food justice practitioners must be socially engaged with both the residents and other organizations in their neighborhoods. To focus only on the physical methods used to create a vibrant local food system, is to miss the creation of the social mechanisms that are vital to the long-term sustainability of that food system. Although I would not argue that the food justice practitioners I work with use the best social mechanisms, examining these social mechanisms will start to give insights as to how the social components of a food justice movement begin to change the food landscape in poor, minority communities.

This section of the chapter discusses garden organizers forming a social network of partnerships and alliances with other neighborhood-based organizations and why the network is vital to the garden. It also compares and contrasts the strategy, framing and goals for the each of the movements. Finally the chapter examines how organizers find resident gardeners, create a local garden champion, mobilize the neighborhood and face political challenges.
The organization of this chapter may evoke for some critical readers the specter of a Cartesian binary analysis between the physical and social worlds. Tim Ingold’s (2011) evocative set of essays about human labor and natural human systems effectively begins to ‘melt’ Cartesian binaries, strict categorization by scales and describes nature as ‘agent’ equally important to human agency. To the extent possible in this chapter, I tried to follow his example in his essay Walking the Plank: Meditations on a Process of Skill (pp. 51-62). Ingold eloquently describes cutting planks for a bookshelf. He then writes about how each component of that process (in his example using a handsaw) is, “to place it in relation to other things in a field of activity in which it can exert a certain effect” (emphasis in original, p. 56). The field of activity in my example is community gardening in an urban environment. Community gardening is made up of an array of processes and events that exist in relation to each other and each exerts an effect upon the other processes as well as the entire field of activity itself. However, each process I describe can be roughly categorized as natural or social, returning the reader to the Cartesian binary. Gardeners and garden organizers do not create clear distinctions and boundaries between worlds as I did in organizing this chapter into coherent topics. I chose boundaries for ease of writing and reader comprehension.

The Physical

The garden organizers work with coupled social/technological/natural systems. Ecologists, Carroll and Salt (2004, p. 9) sum up gardening nicely when they state, “Nature brings together sunlight, air, water, minerals, and a dazzling array of organisms to form forests, marshes grasslands, and other natural ecosystems. Gardeners, with the help of tools, take advantage of and manipulate the same raw materials to create gardens.
Thus, gardens are simply human-managed ecosystems.” Carroll and Salt’s statement illustrates that gardens exist at an intersection of ecology, technology, and human practice. But, there is nothing simple about those systems.

Interviewees have sometimes called the gardens “natural” but, in reality, a food garden does not resemble any ecological grouping found in nature. In some of the community gardens, and in my garden as well, there are sweet orange trees, apples, peaches, apricots, figs and pomegranates. Many of these species evolved continents apart. Fruit trees may be found growing a few feet away from roses (likely from Asia), planted next to sunflowers (from North America) with beds of lavender below (Mediterranean). These are not assemblages of species found together in nature. It takes the coordinated efforts of humans to move these species around the globe. Many garden species are now barely similar to their wild ancestors. Millennia of selective breeding have been invested in achieving the contemporarily desired qualities of these species. Some could not survive if placed back where they originally evolved. These food species are now as completely dependent upon humans as we are on them.

Developing a working, basic knowledge of gardening is a challenge because gardens have many properties similar to any ecosystem, but they are also an ecosystem like none other found in nature. New gardeners must develop a sophisticated set of ecosystem management skills. Obviously, to develop those skills they need some way for knowledge to be disseminated to them. The community gardens must act as learning hubs; ecological knowledge and methods for manipulating and maintaining an ecology must be passed on to the new generation of gardeners. When residents discuss gardening classes and organizers arrange for gardening classes, there is a lot more to it than meets
the eye. Because the garden is an ecosystem, and every single part of an ecology is quite sophisticated, focusing on any specific part or “sub-system” of the garden reveals yet another “layer” making up this complex system.

Even the simplest seeming tasks, composting kitchen scraps, is an exercise in ecosystem management. Lowenfels and Lewis, (2006) *Teaming with Microbes: A gardener’s guide to the soil food web*, devote 50 pages of their book to just outlining the classes of creatures, from bacteria and fungi to gastropods, found in a healthy compost bin. These organisms are *required* for successful composting. If the compost were sterilized, decomposition from organic waste, and conversion into soil would cease.

Compost is stirred to let new oxygen into the center for aerobic bacteria to use. It is watered because the living organisms consuming the organic materials need a damp environment. The compost should be “fed” with a 25 to 1 ratio of carbon to nitrogen-based organic materials for the organisms to work at peak efficiency. The organisms consuming the organic materials need carbon for energy and nitrogen for protein production. The center of a new and healthy compost pile should reach between 130 to 160 degrees Fahrenheit, for a short time, from the heat generated by bacterial action alone.

Gardening teachers may decide not to describe the sophisticated ecological interplay that takes place within a compost pile. That seems reasonable, but if the gardeners are only given instructions to toss their kitchen scraps into the pile, to turn the compost every so often and keep it damp, there may be problems. Any variation from that routine can result in disappointment and failure without the gardener knowing why it ‘didn’t work this time.’ There is always a balance between giving the new gardener
enough information to know what they need to do, and enough ‘ecological theory’ to
know why they are doing it, without burdening them with so much detail that they
become discouraged before they start. While this point may seem intuitive, I do not know
of one garden in the study area that maintains a completely successful compost pile. The
regular maintenance needed, and the ecological knowledge needed to understand why the
compost is not producing new soil, has so far proved elusive.

Knowledge is fundamental to being able to manipulate even a semi-contained
ecology such as a compost pile. However, the community garden or any urban agriculture
project is not a contained system. The garden ecology interacts with its surrounding
environment. In many cases these interactions can be an unexpected delight for the
community gardeners: colorful songbirds climbing over the basil to find aphids,
hummingbirds and butterfly’s visiting the garden for nectar. However, not all surprise
residents and visitors to the community garden are wanted. Entomologist, Eric Grissell,
of insects into gardens from the wider environment. If they find suitable space they will
take up permanent residence. Every plant intended for human consumption is also a
potential source of food for at least one species of insect. Every flower is a source of
pollen for an insect pollinator. Every insect is also a potential source of food for another
predatory or parasitical insect. There are often more insects in a well-managed food
garden than in wild areas surrounding the garden (Carroll & Salt, 2004, p. 109).

None of the gardens use commercial insecticides that I am aware of. But, methods
of ‘integrated pest management’ are not yet well-understood within the community
gardens either. One gardener, Terell, described the situation, “we use no chemicals
whatsoever on our produce. We keep the bugs off with [a mix] of tobacco juice, soap, and water.” The naturally occurring nicotine in tobacco acts as a powerful insecticide that the plant uses to defend itself against many pests. However, tobacco also may carry tobacco mosaic virus that crosses over to infect and kill tomato plants. The general recommendation by University of California, Davis’s integrated pest management experts is that gardeners who smoke must wash their hands and clothes before touching tomato plants and not to allow “tobacco near the garden” (UCIPM, n.d.). Another gardener, Summer, also working in the in the same garden as Terell, suggested creating a “beneficial insectary,” or a reasonably sized section of the garden set aside and planted with species of plants such as fennel, coriander, dill, mint and wildflowers that are known to attract garden friendly insect predators. These predators such as ladybeetles, parasitic wasps, and hoverfly larvae will then thin populations of garden pests. In essence, Summer is suggesting the they try to achieve a “natural balance” between garden pests and pest predators.

As the garden programs mature, the gardeners and garden organizers are developing more sophisticated methods for maintaining the ecology. They are working with a sophisticated mix of ecological issues simultaneously. Each ecological issue poses a different set of challenges. Another source of dismay for the community gardeners and organizers is the constant pressure from invasive plant species that compete with their vegetables for light, water, and space: weeds. In Phoenix, I have yet to see any vegetable garden without some Bermuda grass and lamb’s-quarters. Both of these weeds produce allelochemicals that suppress the growth of other species (Carroll & Salt, 2004, p. 172), the plant version of chemical warfare. In a survey of 2,000 gardeners across the nation,
*Mother Earth News* listed crabgrass, Bermuda grass and lamb’s-quarters among the top ten garden weeds in North America and Canada (Stonebrook, 2011). All three are common in Valley gardens. The community gardeners have approached weed suppression with multiple strategies.

The community gardeners are staying away from commercial herbicides. Of course, the weeds can be uprooted by hand or with a trowel. However, in Phoenix summer, Bermuda grass can grow an 8-foot taproot that makes it close to impervious to hand weeding. Crabgrass sets nodes in the soil that send out runners spreading underground. Pulling crabgrass does not mean you have actually removed it from the garden unless the runners can be found and removed as well. A single lamb’s-quarter plant can produce up to 100,000 seeds in four months, and those seeds will remain viable in soil for long as 40 years. Lamb’s-quarter is considered to be one of the most successful colonizing species in the world (Lanini & Wertz, n.d.). Beyond hand weeding, the community gardeners have tried spraying a mixture of vinegar and salt onto the weeds. Vinegar contains acidic acid that dissolves the waxy coating on the leaf allowing moisture to escape. The dissolved salt creates osmotic pressure on the outside of the leaf, further removing water from the plant and desiccating the leaves on a hot, dry day. This approach has had only limited success. It does not affect the roots underground, so the weed survives to put up new leaves. Another approach is covering the ground with layers of cardboard and then on top of that another layer of wood chips several inches deep. This strategy essentially smothers the weeds and blocks access to sunlight. This method (called sheet mulching) cools the soil, allows rainwater to percolate through, and reduces
evaporation. An added benefit is the garden itself looks nicely uniform with plant boxes surrounded by woodchip pathways after this is done.

By using sheet mulching, they are in effect “shifting” or tilting the ecology in their favor. They are replacing bare and disturbed soil, the conditions in which most weeds, being colonizing plants, can easily take root. They are creating a soil cover that more closely mimics a forest floor where the soil is covered with decades of leaves and other organic debris and is less susceptible to colonizing weeds. This heavy mulch still has drawbacks. It takes a lot of coordinated effort to gather the cardboard and arrange delivery of the woodchips. Many strong volunteers are needed to spread the cardboard and chips, which is a dusty and unpleasant task. The mulch layer needs to be regularly maintained, replacing the decaying cardboard when the Bermuda grass eventually punches through, as it always does, and yet more woodchips to replace those that have decomposed over the course of the year.

Examining the basic physical aspect of a garden, the ecological component, unearths the first layer of complexity a gardener and garden coordinator must navigate. The ecology component itself is sophisticated with many of the ecological mechanisms poorly understood and invisible to the gardener’s eye. While garden ecology is important, the human managed part of the garden ecology is equally important. Humans must actively manage gardens because, unlike a stable, “natural” ecosystem, a food garden is a wildly unstable ecosystem. Because of the inherent instabilities, a food garden is vulnerable to the larger environment, such as colonizing weeds and invading pests, that vie for access to light, water and nutrients made available by the gardener. The food garden’s ecological “equilibrium” point is to exist not at all. Carroll and Salt (2004) state
it this way, “During the first few years following abandonment, cultivated garden annuals generally disappear. Some of the planted perennials may remain, but eventually, these too may disappear, although some may persist, reproduce, and become naturalized. Over time the garden plot will support an increasing number of locally aggressive native and introduced species” (p. 172). Food gardens are not “climax communities” that is, they are not best adapted to survive and reproduce within the average conditions of the area. Because of that they are always vulnerable to ecological succession or replacement by species more suited to the average conditions of the area. Thus, the gardener must constantly struggle against ecological succession—removing weeds, thinning pest species, adding nutrients and improving the soil—to keep the garden ecology alive.

The gardeners and garden organizers are reading and discussing workable solutions to ecological issues they face. However, each gardening topic, from compost, to pests, to weeds is itself sophisticated, and, to some extent, requires a general understanding of the science describing the ecosystem they are creating along with the larger ecosystem in which the garden is being placed. It's not as simple as knowing what plants will grow in the area; it comes down to knowing what virus in one plant will cross over to kill another plant. Or knowing what plants to grow to support secondary populations of “garden helpers.” One must know how to suppress invasive species, while maintaining and increasing desirable species, and how to tip the balance of an ecology in the gardeners’ favor. Grissell (2006) sums this up nicely when he says, “People often equate great gardens with works of art—Manet’s, Monet’s, Constable’s—but the realistic gardener knows that a garden is more nearly like a three-ring circus—balancing acts, knife throwers, and clowns in baggy pants” (p. 322).
Figure 6.1 Community Garden in Central City South. December 2014, photo courtesy of Mary Chow-Thompson.

The Intangible

In the community garden, there are multiple ecological systems at work, around the clock, all year long. A garden is dynamic like most ecologies meaning the ecological balance shifts through the seasons and year. There are few better examples of that, than how garden species change over the course of a season or year in response to climate.
Weeds and pests almost disappear during the cool winter months, but resurge with the summer heat and monsoon rains. The warm season crops wither and die at the first touch of frost. They are uprooted and composted to make way for cool season crops. Gardens connect both gardener organizers and gardeners directly to short-term effects of weather and compel them to strategize around long-term climatic effects on crops.

*Phenological observation* is the study of plant life cycles (e.g., budding, sprouting, leaf loss) to understand how a plant is affected by climatic variation (Lawrence, 2009; Miller-Rushing & Primack, 2008). *Phenological management* is when humans use various strategies to increase plant survival in the face of unfavorable weather and climate. A simple phenological management strategy is to sow seeds or transplants during the most climatically favorable time of the year for that individual species of plant. For example, in Phoenix this means leafy greens in the fall, tomatoes and peppers immediately after the last frost, squash, beans and corn in early summer. Garden organizers use local, science-based publications to help guide phenological management practices. The current vegetable planting calendar issued by the Maricopa County Extension Agency lists 53 classes of annual vegetables and herbs that are relatively easily grown in Phoenix during different seasons (Young & Umeda, 2010). Local gardening calendars have lists of food plant species that are prolific producers in the low desert; the calendars are often one of the first handouts given to new gardeners by garden organizers.

A lot of the science and technology used in a garden seems so basic, perhaps “natural,” to a garden landscape that it escapes simple observation. Much of this technology is based on phenological management used to extend the growing season.
Greenhouses, cold frames or simple row covers will allow cold sensitive plants to survive through the relatively mild Phoenix winters. They can also be used as shelters to start early seedlings for transplanting after the last frost. Perhaps more importantly, for Phoenix, there are technical methods for reducing summer heat. Sunlight intensity can be reduced with shade sails, shading trellises or tall plants. Soils can be cooled with mulches and water (Carroll & Salt, 2004, 163-4). The gardens employ all these cooling strategies, including large shade sails.

In Phoenix, summer heat is an all-consuming issue for garden organizers. Both organizers and gardeners blame hot summer days for struggling gardens. In reality, warm season crops, such as: watermelon, squash, beans, corn, peppers, tomatoes, eggplants, and cucumbers, to name only a few species, require relatively high average daily temperatures to mature. Ecologists and other scientists calculate the days to maturity for warm season crops by “growing degree-days.” That is, each day that the average daily temperature exceeds a species-specific threshold temperature the plant accumulates “heat-units” that speed its maturation rate. If the daily average daily temperature is below the temperature threshold for a specific plant species the plant will not gain enough heat units for that day and the maturation rate will slow (Carroll and Salt, 2004, pp. 123 – 131). Assuming they are not water stressed, fighting off insect pests and/or competing with weeds, warm season food plants bath happily in the intense sunlight and hot Phoenix summer. Gardeners, however, do not do as well. As one Phoenix-based garden educator said, “plants love the Phoenix summer heat, humans don’t!”

In Phoenix, the average daytime maximum temperature for months June, July and August exceeds 103 Fahrenheit (WRCC, n.d.). I consider myself an experienced
gardener. Despite that, during the course of this fieldwork I suffered mild heat stroke twice as I helped around community gardens. Both times the temperature was in excess of 112 degrees, and I had forgotten my broad brimmed straw hat and water bottle. The garden organizers in the study area struggle to maintain gardener populations, and hence the gardens, during the summer heat. A survey of residents in Central City South identified summer heat as one of their greatest barriers to gardening (Bleasdale, Crouch & Harlan, 2011). That finding was echoed in resident interviews for this dissertation. One garden organizer, Hayden, will regularly host events with 80 volunteer gardeners during the cooler months. In the summer that number sometimes dwindles down to a dozen. Another organizer asked me privately if it was worth running the gardens during the summer at all.

While the normal summer temperatures in Phoenix may be hospitable to warm season crops, weeds, and insect pests than to an urban farmer or gardener, human-made changes to the local climate are also influencing garden ecology. As outlined in chapter four, Double Exposure, Phoenix may have one of the most intense Urban Heat Island (UHI) effects in the world (Hawkins et al., 2003). And, there was a, “pronounced divergence” between temperatures in the Phoenix core and surrounding desert by 1970 (Ruddell, Hoffman, Ahmed & Brazel, 2013). The city remains warmer at night instead of cooling down like the surrounding desert. This divergence alters insect population density as well as modifying the plant phenology of the community gardens. In northeastern US cities the urban heat island effect caused “springtime,” or plant budding, to come about a week sooner and “winter,” plant dormancy, was delayed by about a week (Zhang et al., 2004). Essentially, the urban heat island effect, in a northeastern US city, had extended
the growing season by two weeks a year. However, urban heat island has not had a predictable pattern of change on plant phenology in other cities around the globe. While it is demonstrated that UHI is changing plant phenology in cities, there seems to be more variables then only UHI that are altering urban plant phenology (Gazal et al., 2008). It is unclear at this time exactly how Phoenix’s UHI is changing local plant phenology, only that in cities worldwide urban plant phenology is changing.

Anecdotally, in Central City South and to a lesser extent South Mountain, I have observed warm season plants such as tomatoes, eggplants and peppers that, under the effect of the regional climate, are normally annuals, begin to perennialize. Unprotected by sheet rows or greenhouses these plants survived the winter and put out new leaves and fruit the following spring. I do not know if this was a simple difference in plant cultivars. Perhaps they were growing tomatoes that were more capable of surviving cool weather. Perhaps it was an abnormally warm winter. But, it also could just as easily have been that the Phoenix’s UHI had, in effect, ended ‘winter’ or plant dormancy in these gardens. On a personal level, watching a plant change its expected behavioral response to winter was troubling. However, the gardeners rejoiced at the early fruits and vegetables they received those years.

While UHI is changing the phenology in the community gardens, the gardens are also changing the microclimate of the neighborhoods. The community gardens act as cool islands within the neighborhoods. It is unclear how much the gardens cool the summer air around them, but there are some tantalizing hints. Land within incorporated Phoenix that is currently being used for commercial agricultural crops has appreciably cooler microclimates, by 5—8°Celsius than residential, commercial or industrial land uses
(Grossman-Clarke, 2010; Stabler, Martin & Brazel, 2005). The community gardens in the study are generally smaller than commercial farm fields and are not as densely planted. So, a direct comparison to commercial farming is likely to be inaccurate. However, a study of a small park in Central City South has shown that increasing green spaces and shade trees does help mitigate high temperatures within the study area with “potential reductions in surface temperatures from 0.8 °C to 8.4 °C in areas underneath or around vegetation” (Declet-Barreto et al., 2012, p. 1). Many of the community gardens in my study area have shade sails over sections of the garden beds. All but the smallest community gardens have fruit, nut and/or shade trees. There are lower canopy layers of shrubs or annuals. Some have grass between garden beds while others have woodchip pathways. With multiple canopy layers and damp soils, these gardens easily meet the general conditions that describe a cool island in Phoenix.

The garden organizers and community gardeners are embedded in a web of tangled natural and anthropogenic climatic conditions. They are locked into a tight calendar set by the climate. Any decision-making they must coordinate, to some extent, with planting and harvesting calendars. For an organizer or gardener taking a month off means to miss a time to set new annuals, replacing plants that have moved out of their ideal season and are now dying or dead, and a time to harvest when plants have reached peak productivity. Warm season crops, if well watered, thrive in summer. However, the coordinators must also account for heat of summer when it comes to humans; gardener populations dwindle rapidly then. The summer heat also brings another set of challenges: it is the time of explosive growth of invasive weeds and insect pests. Just when gardeners are needed the most, they are least likely to show up in the garden.
Garden Partnerships

’Haven’t they heard Marx is dead?’ Giuliani replied when asked about his plans to uproot community gardens to make room for luxury housing. (Muschamp, 2006)

A solitary urban gardener, working in the backyard, has to navigate formalized economic systems surrounding gardening. Seeds are purchased from stores and mail order companies. Utility companies provide water. Big box stores supply tools and composts. Gardening knowledge is obtained through specialty magazines, formal classes, Internet, and books. Money is required to pay for all these items and services.

The food justice movements in the study area often bypass formalized economic systems that a solitary home gardener must navigate. The most evident, and somewhat obvious, example of this is each movement has begun to ‘delink’ itself from the normal capitalist relationship that exists between the food producer and consumer. Community gardeners grow some of their food and produce is often given away freely to family, friends, and neighbors. Social scientists have established that community gardens do not conform well to normal capitalist accounting (Schmelzkopf, 2002). Some have argued that while community garden scholarship has focused on inexpensive food for those in need, in reality, what a community garden provides is less tangible services such as environmental education, public health education about fitness and healthy food, and community development (Birkey & Strom, 2013). I am not going to argue any of those points. But, what I have observed in my study area is another component of how community garden organizers sidestep the formal capitalist system. This is another “layer” of the onion and one I have not seen addressed in scholarship.
The garden organizers in the study area often must sidestep the formal economic system. Garden organizer, “Mayra,” explains, “To launch a garden costs a lot of money… We don’t have the manpower. We can’t pay the manpower.” There are often unexpected surprises involved. Garden organizer, “Alberto,” describes one unexpected expense, “the cost of putting our own dedicated water line. When we first started we went to the city and got an estimate. It was not quite $5,000 to break up that pavement out there and tying in a waterline. That didn’t even count the line I still had to put in personally all the way over here.” Often, the amount of money available for garden start up is small. The yearly budgets for community gardens are smaller still. If the garden coordinators worked only through the formalized economic system, there would be far fewer, if any, community gardens in the study area.

Land is prohibitively expensive for the garden organizers and the nonprofits that support the food justice movements. Of the 15 community gardens in the three study areas, 14 are on land that is donated or leased to the nonprofits supporting the food justice movements. There is a single garden that is on land owned by one of the nonprofits. A local utility company donated the title of that parcel to that nonprofit for community use.

In most cases, the land used for a community garden belongs to disparate organizations or city institutions with which the garden coordinator has struck a deal. Mayra, a garden organizer in Central City South, explains that six of her seven community gardens are held in partnership with “site partners.” Four of these site partners are the city of Phoenix or other governmental institutions, including public schools and a library. While Mayra’s nonprofit provides some coordination, funding, and technical support for the gardeners, the site partners must “be willing to provide the
[garden] space.” She described site partners as vital to the gardening program, “[they are] one reason we’ve been so successful. Everybody does a little bit and [the gardens] will last.”

Another popular technique is to work with churches. Garden Organizer Alberto, describes the land for his community garden he organizes, “the church leases all of that property back there [to us] for a dollar a year.” The church has developed, “a vested interest in the garden. They like it, and so they asked me if it was possible to put fruit trees in there [with the garden].” As Alberto’s garden program has grown, so has the church’s willingness to support his and the gardeners vision. An advantage to working with an organization like a church is they already have some of the infrastructure in place to support community garden groups. Alberto does not have to coordinate with electricity and water utilities as the church already does that. “Yeah. The only institution that we work with is the church. We have to coordinate with all their events to make sure that there is adequate parking when we do [our events].” Alberto explains to potential gardeners that, “we are a community center, and we rent space from this church to do the garden… we’re gardening on the church’s land, but not specifically with the church.”

The garden organizers can also gain access to land is that privately owned by an individual landowner. Often this land is leased to the community garden group. Garden organizer “Hayden,” explained this arrangement to me: “We’re a not for profit organization so… someone who gives that land to a nonprofit organization, even on a lease option, actually gets their taxes significantly decreased.” It is unlikely that the owner of the land will make much money if any, in leasing to a community garden group, but they may not lose as much money on land if they can reduce their taxes. “It’s a good
business decision for them; it’s an excellent business decision for us… We may pay a
small fee to be there, but we can generate thousands of dollars’ worth of produce on that
land.” Individuals have also loaned their land to the garden groups in exchange for
maintaining the property and to detour crime by keeping eyes on the property.

While the purchase of land is likely the most expensive part of creating an urban
agriculture system, water is equally vital and it is a reoccurring cost month to month.
Garden organizers in the study area will often resort to their social networks to meet this
expense as well. If we had a way to look underneath the land of most community
gardens, we would see a network of pipes, moving life-giving water from the municipal
water hookup to the garden beds. Garden Organizer “Alberto” sums up water; “water is
always the primary issue. You always want to get a constant water supply that’s
affordable or that you can write a grant for or find someone to help you pay for it.” In
Phoenix, the average yearly rainfall is about 7 inches. However, as many gardeners have
pointed out to me, there are few places in the US that can meet all their garden watering
needs only with rainfall. The garden organizers will often strike a deal with the
organization that owns the land to cover the cost of watering the garden. Garden
organizer Mayra, states bluntly, “Water is a big expense that we do not have funding for.”
For the gardens she runs, the site partners cover the cost of the water. The garden
organizers can also raise funds to procure water for the gardens. This however, this has
its own set of complications.

Phoenix has, in essence, two ways to deliver water. There is a set of canals and
ditches for flood irrigation of farm fields, and the historic creation of that system was
outlined briefly in chapter four. Flood irrigation is much less expensive than conventional
municipal water delivered by pipes. Hayden describes the water dilemma faced by organizers, “It's been a big deal for us. We look at some of the historical [flood irrigation] lines even before engaging in projects these days, to find out if we can get [flood irrigation] water there. [Flood irrigation] water is the most cost effective water. For the city of Phoenix water, you are going to pay a premium, and it can be very pricey.” The price difference is enough that organizer “Michael,” who works with refugees to create small, urban farms in Maryvale, will only use land that has access to flood irrigation water. Alberto’s garden has flood irrigation and is also supplemented by municipal water. The church that owns the land that his garden is on helps pay for both.

The garden organizers use multiple strategies to gain access to land for resident gardeners. Using these strategies they have, with either relatively little or no capital cost, managed to set aside parcels for community gardening ranging in size from hundreds of square feet to many acres. The community gardens begin by creating or strengthening social bonds between garden organizers, other groups, and institutions. They continue to exist because of a dense network of social relationships with those other groups and institutions. The literature about community gardens often focuses upon the social networks in terms of residents who work together in the garden and building community through interactions in the garden. But, within the study area, before social networks can be created in the garden, there must be a foundational set of social networks among the garden organizer and neighborhood organizations, institutions and property owners.

Because garden organizers do not have access to sufficient funds to bring their agricultural projects to life, they must step outside of normal capitalistic exchange to generate creative solutions for the issues they face. The garden coordinator cannot do
what they do and remain within the bounds of ‘normal’ economic exchange. Instead, the organizers depend on a ‘thick’ web of social relationships with residents, local organizations and institutions to gain access to the resources for the urban agriculture projects they engage in. In effect, they replace or perhaps ‘subvert’, normal capitalist exchange through the development of social relationships, and they utilize these relationships to leverage access to land and sometimes water. The typical capitalist model of private property generating income for an individual landowner is replaced with negotiated social bonds opening up neighborhood spaces dedicated to a communal use of land.

**Why we do what we do**

Although all the garden programs in the study area focus on increasing nutritional access and community engagement, each garden organizer had very different framing and method for archiving those goals. Each of the communities in the study area has their independent gardening program with an independent set of garden organizers. And, perhaps, they should not have a common framing or strategy. As Hayden explained, “I don’t think you could have one model that would work in [every neighborhood]. Different neighborhoods are going to be different right?”

While neighborhoods differ, there is a mutual respect between the garden organizers for what is happening in the other communities in the study area. Garden organizer, Alberto, discussed Hayden’s work in South Mountain, “I’ve always talked about Hayden’s gardens… Did you know that all those gardens are within just a few square miles of each other? It’s the highest crime and gang activity per zip code anywhere in Arizona! He’s got a lot of energy... That’s not the safest place in the world,
but he’s managed to pull it off.” Alberto also differentiates Maryvale from Central City South, where he also had worked for almost a decade before moving to Maryvale, “They have higher percentage of homeless people over there…” and, “Here I see a lot more homeowners.” Alberto’s strategy for creating a successful garden program in his community is to identify those who are most vulnerable to malnutrition. “The focus is for children 5 to 15; their diabetes is present [here] in this generation more than any other previous generation.”

Alberto sees his mission as twofold. First is increasing the amount of fruits and vegetables in children’s diets. Alberto said, “I went to a school this morning and talked to about 40 parents. That’s what I do, and I’ve got three or four schools that I make the rounds. All the parents meet for coffee one day a month, so I’m there as part of the speaker program.” The second is using the community garden as a ‘breeder program’ to teach homeowners how to garden in their back yard. To do this he first reaches out to the kids, “I’ve gone to school fairs and they’ll give me a table and I promote growing something…I’m more interested that they take something home and watch it grow…their parents come back, and they say, ‘Look, this is what my kid grew!’ Now they’re interested. Now they want to garden in their backyard.” Alberto’s vision is using his community garden and monthly farmers’ market as a demonstration of healthy eating and exercise. He feels it creates opportunities for community outreach and education for children that in turn excites their parents.

Mayra, in Central City South (CCS), frames their gardening program quite differently. Mayra distinguishes the CCS garden program from programs in Maryvale or South Mountain. In part, this is due to the difference in how the neighborhoods have
developed. She explains that unlike the other communities, CCS does not have large vacant lots for urban agriculture projects. She describes the community’s seven small gardens as “quaint” and “fitting into” existing developments. Two of the gardens in CCS are now surrounded by displays of public art and are described as “points of pride” in the neighborhoods. Mayra explains that the garden program is, “about shared responsibility and shared participation. The fact that is, we don’t look at [urban agriculture] as an economic engine. It is about developing, building the community, and putting food on the table.”

A second and perhaps larger goal for Mayra’s garden program is to help neighborhood residents to establish independence from community services. She encourages their gardening movement to be completely resident-driven. Once the garden club is formed, Mayra’s organizational involvement is minimal. Gardeners make up their rules for the garden and are expected to be independent of external aid beyond some funding and technical support. Mayra states, “The strategic goal for immediate attention is always making sure that the garden clubs are intact… That they have determined what the rules of engagement for each other are; that they determine what they’re doing with the produce. All of this is on the garden club.” The garden program in Central City South values neighborhood independence and finds empowerment in self-sufficiency.

Unlike Mayra’s and Alberto’s programs, South Mountain organizers do think of their garden as an economic engine. Hayden, the lead organizer in South Mountain, frames the program as a community space to help residents attain, “legitimate streams of income.” He talks about neighborhood residents having to live in the “hood,” but participation in the garden provides a “yellow brick road” away from the “gangster”
mentality. The urban agriculture projects employ at-risk youth, gang members and parolees, training and paying them to do landscaping and gardening work. Hayden describes the system, “Every first and third Thursdays we pay the youth. Adults and seniors are based on the farmer’s market receipts coming in.” Food justice in this community is linked to creating new economic choices and increasing financial stability and equality.

While the organizers in South Mountain see their agriculture projects in terms of residential economic opportunity, they also describe them as a practical method for improving diet and neighborhood environment. Hayden explains, “For us, it's cut and dry… you are what you eat. [We are] putting in a product that benefits people environmentally [as well as] the built environment… There is a marked outcome… whether it's physical, whether it's social or whether it's air quality… These are all components of building community.” The gardens program in South Mountain addresses several issues they have identified as important: financial stability, neighborhood environment and community building.

The food justice groups in Phoenix do not have a general framing or general strategy for their urban agriculture projects. However, each program has identified one or several important issues facing the particular neighborhoods it is operating in. Each one has customized its strategy, goals and framing around issues it has identified as important. While all of these movements fall broadly under the rubric of food justice, there is a lot of diversity between them, and that diversity springs from the issues that garden organizers and residents have identified as important in their neighborhood. Because the garden programs and movements are generated within the community, and
communities are unique, the framing, strategy, and goals will reflect the specific qualities of the residents, organizers, and neighborhood.

While the strategy and framing may differ, what is common to all the movements is they are working towards becoming less dependent upon the contemporary inequitable food system. Each group is creating systems by which residents can learn about local food systems that establish some food independence. The gardens have become spaces that allow residents to become increasingly independent. This independence means that residents can begin to forge new spaces, both the physical spaces in the community, as well as new intellectual spaces as to how they interact with, and can start to overcome, the existing inequitable food system in their neighborhoods.

Organizers describe the community gardens, market gardens and farmers’ markets as spaces where organizers and residents can begin to address multiple, layered social issues within their community. The garden programs address these multiple issues because often the issues themselves are linked in the minds of organizers and residents. They recognize that by addressing one issue, access to healthy food, they begin to change multiple physical and social outcomes: children’s health, developing community connectedness, strengthening community pride, increasing economic opportunities and environmental health. To their way of thinking, to begin to change one variable in this complex system begins to alter other variables.

Mobilization

The most important component of organizing food justice movements is mobilization of community members. Everything discussed previously in this chapter—the coupled human-natural system of garden ecology, social networks with organizations
for access to land and water, strategy, framing and goals of the movement—is all pointless without the support and involvement of the residents in the community. Hayden describes this reality bluntly, “It is funny, I can give this formula away to people, and they still won’t get it… the most crucial element of keeping these gardens alive is the people. The people who are actually working the gardens, I see these gardens just start and then they literally within three, four, six months they look horrendous.” Hayden’s statement cuts to the core of civic-based agriculture systems. Gardens are complex, unstable ecosystems. They require, absolutely require, human management. Building a big beautiful community garden without simultaneously developing resident buy-in and involvement spells disaster.

Establishing that the community wants a garden, and will become involved in maintaining it, was the first step for all the organizers. As garden organizer, “Alberto,” stated bluntly: “You want to make sure that there is interest. You don’t want to do this on your own.” For the garden organizers in the study area, the method for establishing whether the neighborhoods wanted a community garden could vary from formal to informal. Alberto used a design charrette to address the issue of how to reduce childhood diabetes, “the very first thing that popped up from everybody was creating a [community] garden.” Mayra describes forming partnerships with residents who approach her to create a community garden. She sets aside a small parcel of land, establishes a yearly budget and arranges for free water for the new gardeners. Finally, a resident, Kip, in South Mountain, knew that some small community gardens already existed in his neighborhood. He simply asked a group of residents if they wanted to create a larger garden on some land that was available to them. They liked the idea, so he reached out to
the garden organizer who was running the smaller gardens and collaboration between them began. There are couple key points to keep in mind here. The first is realizing these organizers are working with the community to develop a local solution to a larger problem of food access over which the community has little control. The second is organizers and residents are working from the “ground up” meaning, in this case, they are starting with resources they have immediate access to in the neighborhoods and crafting solutions that are generated from inside the community itself.

Something else became apparent across the interviews with, and in observation of, garden organizers. Much of their strategy and vision for the gardens came from residents who participated in the gardens. Alberto stated directly, “we actually do strategic planning as a group now.” Mayra, who helps residents form independent gardening clubs detailed: “[each gardening club] determines what the rules of engagement are for themselves… and they designate a person that can receive our [gardening] information, supplies, and funding in order to help sustain them.” Hayden meets with residents in the gardens for a few hours at a time, several times a week. Invariably, there are always small groups of residents talking with Hayden discussing what is happening in their neighborhoods and talking about what's happening in the garden itself. These informal chats guide how Hayden frames the gardens mission and strategies for the future. Communication with gardeners and neighborhood residents is both essential to gardening projects as well as driving how the garden itself operates. Residents are critical for the survival of the garden, but the garden also provides a place where they can contribute their voice.
Despite the benefits the community garden may bring to some residents, there is always an attrition rate among active gardeners. People lose interest; they become overwhelmed by the summer heat; they may find the work is too difficult or the schedule too demanding. As one coordinator, Alberto, described it: “In gardens, there is an ebb and flow. People come, and people go.” I won’t argue Alberto’s point but if new gardener recruitment rates dip below the level of gardener attrition rates than the garden itself may eventually be abandoned. Community garden loss, stemming from a loss of resident interest is, in fact, the primary reason for garden failure in the United States. This trend has held for the last couple decades that have been tracked by the American Community Garden Association (ACGA, 1998 p. 6; Lawson & Drake, 2012, p. 10). I have both heard of and visited community gardens in other cities and states that maintain long waiting lists for people who would take a plot when one becomes available. Here, in the Phoenix metropolitan area, I do not know of any community garden that has reached the point where they need to maintain a waiting list. This creates a precarious position for garden coordinators working in neighborhoods with reduced access to healthy food. They must be continuously recruiting new community garden members to keep the gardens active. For the longest time I assumed that new garden recruitment was an unusual burden upon Phoenix garden organizers. It has only been through interviews, reflection and writing that I have begun to see that my initial assessment was wrong. I now see new gardener recruitment as a vital part of how these garden organizers practice food justice.

First, there is the garden party. Most of the garden organizers in these neighborhoods will periodically throw a party, when the garden is open to everyone, residents and nonresidents alike. The parties have some coordinated activities and food.
Invitations are sent far and wide through personal contacts and social media. Each garden organizer has developed a garden party strategy that uniquely fits into their neighborhood residents’ interests and the physical space of the garden itself.

Alberto’s garden parties involve a small monthly fair in which local neighborhood businesses can set up a covered booth from which residents can sell goods and services. A bouncy house is set up during cooler months for the kids or a water slide in the summer. The local youth soccer teams will have a match. Alberto explains that popular sports, “will bring in another 100 people, all parents and family members. They’re all looking at the garden… I have a partnership with the Arizona Cardinals in the National Football League [they supply a professional coach and equipment] and we do flag football… and I always make sure that they always give an exhibition during the garden day.”

Another garden organizer, Hayden, has two garden parties a month. It is not unusual to see 80 or 100 people at his parties during the cooler months. These parties focus more on volunteer hours and giving people a “gardening experience” as Hayden likes to call it. The garden parties start with stretching to loosen up muscles. Hayden gives a short speech about the mission of the gardens, then the group is divided into smaller groups and each is assigned a task that will last for about 90 minutes. Teenagers, who tell me they have never held a shovel before, may find themselves turning compost. Parents may find themselves weeding the ever-invasive Bermuda grass while trying not to accidentally pull up the baby Swiss chard. The brave few who are comfortable wielding sharp tools may find themselves trimming fruit trees while others fetch water for the beehives and grains for the chicken coop. All the while music plays from either a...
DJ booth or a couple resident musicians may show up with a guitar and saxophone. At about 11:00 lunch will be served, which is prepared by Hayden’s wife and is always quite good.

Smaller gardens will host more intimate events. Garden organizer, “Leyla,” hosted a series of garden parties for local churches that work towards beautifying the neighborhood where Leyla’s garden is located. About 20 or so church members donated time and physical labor and brought decorative objects to be hung or placed around the garden. In exchange, Leyla arranged for garden experts to teach small classes to interested members. Kids and adults were assigned short tasks, such as making pots out of newspapers to start seeds, hanging a new sign for the community garden on the fence or picking over the eggplants for tomato hornworms. Predictably, the younger children begged their bewildered parents to take home the 6-inch long, green, tomato hornworms as new and beloved pets. When the sun set, its orange light reflected off the glass towers of downtown Phoenix located only a couple miles from the community gardens in those underserved neighborhoods, a charcoal barbecue was lit and hamburgers began to sizzle.

Garden parties are described in detail because they are an essential tool for new gardener recruitment. But, they also serve other purposes. For many, the garden party may be their first introduction to gardening. For others, it is a reminder of agricultural experiences they had in their youth. But, for all attendants the garden party may create an enduring memory. When the gardens are used for parties they become social hubs in which patterns of practice, such as how to weed, remove pests, water, cultivate soil, and plant new seeds are transmitted to a broader audience than just those who are regularly involved in the daily routine of gardening. The garden parties also encourage a larger
conversation about food and, in the communities that I study, about food access. As retired chef Samuel, who also regularly attends garden parties, explained to me, “The big places like the restaurants, you know, they can get [fresh produce]. But us right there in the neighborhood, it’s hard to really get unless you grow it yourself. Greens, cabbage, carrots, peppers we grow ourselves.” Even if many of residents who attend garden parties do not become involved in the community gardens themselves, some start gardens at home. At several interviews conducted at residents’ home, I was invited into their backyards and shown their home vegetable gardens and newly planted fruit trees. These gardens were inspired, in part, by what these new gardeners had seen and learned by attending garden parties and seeing what other gardeners were doing.

A second strategy that garden organizers use to increase new gardener recruitment is finding “garden champions.” Alberto defines a garden champion as: “somebody that likes the garden so much that they’ll publicize it, they’ll talk about it, they’re there [in the garden], they’re an active gardener and they recruit.” Alberto’s first garden champion was, “like 12 years old here. He lived down the street. He goes: ‘I will protect this garden when I can.’ Pretty soon there was an entire group of kids with their principal coming from the school.” But, Alberto continued, if the “garden champion is an adult, then you can teach him how to write grants.” Alberto has a garden champion who runs his community gardens’ Facebook page and introduces him to groups interested in hearing more about the community gardens. Hayden has champions who share the work and responsibility of the gardens: “You need to have that person who’s distributing the produce [to residents and farmers’ markets]... You have to have the right people in very critical areas.” Hayden has a garden champion, Kip, who ran a series of community
meetings discussing the gardens with residents. They eventually invited Hayden to help them start a large garden, which is now the centerpiece of that local food justice group’s program. Hayden has other champions who transport produce and residents from the garden to the farmers’ markets, and still others who design and maintain the organization’s website. What distinguishes a garden champion from a gardener is the garden champion will do non-gardening tasks such as helping to write a grant, raise awareness of the garden or drive garden produce to a farmers’ market. Essentially, the garden champions are a way for the garden organizer to multiply their efforts. First socially, in the form of attracting new garden recruits and taking on other non-gardener roles like grant writing, and second physically, undertaking the labor and tasks needed to create a resident-driven, local food system.

Besides garden parties and champions, the organizers used other community engagement strategies for increasing neighborhood awareness of the gardening program. Hayden liked to use neighborhood cleanups. He described the vacant lots around his community gardens as “glittering in the sunlight” from the quantity of broken glass. He would choose a vacant lot, enlist a group of volunteers, and with gloves and trash bags they would scavenge the lot for glass and litter. Hayden also used volunteers to clear small irrigation ditches of debris, such as shopping carts and old couches dumped into the waterways. Hayden felt that these neighborhood cleanups kept the garden program “front and center” in the minds of residents. In another community, Mayra published a monthly community newsletter in which a full page would be devoted to gardening or one of the seven small community gardens in her neighborhoods. Mayra also hosted a booth at the local community fairs and events, where information was distributed about the gardening
program and how residents could become involved. In Alberto’s neighborhoods, he, along with a group of volunteers, would go door to door, in pairs, with flyers and door hangers to introduce residents to the community garden. These strategies draw in new garden recruits, start a wider conversation about food, and are also essential in finding garden champions. Alberto explained: “You got to use whatever you can… You’re looking for garden champions, and you never know where you’re going to find them. You’re going to find them talking to a group, talking to a school, going door to door, or Facebook, Twitter. You want a garden champion. You can’t have enough of those.”

Using these strategies, and others, the organizers have kept a small trickle of new garden recruits entering the garden and stimulated a continuous dialog about food, quality of food, access to nutritious food and how residents could become involved in creating local food systems to increase local food security. It also created excitement and curiosity around the gardens. As Alberto tells me: “I’ve had 200 people [at a garden party] and it looks like somebody broke out of jail, there is that many people, but when it comes to day to day, the week to week gardeners, no, you will have a core [group].” Using all these strategies is a lot of work for only adding a few new members to the core group of regular gardeners. If examined only on the basis of adding a few new members, it hardly seems worth it. However drawing back a little and examining the system that these garden organizers have created to keep new gardener recruitment levels above the level of gardener attrition, we see something much more interesting. The coordinators are creating a system of food-related education and discourse within their neighborhoods and are keeping food justice “front and center” in their communities.
The organizers’ multiple strategies seem to be working. The garden parties along with volunteerism, garden champions and the core group of neighborhood resident gardeners have met the human management needs of the coupled human-natural system that is garden ecology. The gardens look a little tattered by the end of summer, but they survive. The gardeners who held onto hope through the summer in face of sweltering heat, hordes of insect pests and rampant weed growth look a little more tanned, but can easily tell a new gardener what to plant for the cool season. Bags and boxes of fresh produce leave the gardens and are dispersed into the community. The common question of, “how do I grow this” becomes slightly less urgent and changes to, “how do I cook this?”

**Every Decision is a Political Decision**

Establishing a community garden is one thing but sustaining it takes considerable political savvy and fortitude. The ACGA’s tips on long-term garden preservation and advocacy read similarly to a battlefield manual. They forewarn of crisis, talk of developing allies, using the media, political engagement, and remaining psychologically motivated. Finally, if the worst comes, they have advice on how to strategically sacrifice one community garden in exchange for gaining permanent protection of another (Ten Tips on Local Advocacy, n.d.).

So far, the battle for community gardens in Phoenix has been comparatively quiet, at least in contrast to the decades-long conflict in New York City to maintain community gardens in the face of rising urban land values and gentrification projects that culminated with Mayor “Rudy” Giuliani’s attempted land grab of 126 gardens (Eizenberg, 2013). We have not seen, in Phoenix, heart-wrenching images of Latino teens and grandmothers
‘holding the line’ against dozens of armored, baton-wielding, riot police and bulldozers as witnessed at the last moments of Los Angeles’ South Central Farm (Kennedy, 2008). Despite that, community gardens in Phoenix have been lost. The two gardens that I know of, one in the study area, and one outside of the study area, were gobbled up in what food justice advocates and garden organizers bitterly described as shady land deals.

Garden organizers must weigh ecological, social and political challenges when they come to a decision point at which a garden’s existence is threatened. The following example is a brief and ‘simplified’ glimpse into the political processes with which garden organizers must contend. This account has been abbreviated and edited in order to protect the garden organizers and the work they are doing and to fulfill my ethical obligation of maintaining confidentiality to the ASU Institutional Review Board. It is an example of how urban gardens become entangled in the political world.

Garden organizer Layla described her community as having, “a long and interesting history, but (in my opinion), has been largely forgotten by the city.” In the spring of 2014, Layla had taken over a community garden that had lost its leadership and gardeners. She began raising awareness of the garden in the community with flyers, Facebook and spreading the word of her community garden through personal contacts. Layla stated, “[I have] assumed the role of organizing, recruiting and pulling together resources for the garden.” What Layla described is true of every garden coordinator in my study area, but what she did not mention is that she is also the political advocate for her garden.

Layla’s community garden had raised garden beds, but Layla and the newly recruited community gardeners felt the raised beds were too small. They decided to build
more gardens, into which new fruit trees would be established and around their roots
would be planted herbs, vegetables, and flowers. They wanted the fruit trees for shade
and appearance and to expand the gardens productive capacity. They wanted to mix
compost into the soil to amend the thick Phoenix clay that was already on the site. While
clay has excellent water retention, mixing compost into the clay (creating a “clay loam”
considered desirable by farmers) would increase water percolation and nutrient
availability. It would also make the soil easier for the gardeners to work.

In response to Layla’s request, a local composting company began a free
composting operation at the community garden. They dug long trenches around the
garden parameter and filled the trenches with composting materials and topped the
material with six inches of soil. This is a popular system of composting known as
Bokashi (in contrast to the Bangalore method outlined earlier) and uses cultured
microorganisms to ferment compost below ground anaerobically and create new soil.

Layla and her gardeners soon ran into a series of politically charged issues
regarding soil and compost. First, the use of the existing soil on the site was brought into
question. Was the soil safe for gardening? Known soil contaminates existing at several
properties surrounding the garden. After weeks of discussion and meetings, the owner of
the garden site stated unequivocally that the soils were tested when the deed for the
parcel was transferred. Then a new issue emerged. Neighbors complained of the
unsightly look of the composting operation and that the compost materials smelled bad.
These neighbors took their grievance to influential community members who
recommended that Layla choose to either clear the compost operation or close the garden.
Layla argued her case at a meeting that she convened with community leaders. She needed the compost to expand the garden. However, she would end the composting operation if it would help the residents accept the garden as a valuable asset to the community. The community leaders, satisfied, asked if they could apply for a plot in Layla’s garden. A new discussion began at that meeting about using the garden to supply a small neighborhood market the leaders would like to see established in the future. Layla had successfully steered the dialog from a discussion about closing her garden to brainstorming how the community could more broadly use the garden.

Layla negotiated with residents, gardeners, influential community members and the site owner about soil, compost and garden expansion. She also reached out to a nonprofit organization that works with communities similar to hers. This group had considerable knowledge about grant writing and a voice at Phoenix-based local, food policy meetings and initiatives as well as Arizona State University Food Systems Transformation Initiative and other ASU food scholarship groups. She attended several of the organization’s meetings and invited them to visit her community garden, which began a new collaboration. Among other things, they discussed with Layla how to create a layer of topsoil using cold composting (another composting method) that looks like mulch spread over the garden bed. They thought it would be acceptable to neighbors and residents.

At the same time that Lala’s community gardens existence seemed imperiled, in less than one year she cultivated allies with influential community members and a new organization, two new garden-champions and recruited new garden members. She
redirected a negative dialog about her garden, turning it into a positive conversation about
garden expansion and possibly extending the garden’s reach into local market shelves.

The community garden organizers in my study areas regularly face simultaneous
and sophisticated political challenges that tend to arise suddenly and without warning.
Though the details of the political challenges change from organizer to organizer, they all
have faced similar obstacles. Most of these challenges are handled quietly behind the
scenes and visitors to the garden are treated to the seemingly non-contentious and
apolitical act of gardening. All the garden organizers in my study area are gregarious
people. But in the background they are also tough negotiators and have repeatedly proved
themselves ready for a political scrap.

The question that needs to be asked is why do community gardens so often
become the center of political strife? I am not sure I have a completely satisfying answer.
Conflicts in cities over the right to space in the city are ongoing (see for example
Mitchell, 2003). However, in this particular case the issue was not land tenure or public
space, but instead revolved around an agriculture use of land in the city and the poorly
understood process of composting. Because community gardens subvert formal capitalist
exchange and ‘float’ in a dense web of social relationships they may be more vulnerable
to political controversy then other organizational models. They organize around a shared
use of land—required to operate the large, sophisticated human-maintained ecologies
they establish with small or no budgets—rarely seen in the US. Growing food in an urban
environment may also be alien to the urban experience in the contemporary US. An
outsider may easily see community gardening as ‘other.’ The ecological work done,
composting piles of kitchen and garden waste, spreading cardboard and wood chips,
digging and kneeling in the dirt, pulling tomato hornworms off of leaves, exclaiming excitedly over a massive carpenter bee dancing from flower to flower, it may be too alien, too much otherness for some urban dwellers.

**Conclusion**

An outsider to the food justice movements in the area may become fixated on the physical achievements in the neighborhoods—the many community gardens and small, temporary farmers’ markets and vegetable stands. But to understand the gardens requires examining the sociality of the community. The gardens are, in reality, *socially negotiated spaces*. First, the reason the gardens exist at all is because of individual and organizational relationships, not capitalistic exchange. Second, creating and maintaining the garden ecology requires a constant flow of verbal information among gardeners, garden organizers and garden teaching organizations, like the Cooperative Extension Agency. Gardeners also access gardening related books, television and Internet site creating more rounds of discussion. Third, the garden ecology itself is dependent upon labor. Labor recruitment is also a social endeavor with gardener recruitment, volunteerism and garden champions required for human management of the garden space. The gardens exist and persist only because of multiple intertwined social processes.

Examining the social movements in the study area from the perspective of the garden coordinator begins to reveal multiple sophisticated phenomena unfolding simultaneously. More insightful is that many of the phenomena are interrelated. Drawing distinct boundaries between the phenomena, say: garden ecology and core garden membership recruitment, creates a mental divide when the two are intimately linked. To
ignore garden ecology in favor of social strategies for new gardener recruitment is to risk being overwhelmed by the ecological instability of the garden. To ignore new gardener recruitment in favor of garden ecology is to risk not having the labor power to manage the garden ecosystem.

The majority of decision-making that a garden organizer will have to do is going to involve garden ecology in some way. As illustrated, many of these ecological management decisions are made while not knowing all the variables or even having a good way to observe the ecological processes at work. Even if all variables were known, there are many that cannot be controlled such as pest populations in the Valley of the Sun or climate. To compound all those issues, many of the garden organizers in the study area do all these tasks with limited budget and time. Only one of the organizers has a budget and a staff member dedicated to the garden program exclusively. The rest have to maintain other sources of income, or they are employed by a non-profit and the garden program is one of many projects.

The garden organizers face a Gordian knot of intertwined, sophisticated problems many of which cross freely from the physical world to the social and then back again. They are in the middle of a complex system. When weighing a decision, each “sub-system,” ecological, social, technological and political can offer a series of difficulties. When a garden organizer comes to a decision point regarding their garden program they must wade through at least one, and generally more, of those systems. Some variables are known, understood and can be manipulated for a favorable outcome. Conversely, many variables are not known, and outcomes cannot be predicted. When outcomes cannot be predicted the path between where the garden coordinator is at, and where they want to be,
becomes unclear. This is not to say that the organizers are not up to the task they have set for themselves. Ultimately, to my mind, their story is one of struggle, but it is also one of hope. They, like Alexander is said to have once done, cut through the Gordian knot with decisive action.
I carpooled to the meeting with a food justice advocate. He represented the local branch of a national organization that works towards cultivating land for community purposes. They create and support agricultural programs that donate fresh produce to food banks. We reached the meeting held at a set of government offices in a downtown Phoenix high-rise. We were greeted warmly by a food justice policy advocate employed by an umbrella organization that has worked with the local food justice movements for the last five years. The advocate arranged monthly meetings with the focus of creating new city policy friendly to local food systems. There were about 35 people at the meeting, the majority of whom represented different branches of Phoenix City government. There were also representatives of private businesses, farmers’ markets, Extension Agency, a group of Arizona State University geography students and one garden coordinator for a food justice movement in the study area.

The ASU students presented first. They had created a new GIS-based interactive mapping system that showed how far residents in the greater metro area lived from a grocery store or farmers’ market. It also provided walkability, bicycling and bus route scores that illustrated neighborhoods with less geographical mobility. The system would allow analysts to identify areas that most needed access to healthy shopping alternatives. The next presentation was about hiring a contractor tasked with creating a large food coalition that would unite organizations across the Valley to speaking with one coherent voice. Then a private contractor spoke about creating an inventory of brownfields. His group had a grant and the capacity to clean contaminated fields to agricultural standards and put them into use for community gardens, farmers’ markets or other community purposes. Early estimates were between 1,500 and 2,000 such brownfields existed in the Valley. Finally, the meeting moved to the new city of Phoenix general plan to be voted upon in 2015. It will set the agenda for the City of Phoenix planners over the next 20 years. Two pages of the plan were devoted to city vision and support of the future Phoenix-based, urban agriculture.

This chapter focuses on the third level of the ecology of actors outlined in the theory chapter: local government and other social change organizations related to the food justice movements in the neighborhoods. The research question addressed here is, “What are the outcomes of local food justice movements?” I am taking a different approach then the way this question is usually examined in the sociological outcomes literature. That literature generally focuses upon national scale social movements
influencing policy outcomes (Amenta et al., 2010; Giugni, 1998; Giugni, 2008). My findings focus upon a much smaller scale than the sociological outcomes literature. The city of Phoenix, as well as the state of Arizona, however, are changing policy and governance relating to local, urban agriculture, in part, because of the food justice movements in the study area. The movements are examples of local, grassroots, and bottom up approaches that illustrate how small social movements can have a disproportionally large influence upon the region in which they operate. Further, the grassroots movements have created ‘fertile ground’ for which other Social Movement Organizations (SMOs) that work at regional and national scales. They have started to see the city of Phoenix and the state of Arizona as worthwhile investments of their resources.

Another focus of the social movements outcome literature is the use of protests by social change groups and organizations to draw attention to their cause (McAdam et al., 2005). Essentially, the food justice movements in this study operate very differently than large scale, protest-based social movements. Claire Nettle, (2014) Community Gardening as Social Action: Transforming environmental politics and policy argues that community garden-based social change groups avoid direct confrontation in order to create a message that is agreeable to policymakers and grant foundations. Garden organizer Hayden summed this up to a group of garden organizers in a strategy meeting, “We are not a marching movement, we are an informational movement.” This is an important distinction. The garden organizers in the study area work do not use confrontational or theatrical tactics to promote social change. However, they do provide a vision of an alternative social arrangement. It is based in community participation, communal land, civic agriculture and healthy eating options. That vision is, in and of itself, a compelling
argument for social change that resonates with a large audience and promotes social change. Essentially, the small-scale community garden-based movements in the study area operate differently than the social change movements that make up much of the popular discussion in recent scholarship. However, the differences reflect positively upon the magnitude of the social outcomes that these community groups have upon a city.

When I first began working on the earliest phase of this research project, late 2009, there were only a handful of people and groups talking about Phoenix-based urban agriculture. These included the food justice groups in the study areas I have discussed, though they have expanded considerably since my study began. In the interim, new groups in Maryvale have organized. The Phoenix Permaculture Guild, now known as the Valley Permaculture Alliance (VPA) was active in 2009, and there were also a few students in the Arizona State University, School of Sustainability, most of whom I worked with in various capacities over the next few years. At that time, I wasn’t convinced urban agriculture in this city would be possible. I knew from personal experience that the learning curve for growing food plants in the Valley of the Sun is steep. Only a few books were devoted to gardening in the low desert, most spoke to places that receive more rainfall and have cooler summers. Trying to translate temperate gardening techniques to Phoenix can be an exercise in frustration. I took the Permaculture Design Course from the VPA in 2007. At the conclusion of the course we had to stand in a circle and link hands. There were about 20 of us, and each one spoke briefly about our vision for the future of Phoenix urban agriculture. I do not remember the words I spoke, but I clearly remember thinking, “We are few, we are doomed, and there is no chance for large urban agriculture projects happening here.”
I was wrong. The swell of interest amongst Phoenicians in creating a sustainable urban agriculture within the metro area has been humbling. What is happening now in Phoenix is similar to what Laura Lawson (2005), described in her book, *City Bountiful: A century of community gardening in America* as already happened in other many other US cities during the 1970s and 80s (pp. 205 - 238). A sudden surge in popular interest in community gardens and urban agriculture, due to multiple intertwined influences, invigorated the public, community organizers, organizations and city staff to begin carving out new civic-based agricultural spaces, opening up grant money for local agriculture projects and creating new local small-scale, urban agriculture policy. I think the new and sudden interest in Phoenix has been due, in part, to both the food justice movements and the local Permaculture movement. Over the years, both of these groups have thrown open their gates, one garden tour or garden party at a time, to thousands, perhaps tens of thousands of Phoenicians. The public could finally see urban agricultural systems functioning here, in the low desert. They could see the fresh produce, were given local fruits and vegetables by family, friends and neighbors, and could buy local produce at farmers’ markets. Between those local influences and a growing national interest in urban, local and alternative agricultures, Phoenicians may have been primed for a rapid shift in perception about the desirability and possibility of ‘eating fresh and locally grown food.’ The growth of these new local food systems, as well as the policy, and initiatives that have been put into place over the duration of my project has offered an unparalleled research opportunity. To draw a metaphor: the formation of urban agriculture over the last 5 years, for a food justice researcher such as myself, might be similar to that of an astronomer witnessing and recording the formation of a new galaxy.
The chapter is organized, like the proceeding chapter, by starting at the center and then spiraling outwards to examine political events and processes happening at scales larger than the neighborhoods. First, the chapter starts in the communities themselves to briefly discuss the physical and social outcomes the food justice groups have achieved there. Second, the garden organizers have created a web of social relationships, collaborations and political alliances with other local social movements and organizations. I compare and contrast two of those, one that has struggled and another that has been very successful. The collaboration that has struggled seems, on the surface, to be an excellent partner for the food justice movements and I analyze why the collaboration, to date, has not worked well. The other collaboration is among food justice practitioners and a Phoenix-based umbrella organization that resulted in the change of local zoning policy surrounding community gardens and small farmers markets. Third, I discuss a new, large and well-funded coalition of organizations forming at the time of this writing. This coalition has the potential to either propel the community food justice movements forward or to coopt the local food justice movement message while offering little or no aide for the community-based social movements. Fourth, I examine a policy issue facing the food justice movements as well as the future of local, urban agriculture in Phoenix, and, I expect, many cities across the US. The food justice movement has hidden allies working on this particular policy issue. Some of the allies have made significant inroads in creating friendly conditions that have swung Phoenix policy and institutions into the food justice movement’s favor. Finally, I briefly discuss two national level social change organizations that are attempting to create sweeping change in Arizona food policy.
Modern Phoenix-based urban agriculture is still new and small enough that food justice advocates, urban agriculture policy workers and organizations that provided the data presented here might be recognizable to other insiders. Many of the interviewees in this study were candid and honest about the political tensions and setbacks they have observed or are actively working to overcome. Also, for these professionals, some of what was disclosed to me is based upon their livelihood and reputation. The political alliances discussed herein are sometimes tenuous at best, and these interviewees have gone to great lengths to keep them going. As such, there are times I had to choose to remain deliberately vague about details to keep confidentiality intact or choose to exclude the data entirely.

**Neighborhood Outcomes**

To ignore neighborhood outcomes as an important part of the larger social outcomes, alliances, policy work and so forth would be to miss a crucial element of food justice movements. The resident gardeners have begun to lay down a social foundation upon which local, urban, food systems are not an aberration but rather normal daily reality and a way of life. While the citywide social outcomes resulting from these movements may be a natural outgrowth of the organizers’ work, to the garden organizers, the community itself is always the focus. They have garden parties inviting people from outside the community, in part, so they can generate community interest in the gardens. They write grants to support their gardens and some of that money goes into the community. It is impossible to skip over the neighborhood outcomes and still remain faithful to the spirit and intention of the social movements operating in the study area.
There are competing thoughts on the efficacy of community gardens on which some small local food movements, such as those here in Phoenix, are based. Mark Winne, (2008) in his book *Closing the Food Gap* states, “having witnessed many sincere but ultimately failed attempts to transform dirt, water, and seed into food, I tend to look somewhat askance at those who suggest that more of us, if not all of us, and especially the poor, should ‘grow their own’” (p. 55). Certainly, community gardening is not a panacea, for there are a host of challenges that residents and garden organizers face as outlined in previous chapters. In the end, community gardens will not feed the masses, nor can community gardens and associated farmers’ markets be expected to meet the needs of all of the poor and socially excluded. Few residents are as lucky as Kip, who told me: “Fruits and vegetables we can get pretty good. There is a [big community] garden now, and people are growing in their backyards, they bring it over to here to the garden and you know… transfer food back and forth like that.” While Kip is pointing out progress (and it would be hard to argue that any progress towards increasing food security and healthy eating options in these neighborhoods is a bad thing), there is still a lot of room for improvement if these communities are to become as food secure and have similar access to healthy eating options as wealthier neighborhoods. However, as Winne observes, this misses the point. Winne quotes a colleague who aptly stated: “The most important word in *community garden* is not *garden*” (emphasis in original, 2008, p. 62). A *community* garden is a space where residents can come together to form bonds that unify disparate individuals and organizations and create a community based on a common discourse and set of practices. I think this dialog and set of practices is an early step, but critical, in the creation of larger resident driven and local and just food systems.
The groups that are working in Phoenix food deserts are not simply producing food as a product. They are also reinforcing and sharpening a larger dialog around food, and food access that are the natural byproduct of how these groups operate. It is in the how they do what they do every day that begins to make observable changes in the communities’ food system. The home gardens, community gardens and small farmers’ markets are meeting places, in which food quality and access, among other issues, can be reflected upon and spark further dialog. That dialog, to my mind, is essential to the creation of larger, more sophisticated and sustainable, resident driven and local food systems. Those food systems will, of course, have to meet the physical conditions of geography, climate and economy, but perhaps as important, the communities that host them, must have dialogs and strategies in place that both welcome and sustain these systems over time.

It is still early days for Phoenix-based food justice movements. However, the garden organizers, in discussion with residents, are actively planning and implementing their next steps. The garden program in South Mountain has leased a new 5-acre parcel that Hayden is slowly transforming into a resident-driven home and market garden. Residents can rent plots to grow produce that can be used at home or sold at farmers’ markets. Another organizer, Michael, has both community gardens and market gardens. The market gardeners distribute produce through a community-supported agriculture group Michael’s organization has created. Michael’s most successful market gardeners are leasing much larger plots of land, located at the periphery of the city, to become self-sustaining small urban farmers. One of these new urban farmers is growing organic
wheat, grinding it, and his wife is baking bread to be sold to local bakeries and farmers’ markets.

Alberto and Leyla are both working towards increasing productive capacity in their community gardens. Alberto is thinking about using a high-technology approach of hydroponics systems that will be installed next to his community garden so he can demonstrate hydroponics to residents as a way to grow a lot of food in a small space. As discussed in chapter six, *Enter the garden*, Layla is expanding her garden beds and has found gardening allies who are helping her and her resident gardeners build new additions to the garden.

![Figure 7.1 Desierto Verde Community Garden in Maryvale. April 2014, Photo Courtesy of Mary Chow-Thompson.](image)

**Tension Between Movements**

Creating alliances with organizations outside of the study area has been, at times, a substantial challenge. Groups that would seem like natural allies in forging large urban agriculture alliances have not necessarily come together. For me, this was particularly
confusing as I saw more commonalities between some of these groups than differences. But, after watching one attempt after another at a cross-community alliance fall apart I had to step back and ask, “Why are some cross-community alliances difficult to forge?” I wrestled with this question for the duration of my fieldwork and I shall answer this question by giving an example of an alliance that, I once thought, should have worked but failed and left at least one food justice group embittered.

The Valley Permaculture Alliance (VPA) is a local organization that states it has over 7,000 members on their LinkedIn web page. They are a local chapter of the international Permaculture movement that originated during the 1970s in Australia. Ecologist, Bill Mollison, was co-founder of the Permaculture social movement and authored the voluminous *Permaculture: A Designer’s Manual* (1988). He argues that farms and gardens are human created ecosystems that must be cultivated by human use; yet adhere to ecological rules of nature (Mollison, [1988] 2007). The VPA focuses on training new permaculture recruits in the design of residential, desert-adapted, urban foodscapes. The word *design* is used specifically as permaculture principles are based on minimization of human labor through intensive, place-based planning, with high upfront capital costs and low maintenance costs. Co-founder of the permaculture movement and alternative agriculture advocate David Holmgren (2002) describes permaculture this way:

Permaculture designers use careful observation and thoughtful interaction to reduce the need for repetitive manual labor and non-renewable energy and high-technology. Thus, traditional agriculture was labor intensive, industrial agriculture is energy intensive and Permaculture designed systems are information and design intensive. (p. 13)
As a certified Permaculturist myself, it seemed normal to me that the VPA would naturally align itself with the food justice movements. They both desire to create new, local, agricultural spaces in the Phoenician urban desert. Over the duration of the project, I heard many conversations and promises between both members and board members of the VPA stating they would work with food justice movement organizers to help them design their gardens. I was both surprised and mystified to see repeated failures to follow through on these promises. The only exception to those was in one case where members of the VPA were contracted to help with community gardens in the study area, though even that was a highly dubious ‘success.’ A food justice advocate described to me how this situation played in the following extended excerpt that has been heavily edited to remove identifying markers.

I had one experience with the VPA consultant in a community setting…. We had a public school that had expressed interest in starting a community garden. I checked with the staff of the organization that had contracted the VPA consultant, and they said that it was appropriate to bring the consultant in to help with this school project. So, the consultant came to one of our meetings at the school and essentially talked through an interpreter. We looked at the space the school had in mind for the their garden and then the consultant guided the group, which was all Spanish speaking, on a design exercise, in terms of what the garden would look like. But in terms of next steps… I asked the consultant point blank about coming back to subsequent school meetings and they said that was, ‘not their role.’ So, they had a vision of their role that did not involve providing that kind of direct support.
To the food justice advocate, and myself, this behavior was mystifying. But, if we examine what the VPA does, the consultant’s behavior was in keeping with their mission. They educate about urban agriculture design. And, that is what the VPA consultant did. They went to the school and showed the school group how to design their garden. For the consultant, it was natural that school group would take that information and start their project. For the food justice advocate it was natural that the consultant would come back to help organize and build those gardens. In retrospect, what I had failed to do was to examine the basic way that the two groups function. It is the differences between how the two groups operate that makes a collaboration difficult.

In permaculture, garden design is key. The permaculturist wants to build an agricultural system structured in accordance to ecologically based rules that will function in a semi-self-sufficient way that reduces human labor. That sounds great. But, a community garden is, as discussed in chapter six, organized around socialized human maintenance of a garden ecology. Its function is, in part, to gather many disparate people into the same space, preferably at the same time, to work together towards a common goal of producing agricultural products. A community garden or school garden is an ecology founded upon social interaction inside a communal space established to provide food, along with many other social benefits, in return for socialized labor.

The permacultureist wants to absorb the major capital costs of the project upfront. Rarely does a community garden or school garden start with a large budget. Instead of front-loading the capital outlay as a permaculture designer might, the community or school garden has to start small. Garden organizers utilize their social networks within a community to start their projects on land that is inexpensive or free. They may use that
network to also subsidize the cost of water. After the community garden begins to build momentum - social capital might be a better descriptor - they can gain access to greater monetary flows for garden support through fundraising, grant writing or by selling produce. Civic agricultural systems cannot afford to start with high upfront capital costs; instead they must start with low upfront costs and modify their gardens and physical environment slowly and over time as funds and labor become available.

Permaculture focuses on organized classes and books to transfer expert knowledge to people who are dedicated to learning the system. When I took the permaculture design course offered here in Phoenix during 2007, it was eight weekends and cost about $700. Consider for comparison purposes that the entire annual budget for many of the smaller community gardens (excluding water) is often considerably less than that. It would be unreasonable to expect a community gardener, let alone a school gardener, to absorb the cost of a permaculture design course or undertake the time commitment. To augment the Permaculture course, and because of my interest, I invested hundreds of dollars in accumulating a small library of Permaculture books and then read them from beginning to end. That is not how knowledge is transferred in a civic agriculture setting. Civic agriculture replaces “information and design intensive” systems that a permaculturist favors, with socialized human knowledge and experience. Gardening information moves from more experienced gardeners talking informally to less experienced. The community garden knowledge “system” is based on informal and free classes, or referring to an easily available expert. Rarely, in community gardens, are formal classes or books used to transfer knowledge.
The differences do not stop there. Permaculture, as it is practiced in the Valley now, is sited on residential private property. Doing a permaculture tour involves going from one permaculturist’s home to the next. One takes a guided tour of backyards while the guide talks through the sustainable and ecologically based agricultural systems they are cultivating. Place that in contrast to the community gardens that make up the backbone of the food justice movements in Phoenix. The community gardens also host events open to the public on special occasions. But, that is where the similarities end. Community gardens are a shared space among members. The gardens are not a private space; nor are they fully a public space like a public park. Community garden researcher Karen Schmelzkopf eloquently states the difference between community space, and public or private spaces, when she says community gardens, “Transcend the separation between the public and the private: they are part of the public domain and are the sites of many functions conventionally equated with the private sphere” (1995, p. 380). Because community spaces ‘transcend’ the normal categories of how North American's conceptualize space it becomes a struggle for an outsider, and perhaps a permaculturist, to understand how community gardens organize within that space.

An outside observer may have the sense that the two social movements are on the same general side of a social conflict about food systems and agriculture. However, they do not have a unified political agenda and they pursue very different strategies and approaches to food systems change. Although agricultural and ecological systems design, as outlined in chapter six, is no less important to an experienced community garden organizer than it is for a certified permaculturist, the basic philosophy and approach of the two movements, at least in Phoenix, could not be much more different. These
underlying differences may make collaboration difficult. Despite appearing to have similar goals and aspirations for creating new urban agriculture systems, the gulf between the local permaculture and food justice movements in Phoenix, at the time of this writing, may be too wide for them to cross.

**City of Phoenix Policy and Umbrella Organizations**

There are examples of successful collaborations between food justice groups and other entities. The collaboration in this example was sponsored in part by an umbrella organization that is dedicated to improving health in poor communities of the Phoenix metro area. I will call this umbrella organization: Eco-Polis. Eco-Polis works regularly with the food justice movements in the study area. They provide technical support and grant opportunities for the garden programs and were instrumental in starting some of the new garden programs in Maryvale. Eco-Polis has a network of contacts with the City of Phoenix and city employees regularly attend meetings sponsored by Eco-Polis. Some of those meetings focus on creating urban agriculture policy in Phoenix. This policy work is often framed in terms of support for, and expansion of, the food justice food groups in the study area.

Creating a policy framework that supports local food justice movements is a valuable, long-term strategy for increasing food justice movement sustainability. However, in Phoenix, public interest in local food systems is evolving faster than new local food system policy can be implemented. In 2002, Phoenix voters approved the Phoenix general plan that included an Environmental Planning element recommended by city staff and city planners to “develop guidelines that encourage community gardens” (Environmental Planning element, 2002, pp. 268-9). I interviewed a retired city staff
member who had worked on that Environmental Planning element and he explained the
difficulties in creating a new community garden policy from the city’s point of view,
“There really was no follow up from the standpoint of who was going to implement
changes to the zoning ordinance,” in part because: “we don’t have the staff resources to
do anything like that.”

Zoning permits are critical to garden survival because when a community garden
goes through the process of obtaining a zoning permit, it becomes a legitimate use of land
that is recognized by the city government. In effect, zoning acts as, “protection for [the
garden] as it relates to people complaining about the use.” As long as the garden is in
compliance with a zoning permit, its right, to exist and function is protected by the city.

By late 2010, it was clear that developing a comprehensive new community
garden policy was essential for garden organizers to achieve their goal of increasing
healthy eating options in Phoenix food deserts. I attended a series of meetings run by the
food justice organizers and sponsored by Eco-Polis, which provided professional policy
advocates specializing in new policy development. The garden organizers discussed the
challenges they faced and also strategies to move forward. These issues included desert
gardening techniques, ways to increase community participation and finding sources of
funding. However, without a comprehensive city policy surrounding community gardens,
zoning problems took a front seat in these meetings.

Many of the food justice organizers had contacted Phoenix City staff to find out
what was required to meet local zoning codes for community gardens but received few
answers to their questions. City staff was unsure whether to zone the gardens for
residential or agricultural land uses. If zoned residential, the garden would be treated as
private landscaping and required to erect a five-foot block privacy fence. Contractor estimates for city-required fences ranged from $35,000-$60,000 for the larger gardens. Agricultural zoning had its drawbacks, including that the city might require the community gardens to get organic certification even though none of the community gardens used any form of chemical pesticide, herbicide or fertilizer. Garden coordinators were unsure if they could proceed with construction of new community gardens or if they needed to find extra funding for block fences or begin the process of obtaining organic certification. The frustrated garden coordinators reached out to local media to try and compel the city to answer. In response, a representative of the Phoenix city-planning department acknowledged in an *Arizona Republic* newspaper article by Michael Clancy, “‘Our regulations are a mixed bag… We have addressed the [community] gardens in a piecemeal way so far’” (Clancy, Sept. 11, 2010).

With city staff unsure how to proceed and lacking the resources to create a new community gardening policy, the garden organizers aligned themselves with the policy advocates and experts provided by Eco-Polis, which had a large grant specifically designated for policy and environmental change in underprivileged communities. The goal of this group, as described by a food justice policy advocate, was to, “provide some generous, as generous as we could through a negotiated process with [city] planning staff, guidelines that would not only help establish new community gardens but also provide directions to staff and to the zoning hearing officers that were going to be interfacing around the issues.”

The work that took place over the next year and a half involved multiple stages. First, an expert panel of garden organizers from the study area was established. They
provided advice and counsel for the policy workers and advocates: “It was always very important that the actual practitioners of community gardening were shaping the policy because they would be living with the consequences of that policy.” Second, a retired city planner created a draft ordinance that was a compromise between the zoning code and the needs of the food justice organizers. Third, the draft was taken to city staff and that jump-started negotiations between the stakeholders and the city. There were multiple rounds of negotiations that enlarged the circle of interested parties and eventually included a diverse selection of city departments. For example, the fire marshal determined the best way to store gasoline for lawnmowers. Finally, in May of 2012, the Phoenix Planning Commission passed a text amendment defining community gardens in city code and created the city’s first community garden zoning policy. That November a full set of community garden guidelines, created collaboratively with the input of the food justice organizers, was published on the Phoenix planning department website (City of Phoenix Community Garden Policy Guidelines [website], n.d.).

There are a few lessons to be drawn from this successful collaboration. This process allowed, for a brief moment, garden organizers from different neighborhoods in Phoenix to come together and openly discuss the challenges they faced. The collaboration allowed them to vocalize shared frustrations and create a cohesive understanding of issues that most urgently needed attention at that time. Garden organizers are used to building alliances within their neighborhoods. However, to address issues that are larger than those neighborhoods, they had to forge new and higher levels of organizing. Building a cross-community alliance with other organizers, Eco-Polis and the city of
Phoenix was an effective way to address challenges to their gardens that came from outside their individual communities.

When I began this research, I naively thought, “community” meant individuals living in the neighborhoods surrounding the garden. However, I have come to learn that community gardens also exist at the “edges” where multiple communities meet. These communities include, among many others: policy advocates, community organizers, grant-giving foundations, umbrella organizations and city staff. While many of the participants in the process of policy creation may not actually live near, or share in the gardens, they all have a profound influence on the development and long-term success of the gardens. Phoenician garden organizers extended their definition of “community” to include others that existed beyond the tight geographical boundary of their neighborhoods. By working with these more distant communities, as they do with their neighborhood residents, they were able to influence garden policy outcomes in sixth most populated city in the United States.

Collaboration is a powerful way to create a strong and inclusive local food movement across the Phoenix metro area. Identifying the necessary ingredients for creating a successful coalition may be tricky. Social movements that have helped popularize local urban food systems in the Valley of the Sun are complex systems with hidden variables that may not be easily noticed in absence of long-term observation of the movements. Key differences between seemingly similar social movements or organizations may reduce the likelihood of successful collaboration. But the differences between groups, such as the food justice social movements and the city of Phoenix could not be more pronounced. In this case, those differences did not matter. It seems the
difference was that the process of policy creation was mediated by Eco-Polis. The intermediary working between disparate groups, in this case food justice organizers and city of Phoenix employees may have spelled the difference between a successful and unsuccessful collaboration.

Asymmetrical Power and Unintentional Co-optation

This section analyzes coalition building among many disparate organizations with a common goal of increasing local food security using, in part, Phoenix-based urban and peri-urban agriculture. These coalitions may speak about inclusivity with existing actors on the ground, like the food justice movements in the study area, but the reality is sometimes more sophisticated. The coalitions may struggle to get long-term participation of the food justice practitioners. The practitioners may struggle to justify their participation in large coalitions when they face more immediate practical concerns. As Hayden and a garden champion liked to remind me from time to time, “We are here in the trenches. It doesn’t get more real than this!” I would be surprised if the findings presented in this section related to only Phoenix-based small social movements.

At the time of this writing, the umbrella organization, Eco-Polis, has hired a group of out of town consultants who specialize in organizing local food coalitions. These out of town organizers have already set dates for their first meeting based on creating, “a more vibrant and equitable food system.” They have created a call to action for, “creating effective solutions to increasing access and viability of fresh and local foods within the county.” After my dissertation is completed, these out of town professional organizers will host a first meeting for which over 100 representatives of disparate Phoenix-based, urban food systems organizations have already RSVP’d. Groups involved include many
food banks, some operating at the local scale and some operating national scales. Many City of Phoenix staff along with other cities in the Phoenix metro area will attend, as well as non-profit and for profit organizations. Arizona State University’s Food Systems Transformation Initiative has attached their name to the collaboration. There will also be several groups creating urban agriculture projects in Maricopa County, including representatives of at least two of the community food justice groups from the study area.

There are some challenges facing the food justice movements in cooperating with the many, many meetings and groups organizing around creating local, Phoenix-based food initiatives. As one food justice advocate, speaking about a different Phoenix-based food coalition, said:

The folks who are most impacted, and where these [community-based food justice movement] ideas have come from originally aren't included. They aren't at the table and also aren't being represented by anybody really. I get that we're not going to have small growers and community gardeners coming to meetings during the day, and that is part of the process. That process can be changed, the culture could be changed, or we can find a process to represent those folks where they feel like they're included and given credit where credit is due.

There are multiple tensions that the food justice advocate expressed in that statement and that have recurred in my interviews with organizers as well. I believe these tensions have to do, in part, with jumping from the community-scale movements to a broader more complex organizational platform. But, they also have a lot to do with unintentional cooptation of smaller movements and organizations by larger movements and organizations. I use the word unintentional because I believe the larger movements
and organizations simply may not consider the needs of the existing, smaller, food justice
groups when they form a large coalition. These larger groups are considering that there is
an issue, in this case inequitable access to high-quality fruits and vegetables in Phoenix’s
poor and minority communities, and that the issue is gaining attention. They want to get
involved, and they bring a unique and powerful skill set to the table with their
involvement. However, I think, they may not know how to engage with smaller actors
and social movements who are already bringing about substantive changes on the ground.
Hence, cooptation, in this case, is not intentional but may be a byproduct of simply
“scaling up.”

When a new set of groups becomes interested in establishing a local food
coalition/working group/initiative in Phoenix they will often reach out to the existing
food justice movements in the communities in the study area, (at least the ones that they
know of) and ask them to be part of their new effort. That is a logical approach in the
minds of the new group. The garden organizers already have a lot of experience in urban
agriculture and motivating residents to become involved. But, it is in the way they reach
out to the community-based food justice organizers that they often meet their first
obstacle. They run into the digital divide.

Some of the food justice organizers are computer savvy, but others are less so.
The organizers keep in touch with their community either by text, phone call, flyer or
often with direct, face-to-face communication. Not once did I hear a garden organizer
say, “I will send you an email,” to a resident. All the garden organizers have computers,
but some of their equipment is quite old. Although they value the capacity of their
computers for word processing and grant writing, it was equally obvious that the
computer is not the preferred method of communication. I learned over the duration of the project that emailing garden organizers might get a response, but an email followed by a text or phone call the next day would always work. Better still, going to a garden event would yield a warm reception.

Every new urban agriculture coalition that I have seen starts with sending out invitations to their meetings by email or, more recently, new food coalitions in Phoenix have been using sophisticated web applications that focus on creating group collaboration. I was surprised to hear garden organizers and advocates grumbling about these web-applications. One garden organizer, who uses computers all day long, asked in frustration, “what happened to good ol’ group emails? I don’t even want to look at this new format!” A food justice advocate who also uses computers all day said she unsubscribed from a local urban food group because she was confused by the web application. She was not going to be bothered to re-subscribe. Soon after that conversation, a new Phoenix-based urban food collaboration began and used the very same web application. The advocate grumbled to me, “doing things the same old way, but expecting a different result. The same people are always at the same events.” These were comments from advocates and organizers who use computer systems every day, whom I consider to be computer savvy and also have high-quality computer systems. Other garden organizers simply told me they hadn’t received email invitations to the meetings scheduled by some of the new food coalitions. However, I know they were on the list to get the invitation and I confirmed with the coalition organizers that the invitations had been sent to them. In some cases, after I described the meeting agenda to
them, the garden organizer would become interested and ask me to text the details to them.

These forming coalitions may not realize that while they are excited and interested in becoming involved in urban agriculture and food justice work, the garden organizers have seen many, many similar groups forming, and more than a few of those have fizzled. The new group may see the meeting as a short time commitment of an hour and half every couple weeks, or perhaps, once a month. Although that might be literally true, let's examine the 'short time commitment' from a garden organizer’s perspective.

Garden organizers lead busy lives. Most have other jobs and are trying to keep the boat afloat financially. They have personal lives; they have obligations outside of their organizing capacity. As garden organizers and food justice advocates pointed out to me, you can tell a lot about both who is organizing a meeting and the target audience of the meeting simply by looking at the time it is scheduled. If it is scheduled during normal working hours, 8am to 5pm, Monday through Friday, the meeting has likely been scheduled by a professional who can take time during the workweek to organize and run a meeting. More, you can discern whom the target audience the meeting is intended for. It is aimed at other professionals who can leave their place of employment for some time and have dependable transportation available to travel to a meeting. They are also likely to be reimbursed for travel related expenses.

The organizers of a meeting set during the normal workweek are very likely paid to organize the meeting as part of their professional duties. Many of the attendees of a meeting set during the normal working hours will also be professionals who are paid to be at a meeting as part of their professional capacity. The meeting, then, is hosted by
professionals and is likely to be attended mostly by professionals. Food justice organizers, on the other hand, rarely have a budget to pay themselves for attending a meeting during regular working hours. In general it costs the food justice organizers money to attend the same meeting. The organizers are, in effect, asked to overcome economic and geographical inconvenience so they can act as unpaid expert advisers to non-expert professionals who are paid to host, listen and talk at meetings. This contorted system of meetings and scheduling may be, in part, the result of the North American system of capitalist workweek flows. But, it may also contribute to asymmetrical power relations between a professionalized crowd and active food justice practitioners who are invited to ‘participate’ in an ongoing justice-oriented discussion about food systems. As a food justice advocate summed it up:

My main critique of all of these meetings is that [they are mostly attended by] people who have a lot of educational [and] class privilege in the positions that they have now. Myself included. Getting paid for this work. Talking about poor people's lives [without any] interest in changing that structure. It's hard because I [also] have the idealized, ‘Oh, there are all of these food movements and community organizations that are already organized and just ready to be asked to be included.’ (My emphasis)

The garden organizers have to maintain a balance between the work they are doing in their neighborhoods and scaling up to larger levels. Scaling up, in this case, means involvement at larger levels than the community itself. That means a commitment of time, money and resources that the organizer may struggle to obtain. While the simple answer to scaling up might seem to be attending all food justice related meetings and
continuously volunteer their expertise to new groups around the Valley, the reality is more complex. At some point the organizer needs to ask a pertinent question, “what is in it for my community and for me?” As one garden organizer said when I asked if she would be attending a local food systems coalition meeting, “How helpful would it be for me to go? There is a lot of talk, but I don’t know how to make it work with different ideals and messages. The idea is good in theory. It’s helpful to know that somewhere a coalition is working... I just hope they are not cannibalizing all the available garden resources...” These difficult and real world negotiations between maintaining and improving what has been achieved within the neighborhoods and trying to scale up to levels beyond the neighborhoods, forces the garden organizers to constantly evaluate potential allies and coalitions.

Because of how these large coalitions operate, they may unintentionally coopt small social movements that do not have sufficient staffing, high quality computer systems, offices, reimbursement for travel, or representatives that are paid to attend a daytime meeting. Like the example of an unsuccessful collaboration between the Valley Permaculture Alliance consultant and the food justice advocate, the issue here revolves around how the different groups operate. On the surface, food justice practitioners and a professionally organized urban food systems coalition seems like a natural fit. But, reality on the ground is more complex and there are hidden variables that influence the success or failure of such collaboration. Despite this, the garden coordinators who can afford to, and have some available time, do go to the most critical meetings. Perhaps, if the large coalitions become more aware of the needs of the smaller but critical food justice practitioners, they can begin to develop more inclusive communication strategies.
Perhaps, if the garden organizers can develop a budget for staff and transportation their schedules will become more flexible and travel will not be an out of pocket cost.

**School Gardens, Food Code and Hidden Allies**

This section examines a complex set of policy issues that limit the potential growth of all the small-scale urban agriculture projects in Phoenix. The outcomes of this next section directly affect the food justice organizer’s ability to scale up and also the organizers who wish to support their programs through sale of produce they cultivate. Here we move from food justice organizers into a realm where educated professionals try to mitigate risk and make sophisticated decisions about complex problems with few simple solutions. Food justice goals, such as increasing available nutritious food to vulnerable populations, are weighed against other health-related outcomes. This section also uncovers a ‘hidden ally’ of the food justice organizers. The work that the interviewee did made significant inroads to understanding the complex nature of this policy issue and carving out a workable solution.

Over the past couple of decades, there has been a growing interest in increasing the quality of food available in school cafeterias. Food justice advocates, along with many other groups, have been vocal in their support of increasing local, fresh foods in school cafeterias and some of the oldest programs in Los Angeles date back to late 1990s (Gottlieb & Joshi, 2010, pp. 171-6). In 2012, Arizona hired its first farm to school specialist, who was tasked with increasing the amount of locally grown food used in Arizona public schools (Sailor, 2012, Oct. 10). I interviewed a food policy expert who worked closely with local farmers, ranchers and public school gardens. She stated, “I would love to have locally grown, small growers and community gardeners selling what
they're growing in a school cafeteria. What better way to get the healthiest produce right into the school? It also helps the local economy!”

Some public schools in the Phoenix metro area have gardens already. School gardens have been described for decades as a way to engage children in teaching chemistry, biology, ecology and other physical sciences through horticulture. It is not a big leap to start thinking about combining the output of school gardens, small, local farms and community gardens, in school cafeterias. As the policy expert explained, “Kids have been able to consume what they were growing in [school] gardens in the classroom, to do taste tests and take food home if they wanted to.” The reason kids can perform taste tests is because the parent knows of the school garden, and that their child will be eating some limited produce grown in the school garden. From the schools perspective the parent has implicitly given permission for the child to produce from the garden. Schools with gardens can also organize student run farmers’ markets. Parents can purchase school grown produce and take it home. In those cases the parents take responsibility and have full knowledge of where the produce has come from. However, as the expert explained, “it's the next step of letting [produce cultivated in the school garden] go into the school cafeteria” that is problematic.

The issue here is guaranteeing food safety. Food grown in the schoolyard is one thing. The public school cafeteria cannot assume the parents have given consent for their children to eat foods produced in the school garden. Rather, the school cafeteria can only use food from “approved sources” that had been certified by Arizona Department of Health Services as having met “food code.” The policy expert explained that food code applies to any farmer, non-local or local, large or small, “once [they want] to get into a
restaurant or cafeteria that is certified by the Department of Health Services as a safe place for a citizen to go buy food it has to meet the food code.” At the time of the interview, there was a lot of confusion about the process that small urban farmers, community gardens or school gardens would need to go through to become an approved source that could supply restaurants, grocery stores and school cafeterias. The food policy expert felt that school cafeterias were an excellent place to start ironing out how locally grown food could be certified as an approved source. As the policy expert explained, “when you think about it, it's food going to be consumed by children. So, they are more adversely affected if there is an issue with the food because of their smaller body.” Because of this, the rules and certification process for school gardens to supply a cafeteria must be at least as rigorous as certification to sell to restaurants or grocery stores.

The list of institutions involved in the process of creating a set of guidelines and certification for Arizona school gardens to supply cafeterias was impressively long. The interviewee worked regularly with Arizona’s farm to school specialist along with the Arizona Department of Agriculture, Department of Health Services, Department of Education, the school districts interested in increasing local food in their cafeterias, and the school districts insurance adjusters. The policy expert explained that each department and entity involved with this process had its own set of objections and questions that had to be met. She reported, “health services saying, ‘it's not an approved source.’ Department of Agriculture saying, ‘we don't certify stuff because we don't know what an approved source is.’ The school insurance people saying, ‘this is what we want to see.’”

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Creating guidelines and a certification process for school gardens to supply the school cafeteria that both policy makers and insurance adjusters will accept and food safety experts will put their signature on is a daunting task, in part, because there are significant gaps in understanding where risk might exist in small, local food systems. For the Arizona Department of Health, deciding whether school gardens could use their vegetables in the cafeteria, those gaps in understanding become significant. Simple agricultural processes such as composting organic waste to build soil, a basic tenant of alternative agriculture, become a point of contention for the agencies involved in this process. From the agency’s perspective, composting presents a source of risk. As outlined in the previous chapter, composting is the process of bacterial and fungal decay of organic matter. Is it possible to guarantee that the bacteria and funguses in compost used on a school garden will not contaminate the food harvested from the garden that is used in the cafeteria? The simple answer to that question is no. Because of that, composting must be done off-site from where school cafeteria food is being grown and rules regarding school-prepared compost are rigorous (Pastor, Schimke, & Eckles, 2013; Arizona Department of Health Services Guidelines for School Gardens, n.d.). As the policy expert explained,

I work within the system to get them to understand that maybe kids can be trained on the proper way to measure the temperature of a compost pile and make sure it's healthy and can be used on the produce. That the produce is not going to take up microbes through the root system of the tomato and cause problems… I can sit there all day long saying, ‘Can't use the compost? That's ridiculous! Can't use harvested rainwater? That's ridiculous!’ But… then you start pulling in the
research. There are a couple researchers right now looking at harvested rainwater in tanks. Is that water safe to use for the produce? Or, is the produce taking up whatever microbes are in the water? You have to look at the research and show that to regulators. They have certain rules that are called laws! And, they have to abide by them. So, you have to work within the system.

The process for certificating a school garden to provide clean food to the school cafeteria is demanding but the speed at which the process was created and the willingness of the various departments involved to find workable solutions for these complex issues has been impressive. As the policy expert explained, “A year ago [2012] this wasn't even on the table that schools could have their produce in the school cafeteria. I feel like we are heading in the right direction, and we are going to keep working on it.” This policy work also provides precedent in Arizona for what other small, local, growers may need to do in order to gain certification for their gardens by the Arizona Department of Health Services to meet food code and become an approved source.

At the time of this writing a small, a local grower does not have to meet regulatory standards to sell their produce to a, “local citizen, or a farmers’ market because none of those have to be an approved source.” For them to sell to restaurants, grocery stores or institutions such as a school district they must meet the food code to be certified as an approved source. From the perspective of a small, local grower, an institutional contract with a school district could be a dream come true. A large institution like a school district could contract the purchase of an entire crop. This means the local grower would not have to try to market their produce; they would have a guaranteed buyer at the end of the season. The grower would only have to worry about making sure the crop
came in, which can be plenty to think about, without the added stress of finding a way to sell their crop. This would mean a lot to a small grower, or community garden program interested in selling their extra produce. The policy expert explained, “I know these smaller growers, they are the one man shop. They are doing the digging, growing, marketing, watering and investigating what is the next new plant to grow!”

As the food justice movements scale up, they run into situations where no clear regulatory precedent exists. But, in order from them to proceed and work “within the system” there must be a clear set of rules to which all parties can agree. The justice groups do not always have the organizational capacity to overcome these situations without external aid. They are focused on the “digging” and “growing” and recruiting gardeners and all the complexity that comes with a coupled human natural system dependent upon communal labor and land. In this case, the only way forward was having someone on “the inside” that believed in the promise of small, urban agriculture systems. This ‘hidden ally’ was able to navigate the labyrinth of institutions and rules and the institutions involved were also helped to explore new horizons relating to creation of a new local, urban food supply.

Social Media, Marching Movements and Disconnect with the Local

In this final section I briefly discuss two national social change organizations (SMOs) that are attempting to create sweeping change in Arizona food policy. Both of these national SMOs have local subsidiaries in Arizona and in Phoenix. They are both using sophisticated technological mechanisms to spread a powerfully worded message of political change. Manuel Castells (2013) described technologically savvy SMOs as, “[subverting] the practice of communication as usual by occupying the medium and
creating the message. They overcome the powerlessness of their solitary despair by networking their desire” (p. 9). Indeed. The national SMOs working in Phoenix at this moment have occupied the medium of social media. They have also crafted a message that reaches a broad group of Phoenicians and Arizonians, unifying many disparate actors in a common desire to see change in the state’s foodscape and potentially alter the US foodscape as well.

In January 2015, six Arizona Representatives, Juan Mendez, Ken Clark, Victoria Steele, Richard Andrade, Diego Espinoza & Rosanna Gabaldon introduced HB 2462: a bill that would label all genetically modified foods sold in Arizona (Arizona State Legislature HB 2462 [website], n.d.). The bill, if passed, would radically alter how GMOs are handled in the state and also has national implications. Maine and Connecticut have already signed GMO labeling laws for their states, but those labeling laws are conditional. The condition is that for them to enforce labeling they need a “broad base of support.” Maine and Connecticut will not enforce GMO labeling until a coalition of other states also sign a similar bill into law (Wilson, 2014, January 10). Arizona’s GMO labeling law HB 2462, if signed, potentially has the ability to shift the balance of power towards states creating their own labeling laws and then, by default, bringing Maine and Connecticut on board as well.

The national SMO GMOFreeUSA and local affiliate GMOFreeArizona immediately lauded the introduction of Arizona bill HB 2462 on social media. The social media campaign supporting HB 2462, only one month after its launch has almost 7,000 Facebook “likes” and 12,000 Facebook “shares” (Breaking News Arizona Introduces GMO Labeling Bill [Facebook], 2015, January 16). GMOFreeUSA website’s slogan at
The time of this writing is “Food Transparency. Food Justice.” They state that their mission is to, “seek to change our broken food system and polluted agricultural system through… uncompromising advocacy and activism” and they have “been actively involved in creating awareness for state and local ballot initiatives and legislative efforts to label GMOs and limit GMO crop cultivation” (Our Impact [website], n.d.). As such, their mission is to cultivate public awareness and support for bills such as Arizona HB 2462.

The second national SMO working in Phoenix on food activism is March Against Monsanto (MAM). MAM is a ‘marching movement’ that schedules yearly organized protests focusing around issues with agricultural giant Monsanto, “On May 23, 2015, activists around the world will, once again, unite to March Against Monsanto.” They advocate for, “buying organic and boycotting Monsanto owned companies that use GMOs in their products” (March Against Monsanto [website], n.d.). MAM is organizing a May 23rd 2015 rally/protest at a farmers’ market in the city of Tempe. They are notifying people using social media, both Facebook and Twitter, across a network of some 38,000 people and, as of this writing, and almost 4,000 have agreed to attend the May protest (March Against Monsanto TEMPE [Facebook], n.d.). The introduction of HB 2462 was followed immediately by a social media campaign to cultivate popular support for the bill and simultaneously, with that another social media campaign for the “March on Monsanto—Tempe,” which takes a boots-on-the-ground approach of coordinated, high visibility protest.

It is hard, when examining the tactics and effectiveness of the national SMOs, to not admire the strategy, planning and coordination. The slick technological savvy
combined with the professionally written messages and high quality photographs of angry, marching Americans can stir a visceral response. Castells, (2013) described SMOs messages aptly as, “contagion in a world networked by the wireless Internet and marked by fast, viral diffusion of images and ideas” (p. 2). Indeed. In the weeks since HB 2462 was publically announced these national SMOs have created a small avalanche of popular support from Phoenicians that is equal to anything the small social movements in the study area have been able to generate over the last decade!

The national SMOs are highly efficient. But, I am going to argue that they do fundamentally different work, and speak to a largely different audience, than the food justice groups in the study area. The national SMOs appeal revolves around allowing consumer choice between genetically modified and unmodified foods. The food justice groups have no real consumer choice given their financial position. It is not simply a matter of choosing to eat nutritious food or junk food. They cannot afford, in many cases, the vehicle needed to get to a grocery store stocked with nutritious food. If they can get to the store they often cannot always afford the healthy choice even if it on the shelf next to an unhealthy, but less expensive, choice.

The national SMOs exist outside any context of the local, or place. They dwell in cyberspace and social media, such as Twitter and Facebook. They using social media to push their message to a broad audience with strongly worded political messages and a decisive plan of action. They really don't have any presence anywhere, or perhaps, their presence is everywhere? But, they do not have tight allegiance with the places in which they are working. Rather, they are pushing for legislative action, in part for Arizonans, but also in part for a national fight against industrial agriculture and GMOs. They have a
top-down approach, where there is little discussion with the general population they claim to represent about the kind of change that population would like to see. These SMOs have come with an answer in hand. Although there is nothing intrinsically wrong with that approach, it differs completely from the local movements. The local movements are grounded in place. They are intimately linked with the history as well as the contemporary physical and social environment of the area. They use, almost exclusively, personal communication, be that face-to-face or phone-to-phone. The local groups are organized by representatives grounded in the neighborhoods and who are developing food systems within the context of community need and are contingent upon community desire. The representatives are in constant dialog with neighborhoods and they are forging social bonds with local organizations and institutions, using local resources and taking a bottom up approach.

Conclusion

The justice movements in the study area exist within a swirling milieu, or perhaps maelstrom, of disparate organizations, institutions, policy advocates, hidden allies, forming coalitions, and national SMOs that operate outside of their communities. Choosing parties with whom to form an alliance requires the organizer asking the question, “Will an alliance provide something for the food justice movement?” There is no simple answer that question because it is based on incomplete information. There is always the chance that even if the organization outside of the community seems, on the surface, to be aligned with the food justice movement, there still may be basic but substantive differences. When paired with groups that, on the surface, seem similar, basic methodological differences in how these groups approach local food systems has
negatively affected their ability to work together. Similarly the organizer must discern if
their movement and the outside group is working with similar populations or issues. It is
all too easy for an outsider to ‘lump’ movements and groups together under the rubric of
‘alternative agriculture’ and make an assumption that they should ‘join forces’ based on
that broad categorization.

The food justice movements have demonstrated their ability to create social
mechanisms within their neighborhoods that increase some residents’ access to locally
grown and fresh foods. However, scaling up and creating alliances across communities
has not been as straightforward. There have been successes and failures. However, when
the food justice movements worked together in a cross-community collaboration, using a
mediated process with an umbrella organization that supported the garden organizers
vision, they were able, as a group, to have substantial impact upon urban agriculture
policy.

Groups like national SMOs have been the focus of much influential social
movement scholarship, but it would be a mistake to assume that small, local movements
do not use equally, or perhaps more, sophisticated strategies. A lot of the small social
movement strategies are subtle and so well integrated into the movement that they may
become difficult to observe. As outlined in chapter six, Enter the Garden, much of these
strategies were focused upon creating a free or low cost garden space and gathering the
resources: water, tools, seeds, soil, constructing garden beds and toolsheds needed to
maintain the garden. Another set of strategies was needed to teach a population of
residents how to maintain the complex coupled human and natural ecosystem of a garden,
particularly in the face of environmental challenges such as insect pests and summer heat.
Yet another set of strategies was needed to gather residents and volunteers into the garden space and create a core group of gardeners and garden champions.

While these community garden-based movements are not based in protest, such as other movements, this is not necessarily a weakness. If we look at their strategy, it is based in creating and maintaining, to the extent possible, respectful and mutually beneficial relationships with a broad array of other social actors, such as government employees, and other organizations and institutions. The garden spaces are completely dependent upon those relationships. Unlike some SMOs that exist mostly in offices and cyberspace, the garden groups exist on the ground, and most of the ground they are on is given to them because of the vision the small movements create of a better future grounded in communal spaces and resident participation. That vision can be a powerful message for social change. Witness the involvement of the umbrella organization Eco-Polis taking an active role in helping the garden organizers work with the city of Phoenix to create zoning rules. Witness the ‘hidden ally’ who worked with the school garden to cafeteria guidelines and certification process, helping to create a new set of policy that facilitates the food justice-based farm to school approach happening both locally and at national levels. Her policy work with school gardens has set a precedent for small scale, locally grown foods to meet “food code” and be certified as an “approved source” for cafeterias to purchase and use. As this policy expert explained the situation, there was no amount of public support and organizing that could change school cafeteria policy. They can only purchase from an approved source. However, by working “in the system,” issues of food safety and risk in relation to small growers could be addressed and new section of food code appropriate for small growers created. Then, as long as the small growers went
through the process to gain appropriate certification, they could become a “legitimate source” for local, school cafeterias, restaurants and grocery stores. The results of that collaboration between professionals working in large institutions created a social outcome that would support local food justice activism and furthers the vision created and popularized, in part, by the food justice movements.

Cross community alliance and coalition building has another, perhaps more perilous, potential cost for organizers then a simple failure to work as a group. Often the food justice organizer’s knowledge and expertise is requested by groups that do not acknowledge, or perhaps realize, the financial burdens and time constraints that the organizers contend with. In effect, organizers are often asked to act as unpaid consultants to start-up urban agriculture organizations. The irony is that the same meeting the garden organizer has to pay to attend—for transportation and time lost—is likely hosted and attended mostly by professionals who are paid to be there. This creates an asymmetrical power relationship between professional organizations, institutions and garden organizers. For the hosts of the meeting, it costs them little, the time it takes to write an email, to invite the garden organizer. If the garden organizer attends, the host can take credit for having bonafide food justice practitioners at their meetings. Other meeting attendees can state that they have gained expertise about the local food system, and the inequalities in the system, from on-the-ground practitioners. If the garden organizer does not attend it may be assumed the organizer is not ‘genuinely interested’ in changing food system outcomes.

There is a second asymmetry in power between these new urban agriculture coalitions and the food justice movements. Some of these coalitions are crafting
messages very similar to that of the food justice movements. If the new groups do have a substantial impact upon Phoenix-based urban agriculture, and some of these groups certainly have the resources to do so, they may, unintentionally, coopt the food justice movement as it exists now. The food justice movements are using bottom-up approaches to creating equitable food systems in minority communities. To that end, the justice groups have created a language and dialog of inequality in the Phoenix food system that frames their work, articulates a vision of the future and creates a call to action. It is not at all clear whether the new coalitions using a similar language and framing will also take a similar, bottom-up, approach to creating equitable food systems in disadvantaged communities. It is just as likely these new coalitions will favor a top-down, bureaucratic approach to creating local, urban agriculture, infrastructure, policy and projects. Many of the representatives of various organizations are, as a food justice advocate described, “people who have a lot of educational [and] class privilege… [and are getting] paid for this work.” It would seem in character for these new coalitions to take a top-down approach that may, in the end, create new inequalities in the developing local food system in Phoenix similar to the “local trap” (Brown & Purcell, 2005; Purcell & Born, 2006) discussed in the theory chapter.

It may be that the best option that can be hoped for is that a bottom-up approach used by food justice practitioners and a top-down approach used by coalitions of professionals might meet somewhere in the middle. In one respect, the sudden growth of popular, organizational and institutional interest in creating local food systems over the last five years may have been, perhaps, too fast. There has not been time to take a ‘reflexive approach,’ to increasing equality within the food system. There was not time to
work out in advance basic policy issues such as food safety certification, zoning or water for local agriculture projects. These new local food systems have not been planned. They are being developed ‘on the fly.’ There will be mistakes. However, the food justice practitioners and other social movements, organizations and institutions interested in creating local food systems have managed to stay one-step ahead. When creating something new, from scratch, without a plan, that is not bad.
CHAPTER 8

AT THE GARDEN’S GREEN EDGE

When I decided to study local, urban agricultural systems I had assumed, rather naively, that there would be little academic interest in the topic. Rather, I found a newly developing discourse moving at a whirlwind pace with monthly publication of journal articles in multiple disciplines and a wide proliferation of scholarly and popular books on the topic of urban systems. Despite that, a lot of the material I read focused on the physical and policy components of urban agriculture. I found many fewer examinations of the social systems enveloping existing local food systems. It is one thing to design policy and physical infrastructure and to talk about the environmental and health benefits of local urban agriculture, but it is quite another to integrate those into existing social systems on the ground. Urban agriculture is not a new idea; Ebenezer Howard’s influential work *Garden Cities of To-morrow* (1902), was published more than a century ago. He fantasized in loving detail about future cities based on urban agriculture at a time when Phoenician promoters still described Phoenix as a “Garden City.” We can talk about and design physical ‘solutions,’ but if the existing social framework is not accommodating, then we have wasted time and resources. If we are serious about urban agriculture, we need to study the social dynamics of existing urban agriculture systems. Further, if we want to get urban agriculture ‘right’ then we need to be sure that everyone has fair access to these food systems. This study starts to fill some of the gaps that I felt existed in scholarship about local, urban food systems.

Many of the topics I covered in this overview of justice-based and local food systems and movements contribute to food-related scholarly discussions. For example,
residents’ struggles with price and geographical distance to healthy and desirable fruits and vegetables are well documented by geographers, as well as health and nutrition specialists and other scholarly disciplines. It was reassuring that many of my findings were corroborated by other studies across the US. However, I also found enough surprises in my data that I was not ‘reinventing the wheel.’ For example, residents cultivating and maintaining food procurement social networks, maintaining a grading system for local food sources and mental maps of food resources are not topics I have seen in food-related literatures. In this concluding chapter, I take many of the disparate elements of my analytical chapters and weave them together to create a holistic image of where I think justice movements are going in the future and to discuss in broad terms the challenges they will have to navigate. As stated in chapter three, *Navigating the Gardens*, the beating heart of this work is based in pragmatism. It does no good to make that claim without examining some pragmatic approaches to issues facing the local food justice movements that were discussed in the analytical chapters.

**Utopian or Justice-Based**

In chapter two, *Gardens of Justice*, I outlined the development of the alternative agriculture movement starting in the US during the 1960s and traced it to the present. New Social Movement theorists of the 1990s and early 2000s described the alternative agriculture movement as a classless social movement. However, that theoretical model for the alternative agriculture-based social movement was problematic. First, consumption of certified organic food is associated with social class, that is, a relatively affluent and white middle class. Second, NSM theorists did not foresee a local trap; that is, many alternative agriculture advocates uncritically describe local food production as
the best (and perhaps only) way to sidestep the conventional food system. Third, NSM theory did not describe social justice issues that are now observed in the alternative agriculture movement, such as who has access to and who profits from, alternative agriculture. However, there has been an intellectual shift away from the NSM theory in the description of alternative agriculture. The new scholarly dialogue pertaining to alternative agriculture revolves around class, privilege and race.

Although the scholarly discourse may have largely shifted theoretical frames in the last decade, Phoenix is rapidly investing in local food systems based largely on an uncritical perspective of the alternative agriculture movement paradigm. In chapter seven, *And Then There Were Many*, I discussed a social movement based in alternative agriculture, the Valley Permaculture Alliance, and several national Social Movement Organizations (SMOs) in Arizona that promote Genetically Modified Organism (GMO) labeling. I also outlined several coalitions forming in the Phoenix metropolitan area with the intent to create local food systems based on alternative agriculture. Inspired by the larger alternative agriculture movement, some Phoenicians have become enamored with local and alternative agriculture.

To some extent, creating local food systems is a populist rejection of the conventional food system. However, local food proponents accept a utopian idealism. Alternative agriculture creates a narrative based around small, decentralized production sites. This narrative rejects technological innovation on the farm; it would replace labor saving devices with a combination of long-term planning and ecological savvy. Rather than limiting food production to the hinterlands, agriculture is integrated into the city. Suburbanites replace lawns with gardens and small livestock. Urban rooftops and vacant
lots become gardens and chicken coops. The normative distinctions between rural, suburban and urban begin to break down as food production is integrated into all three landscapes (Marris, 2011).

In contrast to industrial agriculture, alternative agriculture places people, not technology and/or mechanization, front and center in its creation of local food systems. This vision requires many people to participate in the new agricultural system. It requires urbanites, suburbanites and rural dwellers to assume some small responsibility for food production. Labor minimization comes through intensive planning around place, with high upfront capital costs and low maintenance costs, and these costs are spread ‘thinly’ across the population at large.

In this utopian ideal, we find a democratic vision of food and agricultural production. Expertise becomes the domain of the individual and the agricultural tradition and culture in which that individual resides. For the urbanite, consumption becomes as simple as going to the roof of her high-rise apartment or walking down the street to the farmers’ market and produce stands. For the suburbanite, their front and backyards are lush with gardens. An overabundance of a particular crop can be quickly traded away with the neighbors for something else. Supermarkets and corner markets still exist, but instead of being packed with processed and packaged foods, the isles are filled with whole grains, fresh fruits and vegetables and ethically raised meats. It is truly a beautiful vision.

Phoenicians watch the news, read books and are involved with social media as are residents of any other contemporary US city. Some are aware of the corporatization of the food system, vast profits, government subsidies and mistreated farm laborers. Some
know of the environmental and health concerns about conventionally-grown food, the energy costs of shipping thousands of miles, and losses due to spoilage. Some Phoenicians (a vocal minority) are generally aware of the major issues, and they are also aware of the narrative crafted by the alternative agriculture movement. Given the ongoing negative discourse about conventional agriculture and the compelling story of an alternative and urban agriculture, it is easy to see how they have become excited about local, urban agriculture. Locally grown and processed food seems like a logical solution. Know your farmer and vote for a better world with your fork. As a result, these Phoenicians have high expectations for local food systems.

In chapter six, *Enter the Garden*, I outline the real world struggles that garden coordinators and gardeners experience when they start to cultivate their food. Creating and maintaining a garden sounds simple enough. However, food gardening is nothing like maintaining a lawn and shrubs that might need care every couple of weeks. Food gardening requires the development of a broad base of knowledge about garden ecology and a suite of skills for the successful manipulation of that ecology. In addition, for anything beyond backyard gardening, it requires the development of a social network of organizations that support a gardening program, as well as a network of gardeners. These two networks are vital for scaling up any garden program from a personal hobby to a community activity. Although alternative agriculture creates a compelling narrative, bringing the vision into reality can be challenging. Essentially, as described in *Enter the Garden*, the amount of time and effort required to do the work, for most people, is going to require a dramatic lifestyle change. I am not saying it is impossible. Obviously, the communities in my study area are building local agriculture systems. And, cultures
around the world have maintained gardens for millennia. I am saying that within the context of the existing culture of a US city, there is nothing simple or easy about creating local, urban agriculture systems. Approaching urban agriculture as if it were simple or easy (based on a utopian ideal) will only lead to a series of bitter disappointments.

To some extent, we may need to abandon the idea that a perfect, utopian food system can exist. However, we can begin to create a food system that does not reinforce existing social inequalities. Working from the assumption that no utopian solution exists, food justice practitioners, advocates and researchers are deliberating who is affected by agricultural policies, and how agricultural production and consumption might affect different groups. For example, when considering localization of a food production system, a justice-based strategy would, “address the ways in which racial notions of purity and privilege helped to usher in both our spatial and dietary inequalities” (DuPuis, Harrison & Goodman, 2011, p. 299). In this scenario, the local becomes only a “possible strategy and not an intrinsic solution to the problems of the global food system” (DuPuis, Harrison and Goodman, 2011, p. 298; see Brown and Purcell, 2005).

**Past, Present and Future**

Karl Marx once wrote, “History repeats itself, first as tragedy, then as farce.” Although I take a less ironic view, Marx’s comment is relevant to this work. Historically, racist policies, politics and class warfare, at the local level and larger scales, have crushed minority-operated urban and peri-urban, local food systems in Phoenix. That did not happen once, but repeatedly for over half a century. After World War II, economies of scale drove out small, independent Chinese grocery stores as regional and national supermarkets penetrated the Phoenix market. The natural question that has to be asked is:
can local, minority-operated, food systems survive, or will they face another cycle of racist policy or capitalist expansion, increasing economies of scale and market penetration?

It is unlikely that explicitly racist policies enacted in the past will be repeated in the future. However, we cannot simply call racism dead. The fifth chapter, *Life in a Food Desert*, is essentially an essay about contemporary minority populations who do not have access to the resources (healthy food) they need to live a healthy life. This is a classic case of distributional injustice (Schlosberg, 2007). In addition, in chapter seven, *And Then There Were Many*, I examine how the garden organizers are requested to sacrifice their time and expertise (without compensation) to paid professionals and the asymmetrical power relationships this creates. That is recognition injustice or a lack of basic respect for those who are identified as cultural outsiders (Schlosberg, 2007, p. 16). In this case, the dominant culture is that of professionals, who are neither aware of nor have educated themselves about the needs of the garden organizers. As outlined in chapter six, *Enter the Garden*, the food justice movements are educating residents about gardening and exercise, what healthy food is and how to prepare it. These movements are working directly with capabilities justice. That is, they are encouraging a skill set among minority populations that increases their capability of cultivating and maintaining physical health. As part of developing capability justice for residents, the food justice movements are building recognition justice (by recognizing residents’ needs) as well as practicing distributional justice (by increasing resident’s access to healthy food).

In an unjust food system and an area largely populated by minorities, the food justice movements are clearly working to establish a more socially-just food system for a
vulnerable population. Although explicitly racist policy may be a thing of the past, we cannot assume that systematic racism (giving advantages to some and disadvantages to others) has ended. I rarely heard interviewees mention race or instances of racism (perhaps because I am white), but every element of what these social movements do, every day, is to empower minority populations in the face of systemic racism and its ruthless effects on minority health and wellbeing.

The local food justice movements described in this study cannot build a just food system for all unaided, in part because they work at local scales and in part because of the challenges they face in scaling up. The difference between scholarship and practical, grounded reality is substantial. The scholar may ask herself, what substantive change should be made? However, the activist and the practitioner must ask the more realistic question, what substantive change can I make? If we hope to have universal access to a healthy, affordable and environmentally beneficial food system, then working at the local scale, as seen in this study, can only be part of a larger suite of approaches to creating that system. On the other hand, the approach the food justice movements are taking—that is, garden organizers working with a resident population from the bottom up—is an effective way to begin to create local and just food systems. Placing social justice concerns on an equal footing with creating new, local agricultural systems, as the movements of this study shows, has created new socially just and local food systems.

Approaches to Movement Sustainability

I will outline some issues that must be engaged in order to continue the expansion of the food justice movements in my study area. Although bottom-up approaches have many advantages, such as utilizing local resources and talent, they have the distinct
disadvantage of being ‘ignorable’ by actors working at larger scales. There are a couple of strategies that may make these movements more difficult to dismiss.

Some of these social movements are trying to become self-sufficient through sales of excess produce. Their informal farmers’ markets are the clearest example of this. However, as mentioned in chapter two, *Gardens of Justice*, the social movements have a major obstacle. The garden programs are all nonprofit 501(c)3. They cannot, as an entrepreneur or farmer might, grow produce and resell it for personal profit. All these garden programs exist because they can operate as nonprofits, but they have entered into a ‘Faustian bargain.’ They cannot start new gardens without nonprofit status, but the garden and gardeners cannot achieve financial independence with nonprofit status. The food justice movement in South Mountain, particularly, is struggling with this odd duality. As described in chapter six, *Enter the Garden*, the garden organizers would like the movement to become an “economic engine” within the community. However, this becomes problematic because they are caught in a system where they cannot pay more than a small wage to a worker or make a profit from their enterprise.

This odd situation is not specific to my study area. Milwaukee-based food justice group *Growing Power* claims that they have 200 varieties of crops growing on some 300 acres of urban and peri-urban land in the cities of Milwaukee and Chicago (*Growing Power Home [website], n.d.*). *Growing Power* is also a 501(c)3 not-for-profit organization (Goodman, 2011). *Growing Power* can generate revenue from, “grants, fee-for-service programs, product sales and contributions” but, “[all] revenue that exceeds the organization’s costs are reinvested into the activities of the organization, rather than used for personal gain” (Eatmon, Piso & Schmitt, 2013, p. 211). Despite the capacity to sell
produce and pay a small wage to employees, garden organizer of *Growing Power*, Will Allan, describes both his group and other food justice groups working in cities around Milwaukee, as struggling to make ends meet. “The honest truth is that with urban agriculture… [we] have not yet made it reliably profitable” (Allen, 2012, p. 226). Although urban and peri-urban agriculture may in the past have been a way to make a living (see chapter four, *Double Exposure*), in the contemporary US city, urban agriculture is still an experimental and an alternative livelihood. Food justice groups are experimenting with social practices and agricultural models to make urban agriculture practical, but they also, by necessity, must explore other economic models (Allen, 2012). A not-for-profit has the advantage that the organizations can take donations, host volunteer hours and apply for grants while maintaining a tax-free status. That removes many of the financial burdens associated with for-profit enterprises. But, at the time of this writing, scaling up the size of an operation through the generation of revenue is not an avenue available to food justice movements.

A second and perhaps more fruitful approach to movement sustainability may be cross-community alliances. In chapter six, *Enter the Garden*, I reported that only one of the movements in my study area had a professional garden organizer and staff member dedicated to increasing and maintaining existing minority-operated, local food systems. Although garden organizers may be dedicated to their self-assigned tasks, the reality is they must also maintain a livelihood. Simultaneously, well-funded coalitions are forming now in the city of Phoenix focused on the creation of local, urban and peri-urban agriculture. In addition, these local coalitions (along with national SMOs now working in the Valley of the Sun) are describing their work in terms of social justice, implying that a
just food system is a local food system (see chapter seven, And Then There Were Many).
The food justice movements struggle to have a voice amidst these new groups. The irony is, at the time of this writing, minority-operated, local food systems have become examples of what Phoenix city planners, policymakers and local food coalitions are describing as the future of the city. The new coalitions recognize that social justice can be a persuasive argument for systematic change and have begun to incorporate a food justice-based language, even if they have shown little interest in aiding the existing food justice groups.

Unintentional cooptation of local food justice groups may pose the greatest threat to their future. Alternative and local agriculture coalitions may make the misguided assumption that because they are rejecting the conventional food system, they are advocating for a socially just food system. Simultaneously, they may do little to increase distribution, recognition or capabilities justice among groups with reduced access to healthy food.

In the past the food justice groups have done well working through an intermediary, Eco-City, to create comprehensive new policy relating to community gardens. This may have been in part because the garden organizers can speak from experience of working with communities that are recognized food deserts by the USDA and other groups (see chapter three, Navigating the Gardens). The garden organizers have credibility, political legitimacy, and can make a moral argument for systematic change. Coalition building among food justice groups may be their best hope for moving toward growth and sustainability. However, expecting them to build such a coalition at this time would be to put an undue burden upon them. Rather, it could be the role of an
NGO to help organize a coalition of food justice groups. This would allow garden organizers to scale up and have a voice among local food coalitions and movements. A coalition-building NGO could, for example, create and maintain websites, Facebook updates, help locate and apply for grants, allocate money for garden projects, and so forth. Garden organizers who received help with these tasks could focus more fully on their garden programs. Further, instead of expecting garden organizers to attend an endless parade of meetings around town, a single (paid) representative or liaison could speak for the coalition. Coalition building could easily make the difference between existing food justice movements’ continued successes or slowly fading into irrelevancy as an affluent, white and professional crowd come to dominate Phoenix-based (or any US city) urban agriculture systems.

Because of their initial starting position as bottom-up approaches to remedy systemic problems in the US food system, the contemporary food justice movements may not be in a similar position as the historical minority-operated food systems described in the chapter four, Double Exposure. But, they are still vulnerable. It is doubtful they will be swept away by a hail of overtly racist policy, and historically, minority-operated food systems were able to survive racist policy more or less intact. What they could not survive was pressure from capitalist expansion. Contemporary, food justice groups creating local, minority-operated food systems have not yet reached the stage where they can compete economically with the conventional food system. But, they have an additional pressure of unintentional cooptation by alterative food-based coalitions comprised of highly educated and paid professionals. The nature of the bottom-up strategy used by these food justice groups: nonprofit status, tiny budgets, and little or no
staff means that community-scale food justice movements may be condemned to remain small, local movements. However, coalition building among food justice movements may prove a valuable strategy for long-term movement growth and sustainability.

**Ecology of Actors and Food Justice Movements**

Scale is an important component of this study. Issues of scale including local traps and scalar fixes and localism were foundational to the scholarly critique of the alternative food movement as outlined in chapter two, *Gardens of Justice*. These same topics emerged organically out of the data set in chapter seven, *And then There Were Many*. The ecology of actors was the framework for this study. It has been used to analyze at least six justice-based social movements in cities around the world (Evans, 2002). The ecology of actors’ framework I used in this study went a long way toward helping me make sense of the system I examined. The conceptual scales provided by the ecology of actors made me treat each actor in the system as an individual component to be examined on its own terms. By holistically examining the actors enmeshed in these food justice movements, I gained clarity about the actors and how their social roles differed, but were simultaneously dependent on the other actors in the movement.

As a generalized, theoretical model of justice-based social movements in the city, the ecology of actors had many advantages. However, early in the study I was deeply invested in the conceptual scales. The framework guided whom I interviewed, what questions I asked and how I organized the data chapter by chapter. Eventually I noticed that I had missed some of the important details of the system. Several of the abstractions made by the ecology of the actors’ framework—communities, NGOs, and city government—did not conform to what I was finding on the ground. For example, when a
garden coordinator pointed out the role of “garden champion” (see chapter six, Enter the Garden) I realized I had interpreted the ecology of actors’ framework too literally. The garden champions could switch roles between resident and garden coordinator (taking on responsibility normally assumed by the NGO) depending upon what the circumstances warranted. These individuals wandered freely between the conceptual scales. In retrospect, if I had been aware of this, I would have created another set of questions specifically for garden champions. Unfortunately, I only pieced this together late in the study and had completed almost all of my interviews.

There is a second element where the ecology of actors did not conform well to my case study. The ecology has only a single actor placement for the NGO that sits between community and city government (see Figure 2.1). However, in Phoenix there were dozens of NGOs, institutions, organizations and social movements all working in some capacity with local agriculture, or supporting in some capacity the food justice movements in the study area. As outlined in previous chapters, the food justice movements maintain a thick web of social relationships with other groups, some of which are forged into collaborations and alliances, and some of which will eventually unravel. However, while the NGO is a single conceptual scale, it is also part of a larger suite of other groups that support or sometimes undermine the food justice movements.

This rigid adherence to the ecology of actors may have also created artificial tensions in the analysis and writing that did not match people’s lived experiences. For example, bounding analyses of interviewee groups by scale (resident, garden organizer and food justice advocate) revealed limitations of the conceptual scales. When SMOs and coalitions organized by actors outside the city of Phoenix became active on the local food
scene I was unsure whether I should include them in the study or if I should ignore them because they were regional or national level actors. In the end, the story of non-local actors was more compelling than a strict adherence to the conceptual scales outlined in the ecology of actors.

I went to great lengths (outlined in chapter three, *Navigating the Gardens*) to gather and interpret the data sets as closely to the spirit of the local food justice movements as possible. When I realized the conceptual scales in the ecology of actors did not always accurately describe what I empirically observed, I began to move beyond the scales and generate ad hoc descriptions of why the ecology of actors did not conform to the social milieu of Phoenix and continuously refined the ecology to more closely describe what I was observing. In retrospect, conceptual scales are only a starting point and early guide to be used for mapping and categorization of reality and what is happening on the ground. The researcher must be ready to modify or abandon them entirely as the study progresses.

In chapter two, *Gardens of Justice*, I outlined briefly ideas for inventing novel ways to categorize and explain social and physical ordering of space (Marston, Jones & Woodward, 2005). I chose not to take that approach in part because my research questions were ultimately about the day-to-day reality of food justice movements in a US city. Creating novel orderings and categorizations of space and sociality might have detracted from the purpose of this work. My intent with the study was not to work at the contemporary boundaries of geography, but rather to give a grounded description and analysis of small food justice movements in a major US city. Scale was only one part of the larger narrative. I did not hesitate to rework and augment the conceptual scales of the
ecology of actors. I added more complexity so I could model the sophisticated interactions and multitude of groups working in around these neighborhoods as in *Figure 8.1*.

*Figure 8.1. Revised Ecology of Actors.*
Suggestions for Future Research

In this dissertation I broadly answered my research questions. The work also opens up more room for new questions. I did not zoom down to study the fine details and interconnected parts of this system. For example, I did not study how residents create ride shares to grocery stores. Are there an average number of drivers in a carless person’s network, or are there an average number of participants in a social network devoted to food procurement? Similarly, community organizers have a large number of contacts with other groups who support their gardens in some manner. Are gardens with more outside support more successful than a garden with fewer connections? I think these questions also may particularly lend themselves to using social network analysis. Mapping the social networks of a food justice movement may find some very interesting relationships between actors across scales and identify pathways of information exchange that could increase understanding of how these movements work.

When I think about local food justice movements and examine them in all their different and multiple contexts, I am humbled by their sophistication. They are communities devastated by historical racist policy and systemic racism. They maintain dynamic ecosystems, fraught with scientific complexity and dependent upon social relationships at multiple scales. I have used the phrase a “thick web” of social relations. However, a web is two-dimensional. These movements exist in a multi-dimensional social network interacting across multiple scales. There is no neat or simple way to describe these “systems” once they have been unpacked. There is too much detail and too many variables to keep in mind at any one time. Answering questions about these systems is going to require a higher order of analysis. Elinor Ostrom, (2009) recommends
a “carefully crafted case study” for analyzing, “complex action situations and their linkages” (p. 35). I believe I have provided such a case study. I also believe that the next step in answering questions about food justice movements, and likely other social justice movements, requires complex analysis. Ostrom (2007) states, “We should stop striving for simple answers to complex problems” (p. 15181). The social and physical systems outlined in this case study are, to my mind, complex. If we are to begin to describe them more accurately we should think about modeling them as complex adaptive systems (Miller & Page, 2009).

**Wider Impact**

The wider impact of this work will be a publication intended to reach a broad audience. Two of the communities have independently requested I aid them in the organization and creation of a best-practices manual discussing how to design local food initiatives that are appropriate for their neighborhoods. Wide dissemination of the strategies, techniques, and data uncovered in this study may prove valuable to other underserved and minority, urban communities that are combating food injustice in their neighborhoods. By examining how these local Phoenix-based food justice groups navigate issues such as governance barriers, community perceptions and mobilization of community members, I will share strategies drawn from the disparate organizations that coordinate local food justice movements. Documenting empirical evidence of food-based inequalities and the difficulties facing food justice movements can create leverage points for persuading policy makers to enact structural changes and in funding applications for support for these movements. If I have done my work well, this project should help to
stimulate the ongoing national dialogue about local food systems and food justice in new and insightful ways.


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APPENDIX A

INTERVIEW QUESTIONS
Combined resident interview questions. Probes were used (if needed) to expand upon the overarching question. Some questions were omitted depending if the resident is an active community gardener or not.

<table>
<thead>
<tr>
<th>Question #1: How would you describe the quality of food available within your community?</th>
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<tbody>
<tr>
<td>Probe #1: What kinds of food do you find the easiest to get within your community?</td>
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<tr>
<td>Probe #2: Do you like the quality of foods available within your community?</td>
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<tr>
<th>Question #2: How difficult is it to get nutritious food in your community?</th>
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<tbody>
<tr>
<td>Probe #1: Do you find the foods easily available here in the community to be of the quality you want?</td>
</tr>
<tr>
<td>Probe #2: Do you have to travel outside your community to get foods that you feel are healthier or of better quality?</td>
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<tr>
<th>Question #3: How did you first hear of (insert name of relevant gardening program here) and what encouraged you to participate?</th>
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<tr>
<td>Probe #1: What aspects of (insert name of relevant gardening program here) do you enjoy the most?</td>
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<tr>
<td>Probe #2: To what extent do you think that the community garden helps you meet your nutritional needs?</td>
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<tr>
<th>Question #4: When someone asks you about (insert name of relevant gardening program here) how do you describe it?</th>
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</thead>
<tbody>
<tr>
<td>Probe #1: How would you describe the service that (insert name of relevant gardening program here) offers to your community?</td>
</tr>
<tr>
<td>Probe #2: How do you describe the garden organizers?</td>
</tr>
</tbody>
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<tr>
<th>Question #5: What are the biggest barriers that you would face in participating in a community gardening program or shopping at a farmers’ market?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probe #1: What could be done to reduce those barriers?</td>
</tr>
<tr>
<td>Probe #2: Do you think that gardening would be an effective way to increase the quantity of fresh food in your diet?</td>
</tr>
</tbody>
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<tr>
<th>Question #6: How does (insert name of relevant gardening program here) encourage participation in their community gardens?</th>
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<tbody>
<tr>
<td>Probe #1: How does (insert name of relevant gardening program here) keep in touch with you?</td>
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<tr>
<td>Question #5: If you were to imagine your ideal community garden or farmers’ market being placed in your community what would it look like?</td>
</tr>
<tr>
<td>Probe #1: To what extent do you think that a community garden or farmers’ market could help you meet your nutritional needs?</td>
</tr>
<tr>
<td>Probe #2: If you had a few words of wisdom for (insert name of relevant gardening program here) what would they be?</td>
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</table>

Combined Question Set For Community Organizers. Probes were used (if needed) to expand upon the overarching question. Questions were divided up over three interviews.

<table>
<thead>
<tr>
<th>Question #1: How do you describe the history of your organization?</th>
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<tbody>
<tr>
<td>Probe #1: What would you describe as your original mission within the community?</td>
</tr>
<tr>
<td>Question #2: What was the inspiration behind starting your community garden program?</td>
</tr>
<tr>
<td>Probe #1: How did you come to the decision to do community gardens over some other kind community oriented program?</td>
</tr>
<tr>
<td>Probe #2: Did you have any experience with other community gardening programs before starting your own program?</td>
</tr>
<tr>
<td>Question #3: What was the original response of the community when you started your gardening program?</td>
</tr>
<tr>
<td>Probe #1: How has the response of the community changed over time?</td>
</tr>
<tr>
<td>Question #4: How do you introduce your community garden program to someone new?</td>
</tr>
<tr>
<td>Probe #1: How do you describe the program to a local community member?</td>
</tr>
<tr>
<td>Probe #2: How do you describe the program to a potential sponsor or news agency?</td>
</tr>
<tr>
<td>Question #5: What would you describe as the most important features of your community garden program?</td>
</tr>
<tr>
<td>Probe #1: What features of the community garden program are you most proud of?</td>
</tr>
<tr>
<td>Probe #2: What aspects of the program do you find yourself concentrating upon the most?</td>
</tr>
<tr>
<td>Question #6: How do you prioritize which strategic goals need immediate attention and which goals can be set-aside for the future?</td>
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<tr>
<td>Probe #1: What are the next few short-term objectives for your gardening program that need the most attention?</td>
</tr>
<tr>
<td>Probe #2: What are some of the long-term goals for your gardening program that you have placed on the back burner for now?</td>
</tr>
<tr>
<td>Question #7: What kind of input or information do you consider when choosing which goals need attention?</td>
</tr>
<tr>
<td>Probe #1: To what extent do you consider what you hear from other gardening programs when choosing your goals?</td>
</tr>
<tr>
<td>Probe #2: To what extent do you consider feedback from active gardeners in your program when choosing your goals?</td>
</tr>
<tr>
<td>Question #8: How do you determine which partnerships with other groups, if any, will benefit your program?</td>
</tr>
<tr>
<td>Probe #1: What partnerships have you made with other groups to strengthen your gardening program?</td>
</tr>
<tr>
<td>Probe #2: Have the partnerships you have made in the past benefited your gardening program?</td>
</tr>
<tr>
<td>Question #9: What are your biggest challenges or barriers you face with the city?</td>
</tr>
<tr>
<td>Probe #1: What city departments have you had to coordinate or work with the most?</td>
</tr>
<tr>
<td>Probe #2: Have you developed close relationships with particular city employees or departments?</td>
</tr>
<tr>
<td>Question #10: How have you overcome some of these challenges posed by the city?</td>
</tr>
<tr>
<td>Probe #1: What kind of strategies do you use when you’re working with the city?</td>
</tr>
<tr>
<td>Probe #2: When you are asked for advice in working with the city by another gardening group what words would you share with them?</td>
</tr>
<tr>
<td>Question #11: What other regulatory groups do you have to coordinate with besides the city of Phoenix?</td>
</tr>
<tr>
<td>Probe #1: Do you use a particular strategy when working with these other regulatory groups?</td>
</tr>
<tr>
<td>Question #12: What private institutions, such as water and electricity, do you work with</td>
</tr>
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when creating or maintaining a garden?

| Probe #1: What challenges do you face when working with private institutions?  
| Probe #2: Do you have a particular strategy when working with private institutions?  

**Question #13:** How do you build a strong partnership between your gardening program and the community?

| Probe #1: What have been the best partnership building techniques with the community that you have found so far?  
| Probe #2: If you were starting your program over in another community how would you begin trying to build partnerships within the new community?  

**Question #14:** How do you learn what your community’s vision is for the gardening program?

| Probe #1: What is the most efficient way to gather input from your community?  
| Probe #2: What is the most effective way for community members to communicate with you?  

**Question #15:** How do you communicate your vision of the gardening program to the community?

| Probe #1: What has been the most efficient way for you to communicate your vision of the gardening program to the community so far?  
| Probe #2: How would you recommend another gardening program communicate its vision of its program to its community?  

Question Set For Food Justice Advocates and Phoenix Urban Agriculture Experts.

Probes were used (if needed) to expand upon the overarching question.

| Question #1: How do you describe policy relating to urban agriculture or community gardening in Phoenix, AZ?  
| Probe #1: What issues relating to urban agriculture or community gardening have you been involved with or been informed of?  

**Question #2:** How does the work you do influence policy surrounding urban agriculture or community gardens in Phoenix, AZ

| Probe #1: In your perspective, what issues most urgently need to be addressed relating to community gardening or urban agriculture?  

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<tr>
<th>Question #3: Has (insert name of relevant local food movement/s here) influenced how (insert policy issue here) is created or modified in Phoenix?</th>
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<tbody>
<tr>
<td>Probe #1: What would be the best way to describe (insert name of relevant food movement/s here) influence upon your work?</td>
</tr>
<tr>
<td>Question #4: Has (insert name of relevant food movement/s here) provided you with information or a new prospective relevant to your work?</td>
</tr>
<tr>
<td>Question #5: To your mind, how would collaboration between community gardening program coordinators and policy makers look.</td>
</tr>
<tr>
<td>Probe #1: How do you imagine such collaboration being achieved?</td>
</tr>
</tbody>
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APPENDIX B

MAPS OF THE STUDY AREA
Map of South Mountain study area provided to resident interviewees.

Map of the interview area:
Between 32nd Street to the east and 7th Street to the west. Salt River to the north and Baseline to the south.
Map of Central City South study area provided to resident interviewees.

Map of the interview area:
Between I17 to the east and 7th Avenue to the west.
Grant Street to the north and I17 to the south.
Map of Maryvale study area provided to resident interviewees.