

Community Gardens in Knoxville: Insight into Challenges Facing Community Garden Initiatives

By

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Abstract

The benefits associated with community gardening have been vastly documented and can be witnessed within the context of community garden movements that have sprouted up across the United States. However, despite the recognition of community gardens as valuable neighborhood resources, community gardens continue to face several challenges which threaten their sustainability and initiation efforts. These challenges vary based on local context and concern issues of leadership, maintenance, and other threats to garden permanence. To convey the benefits of community gardens within the local context of the Knoxville community and identify the obstacles that threaten their success, this thesis draws from fieldwork exploring community garden initiatives in Knoxville, Tennessee. Furthermore, the author engages literature and local Knoxville policy to argue that the role of Knoxville's community gardens as valuable community spaces makes them worthy of preservation, proposing the creation of a non-profit organization to bolster local community gardens and the social networks engendered by them.

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Background

Introduction

Community gardens are multi-faceted in their construction, serving as spaces in which issues of the social, economic, and political intersect. Such community gardens are able to provide a wide array of benefits to garden participants, addressing issues of health, food justice, and community development. Despite these advantages, many gardens lack permanence and face a number of threats to their initiation and sustainability. Regarding initiation efforts, struggles such as an inability to gather public interest along with difficulties in obtaining funding and other resources that would contribute to a community garden's success are prominent. Additionally, loss of interest by the public and forfeiture of lands used for gardening to private owners or public agencies who wish to repurpose the land for alternative uses are factors that strongly influence the maintenance of community gardens (Lawson 2005). It is also possible for community garden initiatives to be jeopardized by internal discord surrounding issues of leadership, the generation of project goals, and the implementation of strategies to successfully realize those goals while keeping the best interests of garden patrons in mind (von Hassell 2002). It is important to note that the challenges presented to local community gardens vary based on local political, social, and economic contexts. Therefore, to understand the challenges faced by Knoxville community gardening initiatives, these initiatives must be explored within the context of Knoxville's own community gardening scene.

Although the need for permanence among community gardens may be debated, it seems that many community gardens face the threat of collapse before they can fully serve their intended purposes (Lawson 2005). A lack of needed community garden initiatives or the failure

of such initiatives has the potential to inhibit the receipt of valuable benefits by several members within a community. However, if one can identify the challenges which inhibit the success of community garden initiatives and propose potential solutions, it may be possible to help restore the various advantages that community gardens have to offer.

Due to the complexity of community gardens, a multi-faceted and comprehensive review of Knoxville's community gardens and their respective histories is largely beyond the scope of this thesis. However, this thesis will provide an overview of a number of Knoxville's community gardens with respect to the benefits they provide and the purposes that they serve while exploring the challenges that are faced in the initiation and maintenance of such gardens. The first chapter of this thesis defines community gardens within the regional context of the Knoxville community and delivers background information on the modern community gardening movement, distinguishing the modern community garden movement from historic urban gardening movements in order to help establish an ideological framework for Knoxville's community gardens. Chapter 2 outlines the methods that were used in the gathering of information for this thesis.

Chapter 3 examines the benefits of and purposes served by community gardens, placing a focus on the most common community garden intentions that emerged throughout the course of the author's fieldwork. This chapter incorporates a review of community garden literature, tying in the missions of Knoxville community gardens and the perspectives of local community garden organizers. Chapter 4 explores the challenges related to the initiation and continued maintenance of Knoxville's community gardens, examining the infrastructure of local gardens as well as local government policies that impact gardens with respect to their organization. The fifth and final section concludes with suggestions for actions that may be taken by Knoxville community

members and policy makers to help start and sustain various community garden initiatives throughout the Knoxville area.

A Community Garden Defined

A community garden can generally be defined as a piece of land gardened by a group (community) of people that uses either individual or shared plots on privately or publicly owned land. Additionally, community gardens can take on a variety of forms and may even fall into more specific categories such as neighborhood gardens, residential gardens, institutional gardens, and demonstration gardens (Lawson 2005, University of California Marin Master Gardeners 2014). Such a definition for community gardens, however, is incredibly broad. For the purpose of this thesis, the author will incorporate the definition of a community garden as described by the City of Knoxville's Office of Sustainability.

The Office of Sustainability (2015:6) defines a community garden as “an area of land managed and maintained by a nonprofit or group of individuals to grow and harvest food or non-food crops for personal or group use, consumption, or donations”. Knoxville's community gardens function as features of the community and, unlike market gardens, do not profit financially from the sale of produce. Though community gardens growing decorative plants strictly for beautification purposes can be beneficial, the focus for this thesis is placed on community gardens in which food crops are also produced, as these gardens tend to fall under the umbrella of urban agriculture and may offer gardeners additional benefits that accompany food production and access.

History

Bassett (1981) traces the history of community gardening within the United States back to the late 19th century, dividing the history of urban gardening into “movements”. Many of these community gardening movements took hold in times of social and economic stress and were the result of actions taken by a number of social reformers. Throughout the course of these movements, community gardens have met various needs for communities, serving a wide array of purposes such as providing poor relief, increasing food supplies, beautifying urban landscapes and promoting values of self-reliance (Bassett 1981; von Hassell 2002; Lawson 2005).

The modern community garden movement began in the 1970s with yet another resurgence of urban gardening throughout U.S. cities. In contrast with previous community gardening movements in the United States, von Hassell (2002) explains that a profound change occurred in community gardens during the 1970s, noting a shift away from the initiation of community gardens by various levels of governments and institutions. While many community gardens retained several of the motivations that prompted urban gardening movements in the past, unlike their antecedents, community gardens initiated under the modern community gardening movement have resulted largely from the efforts of local grassroots initiatives (von Hassell 2005; von Hassell 2002; Lawson 2005). In addition, several of the gardens that have emerged within the context of the modern community garden movement are driven by motivations that reflect the ideologies of community revitalization and environmentalism which emerged in the 1960s and 1970s (von Hassell 2002). While a comprehensive history of the community gardening movement within Knoxville is beyond the scope of this thesis, it is important to recognize Knoxville’s existence within the context of the modern community gardening movement. Development and maintenance of Knoxville’s community gardens has

been taking place since at least 1978 when the Knoxville-Knox County Community Action Committee began working with local groups to implement community gardens (City of Knoxville's Office of Sustainability 2015: 3-4), reflecting the roots of Knoxville's community gardening movement in the modern community gardening movement.

Methods

To better understand the challenges facing the initiation and maintenance of community gardens in Knoxville, the author conducted qualitative interviews with seven organizers and supporters of local community gardens to gain greater insight into the challenges and successes of these efforts. Participants interviewed held associations with Beardsley Community Farm, Pond Gap Elementary's community school garden, Parkridge Community Garden, the Birdhouse Garden, the Williams Creek community garden, and the Knox County Community Action Committee's Green Thumb Community Garden Program, a program which currently supports the efforts of about 20 community gardens throughout the Knoxville area (Adam Caraco, personal communication, July 9, 2015). Though not all of Knoxville's community gardens were represented and a small range of interviews may limit the scope of this thesis in certain respects, the interviewees' heavy involvements with the organization of their respective community gardening initiatives provided great insight into the challenges and infrastructures of their respective gardens. Apart from conducting interviews with community garden organizers in Knoxville, the author carried out a review of community gardening literature to investigate the intersection of community gardens with social, political, and economic issues. Municipal policy affecting community gardens was also examined to gain further insight into the effect of local policy on the security of Knoxville's community gardens.

Benefits Provided and Purposes Served by Community Gardens

The merits of community gardens have been widely documented and span across a spectrum of physical, social, cultural, economic, and political issues. Although community gardens afford an extensive variety of advantages and serve several different purposes within their respective communities, it should be noted that individual community gardens may place emphasis on certain benefits and functions over others. This section will provide an overview of the purposes served and benefits afforded by community gardens while providing further insight into the missions of Knoxville community gardens.

Health Benefits

Community gardens have the potential to benefit participants with respect to physical, psychological, and social health. Kaplan and Kaplan (2005) attribute many of these health gains to the place focus of community gardens (289). Anthropological definitions regarding sense of place refer to the connections people form with a physical location, which are produced by living within it (Barlett 2005: 9). Recognition of place within the context of community gardens is important when considering the positive impacts on health that transpire as a result of reconnection with the natural world for such connections are generated within the context of urbanized environments. The beneficial construction of place connections by gardeners that occurs within community gardens found throughout cities often exists in opposition to the estrangement of urban society from nature that takes place within built urban environments (Barlett 2005). Such urban environments are found within the settings of cities that embody a form of “placelessness” through the adoption of notions of modernity which emphasize “technology, rationality, and control over nature as a means to development and personal success” (Barlett 2005:5).

In terms of physical health, community gardeners may receive health benefits which are largely associated with exercise provided by the physical activity of gardening (Armstrong 2000) and improved nutrition due to increased produce intake (Alaimo, et al. 2008; Blair, et al. 1991). Additionally, those who engage in community gardening may reap the psychological benefits and therapeutic effects of gardening that are linked to the natural settings of gardens (Nishii 2011; Stuart 2005). Community gardening also aids in the generation of positive social connections that improve social well-being and strengthen ties within communities (Armstrong 2000; Patel 1991; Stuart 2005).

The perceived function of community gardens as places of healing and physical restoration is incorporated into the perspectives of Knoxville community garden organizers. Elias Attea, organizer of the Pond Gap Elementary School community garden, notes the use of the garden as a “therapeutic space” where children can reconnect with nature and engage in the sensory experiences associated with gardening to learn about things such as self-control and personal health (personal communication, June 29, 2015). Additionally, Adam Caraco, community garden manager of the Green Thumb program focuses on the benefits of exercise and the act of physically engaging with the natural environment, stating “I try not to get people too attached to the results because gardening is...cool even if you don’t get a bunch of vegetables out of it...It’s like something that teaches you patience. It’s good exercise; it’s good to be in the sun.” (personal communication, July 10, 2015).

Food Justice, Production and Access

Community gardens that produce food crops can often be categorized as a form of “urban agriculture”, a term that refers to the cultivation of food crops along with the performance of other agricultural activities within city limits (Five Borough Farm 2015, von Hassell 2002: 31).

Due to their production of food, community gardens intersect with issues of social and environmental justice and are often incorporated into local food initiatives in order to address issues of food justice through the promotion of food security (Alkon and Agyeman 2011; Flachs 2010; Von Hassell 2002). According to the organization Just Food (2015), food justice is defined as “communities exercising their right to grow, sell, and eat healthy food [that is] fresh, nutritious, affordable, culturally-appropriate, and grown locally with care for the well-being of the land, workers, and animals.” Meanwhile, food security is defined by the USDA as “access by all people at all times to enough food for an active, healthy life” (Bartfeld et al. 2006).

Brown and Getz (2011) argue that food insecurity within communities is largely the result of unequal power relations and access to resources produced through material and social processes. Within this framework, low-income communities and communities of color are the most likely to be affected by food insecurity. This is largely because such communities are more likely to be denied access to means of food production and distribution. Low-income communities are also likely to be affected by unequal food access resulting from patterns of capital flight and devaluation that occur when supermarkets and other businesses choose not to invest resources in low-income neighborhoods in favor of establishing themselves in suburban areas that are deemed more economically favorable (McClintock 2011; Flachs 2010). In turn, such unequal social processes affecting access to food production and distribution generate food insecurity through the creation of food deserts which are characterized by a lack of access to nutritious and affordable foods (Alkon and Agyeman 2011; Flachs 2010).

In Knoxville, many community gardens place emphasis on the cultivation of food crops in order to address local issues of food security within low-income communities and Knoxville’s 20 food deserts which have been identified by the USDA (Knoxville-Knox County Food Policy

Council 2015). Knoxville's Beardsley Community Farm was originally created to address issues of food insecurity within the surrounding community by providing fresh produce to the surrounding community of Mechanicsville, a neighborhood that has historically been recognized as a food desert. Within the past year, Beardsley Farm has donated around 11,000 pounds of food to local community organizations in the hopes of increasing community access to nutritious foods and alleviating hunger (Karina Costa, personal communication, July 9, 2015). CAC's Green Thumb Community Garden program also seeks to alleviate food insecurity by providing garden spaces for members of low-income communities to cultivate in order to help supplement a deficiency in nutritious foods and save on grocery costs (Adam Caraco, personal communication, July 9, 2015). For the Pond Gap Elementary community garden, one of the aims is to serve as a food access point for families in the Pond Gap community due to issues of transportation and finances which make it difficult for some households to obtain access to healthy foods from grocery stores located in the Bearden area (Elias Attea, personal communication, June 29, 2015).

While community gardens do seek to address issues of food justice, it is important to note that these gardens are not a plausible long-term solution for solving problems of food insecurity on their own as issues of food security are incredibly complex within Knoxville and the United States, placing community gardens in interactions with various social, economic, and political factors that impact the success of such urban gardens in contributing to food justice (McClintock 2011; Bartfeld, Dunifon, Nord, and Carlson 2006). Such perceptions were echoed by almost all community garden organizers interviewed. Caley Hyatt, an Americorps VISTA member who is involved with gardening initiatives at Parkridge Community Garden, the Center for Urban Agriculture, and the Williams Creek community garden notes that community gardens are

typically too small to grow the amount of food needed to support entire households within food insecure communities (personal communication, July 10, 2015). Likewise, Karina Costa of Beardsley Community Farm points out the reality that despite the wish to alleviate high levels of poverty, hunger, and homelessness within the Mechanicsville neighborhood, the efforts of Beardsley farm will never be able to fully resolve such issues through gardening alone nor can the farm supply all the fresh produce needed for people living in the area (personal communication, July 9, 2015). Americorps member Elias Attea suggests that the provision of food within food insecure neighborhoods is not enough to eradicate hunger, explaining that “people are always going to live in hunger if they live in poverty” (personal communication, June 29, 2015).

Though community gardens may be beneficial in increasing food access within their respective neighborhoods, such gardens operate on a small scale and are not likely to fully meet the produce demands of entire cities (McClintock and Cooper 2009). In addition, issues of living and economic conditions such as housing costs, employment opportunities, and working wage rates impact families’ abilities to obtain access to food while state policies and programs such as food assistance programs impact families’ access to resources that help meet household food needs (Bartfeld et al. 2006). Therefore, the establishment of community gardens within food-insecure communities such as those seen in Knoxville must work in conjunction with the promotion of community activism to address an array of social, economic, and political issues in order to help combat food injustice. Community gardens provide a forum for social networking in which participants can come together to discuss a variety of community issues affecting food security such as disparities in living wages, unemployment rates, local patterns of food production and distribution, and government policies affecting food access. The facilitation of

such discussions within a successful community garden can, in turn, encourage neighborhood organizing to enact positive social change within the Knoxville community.

By raising awareness of social inequalities impacting food security, community gardens can allow participants to engage with a food system in which they have greater control over their access to healthy foods while involving the public in influencing local community improvement efforts through public discussions, political demonstrations, and participation in community gardening events and actions that seek to educate the public and promote positive change regarding issues affecting food security. By allowing community members to speak out about issues of food security and public policy, social activism within community gardens has the potential to restructure food access by influencing government policies affecting food access at local and national levels (von Hassell 2002). Additionally, community gardens are able to serve as arenas for food justice activism by offering a space to combat the dominance of industrial agriculture in favor of an alternative food system that is more just and sustainable (Alkon and Agyeman 2011).

Education

For many participants, community gardens serve as outdoor classrooms, providing a space for “experiential learning about the natural environment and one’s place within it” (von Hassell 2002: 110). These gardens also serve as a forum for the transmission and acquisition of various forms of ecological knowledge, technical gardening skills and values of environmentalism (Lawson 2005). While ecological learning takes place in community gardens through the engagement in processes of maintaining a garden plot, gardeners also learn from one another by experimenting with, and sharing the results of, garden practices. Additionally, forms of learning in community gardens can be more structured in nature and include participation in

educational programming such as the workshops that take place in several of Knoxville's community gardens. All local community gardens mentioned throughout the course of the author's interviews were noted as serving to educate participants through engagement with the physical act of gardening and the provision of educational programming to the public.

Education is an explicit component found within the missions of Beardsley Community Farm, the Pond Gap school garden, Parkridge Community Garden, and the Birdhouse Community Garden. Beardsley Community Farm seeks to educate community members through the provision of gardening workshops. Workshops are open to the public and impart general gardening information as well as more specialized skills pertaining to urban gardening. Overall, with respect to education, Beardsley seeks to promote knowledge of organic and sustainable urban gardening while communicating the financial and environmental benefits of home food production to members of the surrounding community (Karina Costa, personal communication, July 9, 2015).

Parkridge Community Garden also promotes notions of ecological health and environmentalism, incorporating the use of organic gardening and permaculture within the garden and hosting occasional workshops (Chad Hellwinckel, personal communication, June 23, 2015, Ben Rybolt, personal communication, June 22, 2015). For students at Pond Gap Elementary School, educational activities take place that incorporate the Pond Gap community garden into the school's curriculum and complement lessons in school subjects such as science, math, and history (Elias Attea, personal communication, June 29, 2015). Meanwhile, the Birdhouse Community Garden has previously taken the opportunity to educate community members through workshops and projects such as its sunflower remediation project which explored soil testing and sunflowers as lead remediators in response to concerns of high lead

levels in the garden's soil (Gerry Moll, personal communication, June 23, 2015). Altogether, several community gardens in the Knoxville area serve to educate the public by enabling the engagement of participants with the natural environment and promoting social processes of skill sharing and experiential learning.

Community Development and Improvement

Malve von Hassell (2002) notes that community gardens serve as spatial representations of communities in which public and private lives converge (32), allowing for the expression of both individual and communal identities (Flachs 2010). The physical areas of gardens also function as social spaces where community members are able to meet and interact with one another. Within these gardens, spontaneous interactions, garden workdays, and garden parties provide chances for participants to socialize, bringing together people across a number of demographic lines (Armstrong 2000; Flachs 2010). Moreover, gardens reflect and sustain the values of the communities that they are shaped by (Flachs 2010).

Within the author's fieldwork, several garden organizers cited community-building and improvement as an important feature of community gardens, reflecting the value of community gardens as spaces which strengthen community networks and promote social connections between people. Caley Hyatt (personal communication, July 10, 2015) cites community-building as being the biggest strength of Knoxville's community garden initiatives, providing a space where people can "come together and learn together". Ben Rybolt of Parkridge Community Garden recognizes community gardens as venues for people to unite in beautifying a neighborhood space while growing food and making social connections with their neighbors (personal communication, June 22, 2015). Adam Caraco of the CAC Green Thumb program echoes Rybolt's perspective, placing emphasis on the experience of neighbors getting to know

one another. Caraco explains that he stresses “*community* gardening” as a significant reason for participating in a community garden, remarking that he has witnessed the development of friendships between garden participants as a result of neighbors “helping each other with their gardens and sharing stuff” (personal communication, July 9, 2015). For Elias Attea, the ability of community gardens to encourage social relationships is especially important for those who face social or economic hardships:

My only hope with this garden... is that...the most important thing is that you are talking with people and you are making friends...because that is what is going to save people out of...hunger is if we're all eating together and not just buying our own food all the time. If we're sharing meals and even just being considerate of our neighbors...that's gonna help us out a lot more than trying to fend for ourselves all the time. I think that's part of the deeper side to a community garden.

(personal communication, June 29, 2015).

According to Armstrong (2000), community gardens can enhance social networks and organizational capacity within the communities in which they reside. These effects may be especially notable in lower income and minority neighborhoods where needs to address certain social issues, such as poverty, are more prominent (325). Along with encouraging community organizing and promoting local empowerment, gardens also enhance the communities that they serve by helping to increase residents' pride in neighborhoods (Armstrong 2000) and decrease rates of criminal activity and violence (Kuo 2001) through the fostering of deeper social connections within neighborhoods. Such capacity for community gardens to cultivate communities makes them an indispensable resource to residents living in the Knoxville area.

Challenges to Knoxville's Community Gardens

Despite having the potential to provide numerous benefits to communities, community gardens face a number of obstacles which threaten their existence. Many of the challenges

discussed are experienced mutually among all community gardens and involve “matters of organization, ownership and control” (von Hassell 2002: 73). Additionally, issues of local policy and access to community garden resources present additional obstacles to the initiation and long-term maintenance of community gardens.

Garden Participation and Leadership

A common challenge that exists with community gardens lies in gardener participation and leadership within gardens. Such issues were mentioned in all interviews carried out by the author. In terms of leadership structure, most local community gardens are loosely organized, preferring a type of informal organization as opposed to “rigid” and “bureaucratic” arrangements that are hierarchical in nature (Ben Rybolt, personal communication, June 22, 2015; Chad Hellwinckel, personal communication, June 23, 2015; Elias Attea, personal communication, June 29, 2015). While the informal organization of gardens can be seen as “empowering”, issues may also arise in terms of maintenance, creating the potential for gardens to fall into disrepair, an issue that has previously been seen at gardens such as the Parkridge community garden (Ben Rybolt, personal communication, June 22, 2015; Caley Hyatt, personal communication, July 10, 2015).

While fluctuation of participation by community gardeners within gardens is inevitable and may be influenced by a number of factors such as issues of time commitment, lack of interest among community members, the geographic movement of people away from neighborhoods, and other various reasons, another issue that exists resides in the ability of communities to take ownership of community garden spaces. These issues are seen at both Beardsley Community Farm and the Pond Gap Elementary community garden with high volunteer turnover rates and a lack of a consistent garden participant base that engages with these

gardens on a regular basis (Elias Attea, personal communication, June 29, 2015; Karina Costa, personal communication, July 9, 2015). Such inconsistencies in garden participation may be the result of an inability of community members to establish ownership of these gardens and will require community outreach and the creation of dialogue with community members to ensure the future success of these gardens.

Local Community Gardening Policy and Infrastructure

Currently, Knoxville lacks infrastructure dedicated to the support and preservation of community gardens. Additionally, issues exist within policies that inhibit the creation of community gardens and vital structures needed to sustain them, many of which are related to zoning and building regulations. For instance, parcels of land must be properly zoned to even establish a community garden. Other zoning issues affecting the initiation and maintenance of community gardens include a lack of provisions within current city code to build much needed accessory structures such as garden sheds and install water lines on vacant lots (Knoxville-Knox County Food Policy Council and Knox County Health Department 2011).

While policies are being developed within the context of Knoxville's local food movement to promote the growth of urban agriculture through sites such as community gardens and to clarify rules and regulations with respect to urban agriculture through a proposed zoning ordinance, it is unclear how long it will take to fully implement such policies (Caley Hyatt, personal communication, July 10, 2015). Although community gardens may be addressed under this type of developing Knoxville policy, they are usually only done so in recognition of their value as sites of economic development within the city. For instance, vacant lots cost the City of Knoxville \$117,000 yearly to maintain (City of Knoxville 2012). The conversion of city-owned

vacant lots into community gardens could allow for the upkeep of lots by community members, saving the city money on maintenance costs and making community gardens a financial asset to the city. Additionally, legal recognition of community gardens exists solely within the framework of an urban agriculture initiative driven by economic motives such as the creation of jobs on urban farms and local food production. This is problematic when considering the fact that community gardens offer extra advantages that lie outside the spectrum of economic benefits afforded by the practice of local urban agriculture. In turn, a lack of infrastructure dedicated to the preservation of community gardens for their non-economic benefits has the potential to decrease needed support of not-for-profit community gardens in favor of promoting market gardens which are established to generate capital.

Legal Status and Access to Resources

Access to financial and material resources presents another challenge to community gardens. As many of these gardens are the result of local grassroots efforts rather than government-funded programs, it is not uncommon for a community garden start out without a significant source of funding. In fact, a number of garden initiatives in the Knoxville area have been started with little to no budget and as a result, have relied on the generosity of donors to provide physical resources and monetary support. While soliciting material donations can provide an opportunity for community gardens to form connections with other groups within the community, procuring resources for all of Knoxville's community gardens in this manner may fail to provide the resources required to fully meet the needs of all local gardens.

At Parkridge Community Garden, gardeners pay a small fee of five dollars each month for an individual garden plot. Aside from the monthly fee, Parkridge has operated largely without a budget with the exception of a grant that was used to purchase garden tools (Chad

Hellewinckel, personal communication, June 23, 2015). Resources such as seeds, plants, and other materials have been donated by local organizations such as Beardsley Community Farm, Abby Fields, the Green Thumb program, Knoxville Botanic Gardens, and the Knoxville Permaculture Guild. The community garden at Pond Gap Elementary School also works to obtain a majority of its gardening materials and resources from donations. However, Elias Attea (personal communication, June 29, 2015) explains that maintaining the garden for free or in a frugal manner requires a more demanding time commitment, making procuring resources difficult for smaller groups and for individuals with time constraints.

Access to necessary water sources has also been an issue in local community gardens such as Parkridge and the Williams Creek community garden (Ben Rybolt, personal communication, June 22, 2015; Chad Hellwinckel, personal communication, June 23, 2015). Currently, City of Knoxville zoning regulations require that lots be properly zoned and special plumbing permits be obtained to install water lines and faucets on vacant lots (Knoxville-Knox County Food Policy Council and Knox County Health Department 2011). The installation of a water line is also very expensive, serving as a major deterrent to community garden groups operating with little to no budget (Chad Hellwinckel, personal communication, June 23, 2015).

Issues of legal status and liability are also a concern for Knoxville community gardens, especially for those located on city property. The new Williams Creek community garden provides insight into these struggles. Located on city property, the Williams Creek garden is expected by the city to obtain liability insurance which will protect the landowner against a number of legal risks. As a result, gardeners at Williams Creek are attempting to connect with a non-profit that will take responsibility for liability issues. Additionally, conditions exist within the garden's land deed, requiring the lot to be used for a community garden. This presents issues

as the city wants to “hand it [the land] off to a community garden, but it can’t just be a group of people. You want it to be an organization with a number. And not only a number, they want this organization to have liability insurance.” (Chad Hellwinckel, June 23, 2015).

Land Tenure

Often, community gardens are threatened by the inability to secure a permanent site for gardening as land access and the destiny of contested public spaces is largely influenced by land privatization and determined by forces of the real estate market (von Hassell 2002). Should community gardening groups fail to establish land ownership within the economic sphere of real estate markets by fully purchasing rather than leasing a community garden site, the security of their garden sites is tenuous at best (von Hassell 2002). This is because the permanence of such gardens is vulnerable to being undermined by the sale of land for profit or the repurposing of land by landowners who become disinvested in the use of their land for a community garden in favor of an alternative use (Lawson 2005).

The old Birdhouse Community Garden, once located across the street from the Birdhouse building in the 4th and Gill neighborhood, leased their space from a private landowner for about three or four years. Recently, however, the landowner decided to put up a For Sale sign (Gerry Moll, personal communication, June 23, 2015). While community members at the Birdhouse simply withdrew from having a community garden on the lot in favor of doing edible landscaping on the Birdhouse grounds, Gerry Moll (personal communication, June 23, 2015) notes that borrowing or leasing land from a private landowner has its risks and fails to offer security to community gardens. The same risks present themselves for gardens that lease or borrow land from the city such as the Williams Creek Garden and a number of CAC Green Thumb Gardens. Should the city decide to repurpose garden lots for a use that is deemed more

economically favorable, land may be withdrawn and the benefits of community gardens will fail to be realized within the communities that such gardens intend to serve.

Conclusion: Future Directions for Knoxville Community Gardens

Currently, steps are being taken to establish infrastructure and create city policies that are more conducive to the establishment and preservation of community gardens and other vehicles for urban agriculture. For instance, the City of Knoxville Office of Sustainability has worked with local organizations and community members to develop a zoning ordinance proposal that is designed to modify the city's zoning code. The proposed zoning code modifications seek to support the local food economy and increase access to healthy, local foods through the practice of urban agriculture by eliminating barriers to local food production on both private and vacant properties within the Knoxville area. Barriers to local food production include issues of zoning review and permitting requirements (City of Knoxville Office of Sustainability 2015).

Additionally, the Office of Sustainability's proposed zoning amendments work in conjunction with projected goals of the Knoxville Mayors' Challenge to generate an urban food corridor that allows for "greater entrepreneurial opportunities for urban food production, sales, and job creation" (City of Knoxville Office of Sustainability 2015; City of Knoxville, TN 2012). While community gardens are spaces encompassed in Knoxville's goals for the advancement of urban agriculture and a local food system, these gardens serve multiple purposes within the Knoxville community that extend beyond the economic benefits provided by gardens' abilities to function as sites for food cultivation. In turn, these gardens are worthy of preservation by the Knoxville community for the wide array of benefits that they provide to community members, calling for the creation of further legal infrastructure within Knoxville's city policies that seeks to protect community gardens.

To help initiate future community gardens and preserve existing local gardens for their use as a valuable community resource, garden initiatives in Knoxville may benefit from the creation of a local non-profit organization dedicated exclusively to the promotion and perpetuation of community gardening in the Knoxville area. Establishing a non-profit organization that is dedicated to the promotion of community gardens in Knoxville and is able to operate independently of city, state, and federal agencies would allow community gardens a greater chance of success in the face of social service cutbacks that could potentially affect community garden initiatives. Examples of such budget cuts affecting community garden programs occurred in the 1980's with decreases in federal program development funds. These cutbacks largely resulted in the collapse of various community gardens that had developed an over-reliance on federal funding (American Community Gardening Association, 2015). Also, by forming a local community gardening organization that is independent of city agencies, decision-making regarding individual community gardens would be more likely to remain in the hands of community gardeners. This is especially important when considering gardeners' abilities to take pride and ownership in their respective gardens. Were community gardens in Knoxville to be placed under the auspices of a city department such as the Knoxville Department of Parks and Recreation, there is a risk that major decisions regarding the designated uses and aesthetics of garden spaces would fall into the hands of the city instead of the gardeners who inhabit and work to maintain such spaces.

Appropriation of decision-making by city agencies concerning community garden spaces has been seen in the context of New York City's community gardens that enlisted the major support of governmental institutions. In New York City, a number of decisions have been made by city administration that has threatened gardens relying on the support of city agencies. For

example, the garden landscapes of New York City's casita gardens that became affiliated with city agencies grew to be more identical in appearance, reflecting less of the diversity in histories, values and aesthetics of the community members that inhabited these spaces (Lynch and Brusi 2005). This was the result of gardens being taken in under agencies such as GreenThumb, an organization that was started in the 1970's under the New York City Department of Parks and Recreation. While Greenthumb continues to serve as a valuable resource for community gardens in New York, offering assistance with programming and various other community garden resources, other issues have arisen in the past with the appropriation of Greenthumb gardens by city administration. This includes an incident in 1998, during which New York City Mayor Rudolph W. Giuliani shifted community garden lots from New York City's Department of Parks and Recreation to the Department of Housing Preservation and Development. Upon the transfer of garden lots, the Giuliani administration revoked all GreenThumb garden leases before publicizing a plan for the Department of Housing Preservation and Development to auction various GreenThumb garden lots to housing developers (Schukoske 2000). To avoid echoing the tensions between community gardens and city administration seen in New York City, Knoxville may benefit from the establishment of an independent non-profit for local community gardens.

With respect to function, a local community gardening organization could serve to foster the community development engendered by community gardens by uniting community gardens throughout Knoxville. The generation of positive social networks between Knoxville community gardens and their respective participants through such an organization could provide a forum in which to communicate ideas about issues relevant to community gardens, encouraging the grassroots activism needed to attend to various issues such as local government policies related

to community gardens, the creation of community garden resources, and the addressing of local community needs through the establishment and maintenance of community garden programs.

A community garden organization could also serve as a channel for connecting gardens and garden participants to valuable resources. While the establishment of a non-profit community gardening organization may require expensive and labor-intensive efforts (Schukoske 2000), a non-profit organization dedicated to the initiation and preservation of community gardens in Knoxville may help to sustain grassroots groups while contributing to gardens' success through the enhanced provision of technical and design assistance, obtaining land, securing liability protection and legal status, and accessing other relevant resources such as grants and garden supplies. Although non-profit organizations do take on a type of corporate structure with formal legal designations that contrast with the informal character of community gardens, the protection of a non-profit organization may be able to bolster Knoxville's community gardens. For Knoxville gardens residing under the wing of a non-profit organization, funding and resources seem to be more easily procured. A statement by Chad Hellwinckel (personal communication, June 23, 2015), of Parkridge Community Garden, reflects this:

Our neighborhood is fortunate enough to have an active non-profit community organization, the Parkridge Community Organization. It's been an official 501(c)(3) since... '82 or something like that. And that's really good to be in cahoots with a nonprofit when you're a group of people gardening because you can apply for grants and stuff under that whereas if you don't, you can't really get grants...because you don't really have any number attached to your organization.

Hence, the creation of a non-profit may serve as a major aid to the initiation and sustainability of community gardens within the Knoxville area by establishing a foundation for the technical and social support for community gardens. Additionally, the creation of city policies to preserve community gardens as valuable resources within the community may be

needed to sustain the provision of non-economic benefits from local gardens to the surrounding community. Finally, creating dialogue within Knoxville about community gardens and involving community members in local garden decision-making processes through social activism may help to encourage communities' participation in, and ownership of, Knoxville's community gardens, increasing the success of community gardens in their ability to positively transform the Knoxville area.

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