

Comparing Urban Community Gardens in the Twin Cities Metropolitan Area

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Abstract

It is well-documented that community gardens are diverse entities; they arise under varying conditions and may produce multiple meanings for both users and non-users. Yet, while it is generally understood that community gardens are diverse, less attention has been paid to specific internal structural and social differences between them than to the outcomes they produce. This research explores the similarities and differences between community gardens by examining a sample of gardens in the Twin Cities Metro Area, Minnesota. As the community gardeners utilized varying management approaches within their gardens, different spatial practices, and consequently different outcomes, resulted. I explored these practices through in-depth interviews with garden managers at 34 community gardens in the Twin Cities and surrounding suburbs, through a purposive random selection of gardens which varied on features of age, ownership, and location. I found that the accessibility of community gardening spaces, their internal rules and structures, and the benefits that gardeners derived from participating differed depending on the garden. Ultimately, while some gardens focused on food justice and acted as open-access commons, many others sought to facilitate gardening as a hobby, with more inaccessible and privatized models. Because community gardens are not one-size-fits-all, better understanding their diversity and the ways gardeners manage communal resources may improve urban agricultural policymaking, urban planning decisions, and future community garden research. Moreover, recognizing that some internal management practices support specific outcomes

over others may allow both community garden managers and gardeners to target their preferred outcomes during the initial stages of creating or joining a garden.

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Introduction

As urban populations continue to grow rapidly (UN DESA, 2018) and issues of food insecurity and global hunger persist despite improved efficiency of agricultural production, increased attention has been paid to the capacity for urban agricultural initiatives to alleviate these issues on a local scale (Besthorn, 2013; Opitz et al., 2015; Edmonson et al., 2020). Of particular interest is the role of community gardens, which are argued to not only improve food access, but also produce social, public health, economic, and environmental benefits (Hanna & Oh, 2000; Lawson, 2004; Draper & Freedman, 2010; Horst, McClintock, & Hoey, 2017). Community gardens, unlike private home gardens, are institutions that involve the public in terms of “ownership, access, and degree of democratic control” (Ferris, Norma, & Sempik, 2001, p. 560). Although urban community gardening has been formally practiced in cities across the United States since the late 19th century (Lang, 2014; Roberts & Pollans, 2015), it has seen a marked resurgence in city planning over the past few decades for its many purported benefits.

In the Twin Cities Metropolitan Area, Minnesota, where this research is focused, community garden initiatives have similarly become increasingly popular in the last ten years. This is particularly true in Minneapolis where community gardening has gained some formal legitimacy from the city government. In 2009, an urban agricultural initiative of the City of Minneapolis called *Homegrown Minneapolis* released a report that tasked the Minneapolis City Council with creating a plan to promote a local, sustainable food system.

The report noted the importance of a strong local food system for communities' health, food security, and economic and environmental opportunities, among other benefits (*Homegrown Minneapolis*, 2009). The report recommended ways the City of Minneapolis could make institutional changes to improve food infrastructure in the city; one suggestion was to increase the capacity for city residents to participate in urban agriculture.

Following the *Homegrown Minneapolis* report, the city's Community Planning and Economic Development Department (CPED) set about rewriting and updating existing land use policies and regulations to support the growth of urban agriculture in Minneapolis. In 2011, Minneapolis instituted its Urban Agriculture Policy Plan. The Urban Agriculture Policy Plan serves the primary purpose of fostering "connections between land use, transportation, urban design, and community access to food" (CPED, 2011, p. 4). Since enacting the Urban Agriculture Policy Plan, community gardens have gained some tenure and legitimacy. There are now nearly 300 community gardens in Minneapolis alone (*Homegrown Minneapolis*, 2019), and newly available vacant lots continue to be leased for gardening purposes.

While community gardening in Minneapolis receives much of the local attention, residents of Saint Paul and suburban residents of the Twin Cities also participate in gardening efforts. There are an estimated 58 community gardens in Saint Paul (City of Saint Paul, 2020), and Twin Cities suburbs such as Brooklyn Center, Fridley, Columbia Heights, and St. Louis Park each have various private and public spaces for residents to garden (*Gardening Matters*, n.d.). Julie

Kosbab, a writer living in the suburbs, explains, “While homeowners can sometimes just dig up their own yards, apartment dwellers, seniors in rentals, and suburbanites who live under...homeowner associations who are still romancing the lawn are finding other options” (2012, para. 2). Community gardens, especially those run by city governments, are one of these options. As such, although community gardening initiatives are often centered in Minneapolis, local gardening practices extend into Saint Paul, the suburbs around the Twin Cities, and throughout the state.

As community gardens developed over time across the Twin Cities Metro Area in varying contexts, their contemporary features such as age, land tenure, ownership, and contextual social and economic factors differ for each garden. Gardens may have institutional support from city parks departments, or they may be self-managed, where participants need to collectively decide on matters such as “plot assignment, paying for water and insurance, and making sure the site and tools [are] in good condition” (Lawson, 2005, p. 222). Rules and constraints such as fees, maintenance expectations, levels of communal work, potential restrictions on what can be grown, and the conflict negotiation process, among others, must be decided for each community gardening space. The purpose, internal features, and garden practices must be negotiated by members and garden managers, and ultimately decisions made in each garden may act as enablers or barriers for participation by the community.

Given gardens’ unique contexts and the many decisions that garden managers and participants must engage with to create and sustain a garden,

these spaces ultimately vary in how they are managed and what outcomes they produce. The different outcomes, both positive and negative, which arise from urban community gardens are related in part to their geography; where the garden is located, how much institutional support it has from the governing city and the law, how large the garden is, all impact its ability to serve community members. Additionally, outcomes from community gardens are further shaped by internal processes such as agreed-upon rules and norms. This research explores the differences in the features of urban community gardens in the Twin Cities Metro Area to better understand how similar or dissimilar they are, as a window into whether and why some community gardens produce different outcomes than others. This paper adds to the existing literature on the diversity of urban community gardens by examining and classifying the varied forms which gardens in this region embody. This work demonstrates that community gardens should not be considered as a unified entity, but should instead be discussed in the literature and policy as unique spaces due to the variety of practices and outcomes they utilize and produce.

Benefits of Community Gardening

From the outset, community gardens have been championed for their capacity to improve food security by providing fresh, nutritious produce to gardeners and their families (Draper & Freedman, 2010; Milburn & Vail, 2010; Lovell, 2010). Primarily, produce needs are supplemented for families who participate directly in a garden, but non-participants may receive donated foods

from those gardens which share their excess produce with the broader community (Corrigan, 2011). This extra food production is particularly important in food deserts and remains one of the primary selling points when activists advocate for community gardening spaces. In addition to producing foods for participants and their communities, by increasing access to fresh fruits and vegetables higher consumption of healthy foods is linked to participation in community gardening (Alaimo et al., 2008).

While community gardens may provide some level of food access and health benefits, recent research has also focused on their capacity to address “urban blight” by transforming vacant lots (Lawson, 2004; Milburn & Vail, 2010). Community gardening is one component of the process of “urban greening,” an on-going practice in the United States to bring green space into the city. As urban environments grew larger, more populous, and more complex during the 19th century, green spaces evolved as an “antidote to conditions of life within cities” (Schuyler, 1986, p. 59). It was believed that by bringing green, “natural” spaces into cities, urban parks could alleviate the city’s ailments by “promot[ing] the reconciliation of country and city” (Schuyler, 1986, p. 59). Community gardening is an extension of this practice, as while “some gardens are laid out strictly for utilitarian distribution of plots, others serve as *de facto* parks with lawns, picnic areas, and play equipment” (Lawson, 2004, p. 152). By transitioning vacant lots into green spaces in urban environments, community gardening is enjoyed by residents for its aesthetic features in addition to its food production benefits.

Finally, community gardening initiatives are often linked to general community development (Kurtz, 2001; Saldivar-Tanaka & Krasny, 2004). It is argued that community gardening improves community development capacity, where “community development” is community members’ ability to “improve [their own] economic, social, cultural, and environmental conditions,” (Saldivar-Tanaka & Krasny, 2004, p. 400). By “promot[ing] interactions and social inclusion” (Firth, Maye, & Pearson, 2011, p. 557), community gardens may bring together residents from diverse backgrounds into spaces where they can socialize and learn from one another. Some gardens may bring cross-cultural groups together that would otherwise not interact, or they may be a vehicle for immigrant communities to create empowering spaces with culturally relevant foods (Baker, 2010). In this light, community gardening may be about more than just growing food or creating green space in the city—gardens can be spaces which build resilient, engaged, and connected communities through communal work and collaboration.

Urban community gardens are “part of a wider phenomenon of urban contestation by which space is utilized to voice and fight for alternative socio-political arrangements” (Eizenberg, 2012, p. 767). Users of community gardens carve out a place for community development and the production of food in ways that are “alternatives to capitalism” (p. 780). Furthermore, they are argued to “re-embed the agri-food system within the social relations” which the industrialization of agriculture has eroded (McClintock, 2014, p. 6). While urban community gardening may be somewhat contradictory in how it contests capitalism while

working within the prevailing capitalist system (McClintock, 2014), its growing presence in urban settings may represent communities' desire for a collective community capacity (Certomà & Tornaghi, 2015). Studying how gardening spaces are produced and managed can provide us with not only a better understanding of urban agricultural initiatives, but can also provide a lens through which to see other urban movements as they too are embedded in today's prevailing issues of climate change, a growing wealth gap, and environmental racism.

However, urban agricultural initiatives will not “automatically produce all the social, environmental, and economic ‘goods’ attributed in the literature” (Siegener, Sowerwine, & Acey, 2018, p. 20), especially not in the absence of political support at the city or state level. Rather, community gardening provides one potential avenue for addressing social justice issues. In so doing, however, some argue that community gardens burden individuals with responsibilities that should be fulfilled by local governments (Barron, 2016; Siegener, Sowerwine, & Acey, 2018). Rather than city, state, or federal governments providing sufficient social support, community gardens devolve this responsibility from policymakers onto neighborhood residents who then need to devote their own time, money, and expertise to improve their communities' livelihoods. It is argued that this may “[reinforce] self-help and government austerity arguments, absolving government of the responsibility to address the structural and institutional causes of food insecurity,” along with other pressing social problems (Horst, McClintock, & Hoey, 2017, p. 281). By shifting responsibility to community members to address

structural livelihood problems, residents—particularly disadvantaged community members—may be unfairly burdened with making social justice improvements that others argue government entities should be responsible for.

Further, community gardening practices may reinforce existing inequalities rather than addressing them. Community gardening practices may be led predominantly by advantaged White community members, even in primarily non-White neighborhoods (Hoover, 2013). In turn, advantaged, White-led gardens are often able to accumulate funding opportunities and public support with more ease than gardens run by the poor and/or people of color (Reynolds, 2015). This can increase the disparities in outcomes between disadvantaged and advantaged community members, often along racial and socioeconomic lines. The rules and requirements within community gardens may foster this type of inequality by preventing participation or making it difficult for some community members to join. Further, as community gardening practices transform vacant urban lots into green parks and gardens, these improvements may contribute to green gentrification outcomes which ultimately push residents and disadvantaged community members out (Lawson, 2004; Siegner, Sowerwine, & Acey, 2018). Overall, while community gardening may provide tangible benefits and has the potential to improve economic, environmental, and social outcomes for its participants and neighborhoods, there are also numerous limitations associated with the practice.

Rules in community gardens

In recent scholarship, urban gardening has become increasingly recognized as a way for communities to assert their “right to the city,” or simply, the right to shape outcomes in the city (Schmelzkopf, 2002; Follman & Viehoff, 2015). Through community gardens, residents may reclaim their collective “inalienable rights to land, air, and water” (Linn, 1999, p. 42). In some instances, gardens are started on vacant lots held by private companies for prospective development (Schukoske, 2000; Schmelzkopf, 2002; Lawson, 2004).

Communities who garden in these spaces do so in common, shifting a privately held “enclosure” of space into a shared space open to the public—whether permanently or only temporarily (Eizenberg, 2012; Follmann & Viehoff, 2014). Other gardens have more secure land tenure but are similarly managed collectively and consist of shared resources such as gardening space, soil and compost, water, and sometimes garden tools. In this way, because community gardens create a communally managed space with shared resources, urban gardens have frequently been referred to as commons (Hess, 2008; Eizenberg, 2012; Colding et al., 2013; Nettle, 2014; McClintock, 2014; Barron, 2016; Rogge & Theesfeld, 2018).

Within a commons, the rules governing the management of shared resources are determined by its users. Rules are “prescriptions that define what actions...are required, prohibited, or permitted” (Ostrom, Gardner, & Walker, 1994, p. 38). Rules may impact features such as the number of participants, the use of a resource, and the benefits and costs of using that resource. Primarily,

rules dictate the ability for access and withdrawal, where access refers broadly to “the ability to benefit from things,” (Ribot & Peluso, 2003, p. 153) and withdrawal is “the right to obtain the ‘products’ of a resource” (Schlager & Ostrom, 1992, p. 250). In community gardens, access includes a range of benefits from the ability to enter and use the garden, to the ability to receive a passive benefit from its aesthetic contribution to a neighborhood. Withdrawal refers to the right to take produce cultivated in the garden, and the ability to directly benefit from the social capital produced through gardening in common. As rules shape use and outcomes in other collective management systems (Ostrom, 1990; Tang, 1991; Ostrom, Gardner, & Walker, 1994), it was theorized that they impacted similar outcomes in community gardening spaces as well.

Because community gardens develop in diverse urban spaces, their internal features and rules differ. Within different gardens, the size, land tenure, physical layout, produce cultivated, participant demographics, and overall purpose, among other features, may be different at each one (Ferris, Norma, & Sempik, 2001; Kurtz, 2001; Draper & Freedman, 2010; Horst, McClintock, & Hoey, 2017). All of these features are managed in some way by rules, or the absence of rules, which dictate how resources may be used and by whom. While the rules in community gardening spaces affect the capacity for access and withdrawal, who determines the rules in each garden may differ significantly. Payne and Fryman (2001) write,

Like every other type of community development project, there is ample potential for a garden to be top-down, driven by the priorities of outside

do-gooders, or controlled by a few people who exclude others. Or a community garden can be a place that encourages participation and new forms of leadership for people of all ages, ethnicities, classes, and abilities (p. 3).

Gardens may vary in what benefits they produce, who oversees and runs them, and who may participate or not based on the rules that either encourage or prevent access to and withdrawal of the resources within gardens. Further, conflicts may arise between gardeners and garden managers as these rules are negotiated.

Previous research has demonstrated that conflicts within community gardens may arise as the rules governing gardening spaces are negotiated. Aptekar (2015) observed such internal conflicts through a long-term ethnographic study of a diverse community garden in New York City. Aptekar found that the differing views and values of gardeners led to conflicts over the rules regarding plot upkeep, aesthetics, and theft. Consequently, it was expected that in the Twin Cities Metropolitan Area gardens would embody a range of forms where similar conflicts over upkeep, aesthetics, and theft would need to be negotiated. This study expands on this concept and similar research by more definitively recording and analyzing the relevant rules and practices which govern gardens and determine users' outcomes in the region.

This research adds to current urban community gardening literature by further analyzing the internal processes that are present in community gardening spaces in the Twin Cities Metro Area. By examining the purpose, rules,

accessibility features, and outcomes produced in community gardens, this research asks: How are community gardens in the Twin Cities Metro Area typically organized? What are the similarities and differences between common community garden models? And finally, how might the organizational models of community gardens determine their role in the urban agriculture landscape?

Methods

Data collection

Qualitative methods were used to assess the range of community garden practices in the region. Semi-structured interviews (n=34) were conducted with garden managers from community gardens in Minneapolis, Saint Paul, and the first-ring suburbs immediately surrounding the Twin Cities (Appendix B). A purposive sampling strategy was used to determine the sample of community gardens (Patton, 1990). Gardens were selected from a pre-existing list of community gardens in Minnesota, curated by the now-defunct organization, *Gardening Matters*. This list of community gardens was collected on a volunteer basis, where garden leaders and managers voluntarily chose to submit information about their garden to the database. As such, while an extensive resource of community gardens in Minnesota and specifically in the Twin Cities Metropolitan Area, this list was not exhaustive. No complete record of all community gardens in the Twin Cities currently exists.

Purposive random sampling, rather than purely random sampling, was used to ensure a diversity of cases (Patton, 1990). Selected gardens differed on three main features: their location in either the Twin Cities proper or in one of the

cities in the surrounding suburbs; the age of the garden; and either private or public ownership of the garden, recognizing that the land may be owned by one entity but gardened by another. All gardens were formally recognized community gardens with leasing and zoning permissions. As such, this sample excluded “guerilla gardens,” which are typically temporary and not formally recognized, as well as urban farms, which exist for commercial purposes rather than community purposes.

One interview guide was used for all interviews, with both open-ended and directive questions about the structure, rules, atmosphere, and various features of the garden in question. After developing the initial guide, a pilot interview was conducted to evaluate clarity and specificity, and the guide was adjusted accordingly. Participants were also asked at the end of each interview if they would like to share any other thoughts or observations not previously covered in the discussion. The 34 interviews with garden managers were completed between July 2019 and March 2020. Fifteen interviews occurred by phone, and the remaining 19 interviews occurred on-site at each garden. Two supplementary interviews occurred with other key informants who were involved in community gardening but were not garden managers; one by phone, and one in-person. Phone interviews were recorded and transcribed for further analysis, while in-person interviews were not recorded but instead extensive field notes were taken.

Qualitative, interview-based methods were chosen for two primary reasons. First, creating a mail or online survey would constrain the participants’

responses to the framework selected ahead of time. This might have limited the ability to generate new insight about community gardens in the region. Second, in-depth interviews allowed for more direct interaction with garden managers. By speaking either by phone or in-person with individuals directly, I was able to ask targeted follow-up questions for additional information or nuance. Additionally, I was able to clarify questions when something was unclear or ambiguous and tease out additional information that the questions alone may not have solicited without further discussion. Finally, interviews frequently provided the opportunity to visit the gardens in-person and observe firsthand how the gardens were physically organized and used by members.

Data analysis

While the results were first considered in relation to concepts of resource management, open-coding of the data was used to allow for additional narratives to emerge. Because community gardens are eclectic spaces where lived realities are not perfectly consistent nor measurable, using predetermined codes to analyze their existence would ignore the many ways gardeners create and re-create gardening spaces. As such, open, qualitative coding was used to explore the diverse features of the community gardens and the topics which garden managers discussed.

Qualitative analysis using open-coding is an iterative process that involves extensive consideration and reconsideration of the data (Burnard, 1991). The primary data sources included interview transcripts, field notes, and garden

documents such as pamphlets, garden handbooks, and gardener agreements, which were provided by garden managers. Five major thematic codes emerged from the data: purpose, accessibility, rules, conflicts, and outcomes. These themes were further separated into their component parts to understand how these features differed at each garden. Two independent reviewers coded sample documents using these themes to establish coding reliability and consistency.

After coding the data, types of gardens were established from the patterns in the codes. Collier, LaPorte, and Seawright's method for forming and organizing concepts (2012) informed the process of categorizing the community gardens in this sample into types. In this case, this process required identifying the significant features that are commonly present in the community gardens and then examining the relationships between these features in each garden. To this end, an index with all 34 gardens (Appendix A) was created so that the various aspects of each garden—such as its intended purpose, the cost to join, or whether it has residency requirements—could be easily compared and contrasted across gardens. For each entry, data in the table was contextualized using interviews, field notes, and garden document data to ensure that any possible nuance to a given feature was considered. Types of gardens were then determined by using the index in combination with coded interview data.

Results

The 34 community gardens in this sample shared numerous similarities and differences (Appendix A). Gardens ranged from being three to 76 years old; were located in different neighborhoods throughout the Twin Cities Metro Area with different historical contexts and city rules; and were run by city governments, churches, schools, neighborhood organizations, or small groups of individuals. All but one garden in the entire sample was organic, meaning that no chemical pesticides or herbicides could be used. The distinguishing features of each garden type were their intended purpose, how accessible the garden was, what rules were in use, and the benefits that users and the wider community received from each garden. Derived from their shared and distinctive features, the gardens in this sample were divided into three types of gardens: hobby gardens (n=18), food justice gardens (n=4), and hybrid gardens (n=12).

Hobby Gardens

Community gardens have a reputation for their ability to improve issues of food insecurity, especially for vulnerable residents or in food deserts. However, while some gardens in this sample aimed to improve access to healthy food in their communities, exactly half of the 34 gardens sampled (n=18) were created so that participants could engage in gardening as a hobby rather than specifically for food security. This does not imply that gardeners in these spaces do not eat the produce they grow. Rather, it was found that gardeners in hobby gardens preferred to grow their own food so they knew where it came from, could ensure

that it was organic, and could partake in the practice of growing—not because they could not afford fresh produce.

Ten of the hobby gardens were owned and operated by city governments in the Twin Cities suburbs, most often located on city park property. Describing the intent for these gardens, several managers explained that their gardens were created in response to their communities' desire to have space to garden. One manager reported that the mission statement on their website is simply, "Providing affordable organic gardening space for neighbors." Another manager, who operated their garden through their city Parks Department, said that their garden was part of the city's "goal for providing healthy alternatives for people to participate in activities rather than just sports." Thus, these gardens focused on fostering gardening opportunities for enjoyment and recreation.

In addition to individual recreation, garden managers frequently said that a secondary driving goal of their gardens was to build community and provide a social gardening experience. One manager said that their garden was meant "to bring the community closer together through a common activity." They said that people who were interested in gardening could "meet up at the same time to share ideas and experiences with fellow gardeners." Another manager described this collective interest as, "A way of being and seeing things that a lot of community gardeners have in common." On top of providing a space where gardeners could grow organic foods and recreate through gardening, garden managers also suggested that their gardens were about building community with like-minded individuals.

Finally, garden managers at hobby gardens often discussed the aesthetic purposes of their gardens. One manager said that their garden was created to, in part, “[put] value into a plot [of land] that before had essentially been a little bit of a blight in the neighborhood.” Similarly, another manager said that their garden was meant for “reclaiming the space, beautifying the space in the neighborhood.” In fact, one hobby garden did not grow food at all but instead was used for improving the aesthetics of a vacant plot of land alongside a railroad. This garden was focused squarely on visual changes, with additional derived purposes such as recreation and socializing. While developing space for recreation and community building, hobby gardens also sought to improve their neighborhoods through the beautification of vacant land.

As these hobby gardens were created to provide recreational opportunities, build community, and improve their neighborhood aesthetics, they adopted specific practices to this end. The data revealed that in comparison to other gardens in this sample, hobby gardens had higher barriers to entry, stricter rules and expectations, and generated more individual-oriented benefits for gardeners.

Accessibility

The average cost to join a hobby garden at the lowest fee offered—for the smallest possible plot—was about \$33 annually. At one garden, the annual fee for a plot was much higher, at \$125. While some of the gardens offered financial aid as a policy or by request, nine of the 17 hobby gardens did not offer any type of financial aid. Furthermore, in gardens run through city governments, it was not

uncommon for there to be residency requirements. Describing the joining process at their garden, one manager said, “[Gardeners] actually come in-person [to join] because they need to prove to us that they are a resident, with either a driver’s license or a state ID.” This combination of higher fees, lack of financial aid, and residency requirements create inherent restrictions on who can join hobby gardens.

Despite having, on average, higher fees, half of the hobby gardens in this sample did not have tool sheds with shared garden supplies for gardeners, and a few of the gardens did not provide water. Instead, gardeners were expected to provide all of their own supplies and in some cases transport water to the site. One manager stated,

We don't have a space for them [to] leave tools in a communal type of space. If one person leaves a hoe in their plot and it's just kind of a spoken thing between them and their neighbor, you know, I don't know about that. But there's not a, like a gardening shed there for people to leave things. So pretty much everybody brings what they need each time.

Not having communal tools increases the start-up costs for gardeners who either need to already have or purchase the tools necessary to plant and maintain their gardens. This can unintentionally exclude community members who cannot afford to obtain tools or easily transport them to the site.

The hobby garden managers did not frequently discuss on-site resources for assisting gardeners whose first language is not English. One manager said,

You know, we struggle because we have a lot of immigrants in our community with barriers of language. So this is still difficult for us because not everybody's first language is English, and having, you know, very defined rules and fine print, and very small print, that's got to be tough. Although this manager recognized the challenges for immigrants or community members who do not speak English, the manager did not identify any collaborations with translators or community leaders to help address this predicament. However, another garden manager did explain that in the past when they had difficulty explaining the rules to some immigrant gardeners, they would "just kind of [hang] out in the garden a lot, and wait until like their grandchildren came with them and then...get their names and phone numbers and addresses." But despite working with immigrant gardeners directly, this garden also did not identify any resources catering to immigrant communities directly, such as providing translations of the garden agreement or flexibility in the rules for immigrant gardeners with respect to cultural practices.

One telling aspect of accessibility in hobby gardens was their perspective on the taking of produce by non-participants. In hobby gardens, produce harvest by non-gardeners was considered theft. Many managers expressed the same sentiment that one manager said of produce theft in their garden, "'Community' doesn't mean the community can come and take things." Garden managers routinely spoke of instances where they confronted strangers "stealing" produce, usually by explaining the nature of the gardening space and asking the offender not to harvest again. One garden manager went so far as to say that they

believed the amount of theft at their garden “has to do with the welfare state,” stating that, “people think that everything in the world belongs to them.” However, most managers did not characterize produce theft with such strong language and instead suggested that while they wished outsiders would not take produce, they could understand why it occurs. One manager said,

So there's a sign on the garden that says 'Community Garden,' and in the very beginning, somebody was there and was harvesting in a plot that I knew they weren't the person, and I just happened to be up there. And I said to them, you know, 'Excuse me, how do you know this family?' And they're like, 'Oh, this says *community garden*,' and I said, 'Yep but you have to be a member of the specific community here, the garden community, to get produce out of the garden.' And so, I don't know whether that was truly a misunderstanding for that person or if that was just a quick answer, I don't know, I didn't investigate that. And anyway, they were just like 'Oh sorry, thank you' and they left.

Despite the title of 'community garden,' hobby garden managers made it clear that they did not want the whole neighborhood to think the produce grown in the gardens was free for anyone to harvest. To combat the taking of produce, some gardens instituted “sharing” plots with signage explaining that anything grown in those specific plots could be harvested by passersby. Other gardens used fences or simply relied on signage and confrontation with non-members who harvested produce without permission.

Rules

Hobby gardens utilized specific garden rules, usually outlined by a garden agreement or contract that participants were required to sign when they joined. One manager described their agreement as, “kind of a legal agreement in a way.” They said, “So they get [the agreement] in the mail, they mail it back to us...It says, ‘I agree to...’ whatever. And then you know, they fill out the background check form.” Some example rules from such agreements include: “Generally visit your plot at least once a week.” “Renters must maintain their garden or they will be given 10 days to correct the problem or the plot will be reassigned.” “Only seasonal (annual) plants may be planted.” In some cases, not following the garden contract rules could result in losing one’s plot for the season and sometimes even future seasons. Strict rules like these with graduated repercussions were characteristic of hobby gardens.

Because one of the main drivers for hobby gardens was their aesthetic benefit to the neighborhood, some hobby garden managers expected participants’ individual plots to be highly maintained. One manager said, “Earlier this month I sent [the gardeners] photos of some exceptional gardens. They would be setting the bar incredibly high, but I also kind of encouraged them, ‘Hey, this can be done, it’s possible to make your garden look like it could belong in pictures in a magazine.’” Similarly, not keeping up with weeding could result in losing one’s plot. One manager stated,

You know, in the past we’ve had to—or we’ve felt we’ve had to—send out an email to a particular person saying, ‘Hey, we’ve noticed that your plot is really weedy, it doesn’t look like anything is growing. Are you ready to give

up on your plot?'...And there was one time where we actually did turn the plot over to another person.

Certainly, not utilizing a plot could result in forfeiture, but this could also result from not putting enough effort into maintaining a plot to the garden's required standards.

In addition to garden plot expectations from garden managers and garden agreements, some conflicts over the appearance of gardeners' plots occurred *between* participants. In one hobby garden with a more diverse membership, the manager described a tension between users' aesthetic expectations. They observed,

...Especially for a lot of the European-type, anal-retentive gardeners—they sure don't like the messiness of what we would see in a traditional African American garden...It could be more frustration of the look of the garden, tidiness of the garden, or somebody that breaks rules in their mind and they don't.

As a result, gardeners in this garden have complained to the manager about others' plots. However, the manager here stressed the importance of letting gardeners work out their conflicts and not yielding to complaints that they feel are rooted in "racism and the struggle with the things in this world that are changing on [the gardeners who complain]." But this tension demonstrates the capacity for peer pressure within a garden to create expectations for what plots should look like, even if the garden managers' expectations are more flexible.

When considering where these rules originated from, managers shared that the rules and garden contracts were usually created by consulting the rules and agreements from other gardens. One manager said, “Some of the information...we’ve derived has been from other communities. We’ve either heard or sought out to gather what other gardens are doing...I’ve also gone to some community garden roundtables, and you know, just getting information.” Although it may be easier for gardens to use other garden agreements and contracts as a baseline for their own rules, this practice may perpetuate the use of rules created by a specific demographic of gardeners that may not reflect the current gardening community. One manager spoke to this problem, discussing how they were struggling with revamping the rules at their garden to better meet the needs of their current gardeners. They explained that while they originally copied a garden agreement from another garden, they had since been trying as a community to adjust the agreement. They said,

We’ve really stripped [our agreement] down to its bare minimum, what we really need and what’s going to serve us...So, I think as we’re inventing the rules the way we want them to be, you know, we’re not kicking anybody out for having too many weeds...[We’ve been] trying to figure out, how do we crystallize the way that we’re functioning now into a set of rules that aren’t really that ‘rules-y’?...And we’ve definitely had growing pains there where some of the original founding people had really clear ideas and clear visions about what needed to become of the place, you know?

Although hobby gardens often had strict rules in place, there were similar efforts in some of these spaces to adjust the rules and refrain from “micromanaging” gardeners.

Despite higher joining and upkeep requirements, only four of the hobby gardens required members to participate in volunteer hours on-site. Perhaps because of the higher fees paying for the site and by extension top-down management of the garden, or because the garden atmospheres were more individualistic in nature, hobby garden managers did not frequently identify the need for volunteer communal work at the site. This reduced the time commitment that gardeners needed to participate, increasing hobby gardens’ accessibility in this respect.

Benefits

Hobby gardens generally produced more individualistic benefits in line with participants’ interests, rather than system-wide benefits. Of the participants in their garden, one manager said, “I don’t know if anyone is using the garden for sustenance as much as a hobby.” Another manager at a city-run garden said,

Most of [the gardeners] say that their yards are shaded, or they live in townhomes or apartments so they can’t have gardens. So, they’re coming...to have fresh vegetables that they can’t grow in their own backyard. And then we do have one family who has a lot of black walnut trees in their backyard, and so there are so many crops that black walnut does not, is not compatible with. They grow a couple of things in their yard

that they can, and then they have everything else that they grow up in the garden.

Garden managers at hobby gardens routinely suggested that participants in their gardening spaces had homes with lawns where they could sometimes garden and often did, but for one reason or another, they also chose to join a community garden. Certainly, not all homes have lawns suitable for gardening, so the hobby gardens may provide needed land access. But in numerous instances, managers reported that many of their gardeners had at least some capacity to garden at home.

Perhaps because hobby gardeners often had access to gardening space at home, managers suggested that their participants are usually experienced gardeners. One manager explicitly stated that their demographic of gardeners were “not people who want to learn how to garden,” but instead people who already knew how to garden. They shared that the gardeners “want to grow their own food, touch the earth and connect with nature, and be part of their community.” As such, few managers mentioned any garden-wide classes or lessons on gardening best practices. While some of the gardens had leaders who could help teach new gardeners or share their gardening expertise, many of the managers suggested that participants generally already knew what they are doing.

Instead of necessarily coming to the garden to learn new skills, a few managers believed that participants sought out community building and networking benefits. One manager said,

I think that ostensibly the point of the community garden was, in fact, to create a sense of community and to bring people together. And I think it does that, but it does that—and I don't mean this in a necessarily negative way—but it does that in a somewhat unplanned and organic way. Where, you know, if you happen to show up at the same time as somebody else showing up to weed their garden, you'll strike up that conversation.

However, this manager also said that even though they were one of the core-organizers and avid gardeners at the site, they did not use the garden to build new relationships. They said,

I don't personally view the community garden as a way to meet new people and get together and have these get-togethers with 20 or 30 other people. You know, I greatly enjoy meeting the occasional neighbor when I'm down there, you know, harvesting something or weeding, and having a chat with them, but I think, clearly, the consensus was...there's a core group of five, six, seven gardeners who will show up to [garden events] and that's it. So we just kind of discontinued [the events].

Because plots were individually managed, gardeners may have had less motivation to work with or meet others in the space, particularly if gardening schedules did not align. Still, some managers mentioned community building as a “bonus” for joining a garden and suggested that getting to know others may be a big draw for community gardening. It is possible that institutional gardens such as those run by churches or clubs may produce more community-building benefits for participants due to the shared interests and backgrounds of those

using the space. But overall, the community building aspects likely vary for each garden and depend on how much buy-in managers and participants garner for attending garden-wide events.

Food Justice Gardens

Of the 34 gardens sampled, four gardens focused primarily on food justice. All four of these gardens were located in Minneapolis (Appendix B). Unlike the hobby gardens, which were primarily created for recreational gardening, the food justice gardens were established specifically to address issues of food insecurity. In these gardens, managers discussed the implications of urban agriculture for the entire food justice system rather than for individual gardeners' purposes. One manager stated, "The food system is not just about individual people, but the larger community...We do have communal gardens, but it's beyond that. It's a whole food systems program." Food justice gardens focused on the larger inequities in the food system and the ways that these inequities burden their communities. As such, these gardens expressed their goals through the greater accessibility of their spaces, the flexible nature of the rules on-site, and the work they did to ensure that both participants and the wider community could receive benefits from the gardens.

Accessibility

Unlike the majority of the community gardens sampled, food justice gardens did not have fees or strict requirements for joining the gardens. All four of the food-justice gardens were free and easy to join. When asked about the

process of joining their garden, one garden manager simply said, “People just need to show up to participate.” They continued to say that unless someone was going to “destroy or vandalize the garden,” they would be allowed there. Rather than applying, meeting residency requirements, and committing to a certain plot, anyone could participate as much or as little as they would like in these spaces.

The food justice gardens in this sample all provided tools and water on-site for gardeners to use, as well as seeds and compost. By providing tools, water, and seeds, gardeners who were unable to purchase or transport their own supplies could still participate. To facilitate community building and manage gardening communally, the gardens all scheduled routine work times—typically an hour or two every week on a set day. However, if gardeners wanted to participate outside of scheduled times, they were welcome to. One garden manager kept a bulletin board at their garden with a running list of tasks that need to be completed. This manager said, “People can participate at all levels, the space is open. They don’t even have to talk to me to use it.” Another garden manager posted updated to-do lists on Facebook, encouraging community members to stop by when it is convenient for them to work on some garden chores. By being flexible on when community members may participate and how much work they are expected to do, those who work multiple jobs or have inflexible hours could contribute to the garden in times that fit their schedules.

Because these gardens did not receive funding in the form of joining fees, their financial support came from a range of sources. One of the gardens was funded by a neighborhood organization that works to supply housing for and

empower neighborhood residents. As part of its outreach work, the organization facilitated listening sessions with over 400 residents about best practices before breaking ground with their community garden. The other three gardens were funded primarily by their respective neighborhood organizations but also received community donations in the form of monetary gifts and plant seedlings.

Rules

In addition to being highly accessible, the rules in food justice gardens tended to be more flexible and less strict than those in hobby gardens. One manager said, “The community is highly transient and has higher rates of poverty, so it doesn’t make sense to structure the garden a lot or else it would only cater to middle-class White folks, not all members of the community.”

Similarly, describing their rules another manager said,

We don’t do membership stuff because...this is a bit more of a gentrified area and it’s going to get even more, so we’re trying to, in a way, keep it [flexible]...We want to make food accessible to everyone who needs it, we’re always going to keep it that way.

Rather than creating highly structured environments that may inadvertently exclude some members of the community, food justice gardens chose to be informal and adaptable to the needs of their community.

The model of food justice gardens differed from the typical community garden found in this sample. Rather than individual plots, the entire gardening spaces were communal; instead of fees to join, gardens were free and open to everyone. One manager contrasted their communal garden with the typical

community garden in the area. They said, “I’ve seen it in other neighborhoods...it’s like, yeah, these community gardens, you have your own little box and you pay for it. But if you want to grow something [in this garden], you better be willing to share it.” Everything at the gardening site was shared with all who participate, regardless of how much they participated. In fact, even those who could not help in tending these gardens were encouraged to harvest produce if they were in need. One manager said, “There will always be people who say you shouldn’t take unless you help...but there are a lot of reasons that people come to [the garden], sometimes just to take.” Contrary to most community gardens in this sample which considered instances of harvesting by non-gardeners as theft, food justice gardens regarded harvesting by non-participants as central to the mission of the garden.

Because these gardens were communal and everything was shared, decisions about what to plant were left open to the community. All of the managers described choosing plants by asking community members what they were interested in growing. One manager said, “We do a lot of tomatoes because a lot of folks like fried green tomatoes.” In another garden, a manager said that they bought seeds based on any requests for new plants, especially ones of cultural significance to the gardeners. Similarly, when possible, other decisions about the space were left to the community. One manager explained that even though they were very committed to the garden, they remind themselves that it was “not my garden” and that the garden was meant to be a space for collective decision-making.

Although the nature of these spaces was very relaxed and the gardens did not have applications, contracts, or gardener agreements with strict rules and consequences, managers still emphasized the need for participants to be respectful. One manager said, “Respect is the rule of the garden.” Other managers echoed this sentiment, stressing that the only rule that participants needed to follow was being respectful of one another and respectful of the space. If participants were not respectful in the garden, conflict management involved discussions with participants and reminding gardeners that the space was meant for everyone.

When asked how the structure and model of their garden were determined, one manager explained that they held listening sessions over two years with hundreds of residents before breaking ground. They explained that they worked collaboratively with their nonprofit organization and neighborhood members to search for a suitable plot of land, while also “getting external training for help, and working with master gardeners.” This manager and their team then created a report with the feedback generated from community listening sessions, with the hope that their work could be used to foster future food access initiatives. Another manager shared that they work as a community organizer and used their connections and skills to engage with neighbors when starting their garden on a vacant lot. Although the amount of time and outreach with community members varied at each food justice garden, all of the managers expressed that their spaces were collectively organized and managed in a bottom-up fashion.

Benefits

Managers highlighted several benefits that participants received from engaging with these gardens. First and foremost, garden managers emphasized that the gardens helped vulnerable community members access healthy foods. One manager explained, “In some areas of town this is also a means of access, trying to fill in gaps. We experience food apartheid over here—I wouldn’t even just say food desert—we have grocery stores but it’s our quality of food.” Food justice gardens made it easier for people to obtain fresh produce, especially in food deserts, or areas that have limited access to affordable and good-quality food. This was especially important for residents in apartment buildings that did not have their own lawns or yards to garden in, which all four managers emphasized.

While improving access to food, garden managers identified the many learning outcomes that gardeners received by participating. The food justice gardens all coordinated learning sessions for gardeners and their families. These included classes like gardening basics, canning, composting, and how to harvest seeds from produce to use in the following season. One garden manager said that gardeners cared about their community, and wanted to “share meals, learn from other cultures, and connect with taste.” Some managers also discussed learning benefits for children in their respective communities, noting that gardening can be a great way for children to learn about nature and healthy foods. One manager said that they were “trying to get kids excited to try veggies.” They continued, “Especially if they help plant the stuff, that’s when they’re like,

‘Oh, I’m eating that cucumber, I’m eating those snap peas because I helped but that in the ground.’” By incorporating learning sessions about gardening best practices and teaching children in the community about healthy foods, food justice gardens did more than improve food security.

In addition to providing learning benefits, food justice gardens fostered community building. The garden managers organized events at their gardens that anyone could attend, and also let neighbors know that they were welcome to sit in and enjoy the garden. One manager said, “I try to encourage people to use the space. If they wanted to have a cookout there with their family, they can do that...you have people who just want to sit in a garden because it feels peaceful and it’s just quiet.” Another manager said, “We grow not just food but our knowledge and connection [to one another].” Two of the garden managers even said that community members who are not regularly involved in the garden could also borrow gardening tools to use at their own homes if they desire.

Hybrid Gardens

On the spectrum of community gardens from food justice gardens to hobby gardens, some fell in the middle in terms of the intended purpose and overall outcomes. In this sample, 12 gardens maintained a dual-purpose of working to improve food security while also providing a space to garden recreationally. One garden manager described their garden as “giving people the opportunity to connect to their food, and grow healthy food for their family,” which is why they said they keep the garden “cheap” to access. Another manager said

that their communal-style garden was meant to be a relaxed, learning environment for new gardeners. They said,

[The garden] is a welcoming space for intergenerational folks. It's flexible, which a lot of people don't find in other community gardens, and there's space for beginners, students especially...like, it's less scary to join a community garden when like, 'Oh, if I fail, it's not like everything is going to die.'

Further, they said that some participants joined “because the food is important to supplement whatever their budget can buy.” In pursuit of these driving purposes—addressing food insecurity, providing a welcoming learning environment, and creating a space for gardeners to enjoy the hobby of gardening—hybrid gardens took on a form and function that was more accessible and less strict than hobby gardens but was not completely open-access like food justice gardens were. By bridging food justice gardening practices and hobby gardening practices, hybrid gardens created a unique presence in the community gardening landscape.

Accessibility

The hybrid gardens in this sample had an average annual cost to join of about \$17, which was just over half of the average annual fee to join one of the hobby gardens (\$33) but was still more expensive than the free-to-access food justice gardens. However, all but one of the hybrid gardens offered financial aid to either waive or deeply discount the fee to join. Further, all but one garden had

shared tools that participants could use on-site, which reduces the necessary costs for participants.

None of the hybrid gardens had any residency requirements to join their gardens—this allowed community members who may have worked near a garden but not lived there to join, and made the joining process easier because participants did not need licenses or paperwork to prove their residency. Instead, to join one of the hybrid gardens prospective members send an email to the manager requesting to participate, or in some cases fill out a short online form. Frequently, hybrid garden managers suggested that when possible, they altered the layout of their gardens so that more people could join. One manager said, “Sometimes it’s tricky to squeeze people in and readjust things every year, but we’ve been able to do just fine. We squeeze things in.”

Being accessible was an important goal for hybrid gardens, as many of these gardens sought to be welcoming to immigrant and refugee communities. These gardens frequently collaborated with non-profit organizations, community leaders, and translators to better connect with and serve immigrant and refugee populations. Some of the gardens were located on church property and could use church resources to increase their outreach capacity. At one church-run hybrid garden, the manager explained that they worked with a local non-profit “that assists new immigrants and refugees” to help with communication and representation aspects. Members of the non-profit attended garden meetings to advocate for immigrant gardeners when language was a barrier, and also helped by translating the garden agreement and expectations.

One garden manager explained the difficulties they encountered working with an immigrant and refugee population, and the ways they tried to make the garden more accepting of cultural differences. They said,

Communication is really difficult, most of [the immigrant and refugees gardeners] are struggling with English...communication is so important, and in some ways is so broken, because emails don't necessarily work for them...They have people that are considered liaisons for the organizations that help them but in my case...[the cultural organization] that we work with, those people are stretched super thin so sometimes you just can't get anybody to communicate, because they don't have the resources to do it.

They explained that in their garden, learning how to work with immigrant gardeners who had different agricultural skills and experiences could be challenging, especially when other gardeners and the property owners held their own expectations for the space. However, this manager worked hard to be flexible with gardeners and maintained a relationship with local cultural organizations for assistance, even when such organizations were understaffed or had a limited capacity to help.

A final feature of accessibility that hybrid gardens navigated was their relationship with the wider community when it came to the harvesting of garden produce by non-members. At food justice gardens, community harvesting of produce was part of the driving purpose; at hobby gardens, this practice was considered food theft and was highly discouraged. In hybrid gardens, the

response to harvest from non-members ranged. In some instances, it was also considered theft and was frowned upon and actively mitigated. One garden manager said that a lot of food theft had been occurring in their garden, despite signage asking visitors to attend scheduled potlucks in the garden if they needed free food. However, produce theft continued at the garden and some members decided not to come back in subsequent years due to their losses of produce. On the contrary, in another community garden located in a densely populated neighborhood, the manager explained that harvest by the community was not considered “problematic.” They said,

I don't think a lot of people who are just walking past will harvest much, but we certainly don't worry about it if they do. It's supposed to be a community garden...It actually makes me happy, if someone's walking their dog and they grab some cherries or a zucchini—don't come in and strip the garden, and we've never had that happen—maybe they'll think [the garden] is a good idea.

This range of responses to non-member harvest embodies the diversity that hybrid community gardens expressed. By combining food security gardening and gardening for recreation and enjoyment all in one space, hybrid gardens were focused on both improving the food system while also providing opportunities for their participants. As such, when non-members harvested produce it may have been accepted as part of the broader food justice movement or discouraged because of its impact on individual gardeners' efforts, depending on the garden. This tension speaks to the context-dependent nature of understanding

community gardens, especially for hybrid gardens which varied more widely in their form and function than food justice gardens or hobby gardens did.

Rules

Just as hybrid gardens had more relaxed sign-up requirements, these gardens also had less strict expectations of their gardeners' plots. Hybrid gardens were not as formal as hobby gardens and as a result, garden expectations were more flexible. This was especially true in hybrid gardens with larger populations of immigrant gardeners. Discussing the garden expectations in their space, one manager explained,

So, I would say, [the other manager] and I have standards, right. Like, we have an expectation of what we would like [the garden] to be, based on our legacy agreement, and we're in an urban environment...the property is at the front of the church so there's a need for maintenance because of that. But that's about where my concern for that ends...it's also a community garden, you know, we just have to accept that everyone's got their own approach to it. You can't cultivate everybody. So, I try very hard to strike a balance.

Although this manager recognized their desire for the garden to conform to a certain aesthetic style, they ultimately did not want to infringe on the ability for individual members to garden their own way, especially in their garden with a large immigrant population. Unlike hobby gardens which often required compliance with certain aesthetic standards, hybrid gardens tended to be more

understanding of imperfect garden upkeep and cultural differences that produced diverse gardening outcomes.

Despite being more relaxed on garden upkeep rules, some hybrid gardens still had requirements on what could or could not be planted or done within the gardening space. These restrictions prohibited things like tall plants or structures that might shade other garden plots or plants that spread rapidly, like mint. But of the hybrid gardens with additional restrictions, many managers explained that they were often quite lax on enforcing them. One garden manager said that they asked participants not to plant “vining plants that would get really woody.” However, they continued to say, “People [plant them] anyway. I don’t know if they realize what a vining plant is, so, we have the rule but we don’t really enforce it.” In this garden as in other hybrid gardens, while some rules were agreed upon in the gardener contract, minor rule-breaking was often ignored or forgiven. Another garden manager shared that they did not have any restrictions on what gardeners could grow at all. They said, “We don’t [have any restrictions], it hasn’t been an issue. I know some gardens...you know, have things that they don’t want you to grow. But we haven’t imposed any rules on not being able to grow anything.” While some hybrid gardens had planting restrictions (whether they were enforced or not), others avoided these restrictions altogether and instead allowed their gardens to take on organic forms as their participants shaped them.

One rule at some hybrid gardens which was not present in any of the hobby gardens, and did not apply to food justice gardens, was the requirement of a set number of seasonal volunteer hours. At five of the hybrid gardens,

members were required to complete volunteer hours at the garden site in addition to their individual plot upkeep. Volunteer hours were meant to address the communal aspects of a garden that individuals would not necessarily tend to when working in their own plots, such as garden pathways, pollinator plants, and shared compost. While volunteer hours can be important for upkeep in these gardening spaces—especially if the fees are so low that the garden cannot afford to hire anyone to maintain the space, or they do not have the institutional support for management like city-run gardens do—volunteer hours increase the time commitment that gardeners need to participate. This requirement may have made hybrid gardens less accessible to community members who only have a few hours a week to stop by a garden between work, childcare, and other individual responsibilities.

However, despite “requiring” volunteer hours, many of the hybrid garden managers shared that again, they were relaxed in enforcing these requirements. One manager said that while the garden agreement requires six volunteer hours a season, in actuality the rules were “loosey-goosey.” They said, “We maybe get 25-30% of gardeners who show up to workdays,” especially as the weather gets hotter during the summer growing season. But even with the low turnout, gardeners in these spaces were not barred from joining again the following year. This tension between creating rules to manage the space and then relaxing enforcement of the rules to ensure that the garden is more widely accessible was characteristic of the dual-purpose of hybrid gardens. Hybrid gardens attempted to find a way to walk the line between gardening as a hobby and gardening for food

security purposes; between being structured and rules-oriented, and accessible and open.

Benefits

As one purpose of hybrid gardens was to provide access to fresh produce at a lower price, it was expected that participants derived food security benefits from these gardens. Indeed, managers expressed that while gardeners who participated were not always food insecure, they often relied on their gardens to supplement their diets. One manager said,

I know there are a couple of people that, I don't know that 'food insecurity' is exactly the right word, but they are—don't have as much disposable income, or whatever. And so, I think it allows them to have a source of good food at relatively inexpensive cost.

Unlike food justice gardens that catered directly to vulnerable, food-insecure community members, hybrid gardens were not established to provide free food to bolster the food justice system. However, they did offer much lower prices than hobby gardens and created a welcoming and flexible environment that may appeal to a broader set of gardeners. Garden managers explained that their gardens helped alleviate the costs of fresh and organic produce for participants who wanted these goods but could not afford to purchase them consistently.

On top of providing low-cost organic foods, hybrid garden managers also explained that their gardens were particularly important for immigrant and refugee gardeners, as they endeavored to be. Hybrid garden managers often reported that their gardens had diverse populations and shared that their

gardeners received a lot of benefits from participating in these spaces. One manager said,

We have a lot of New American gardeners that are growing on our plot. And so, like, where we're located there are a lot of apartment buildings that don't have yards...I know many gardeners that live in those apartment buildings but then have plots...sort of to make up for not having land, which is something that from their countries of origin they're pretty used to having.

Similarly, the manager of another hybrid garden which was created almost exclusively for a local immigrant population, explained that the gardeners live in nearby apartment buildings, so the garden provided much-needed access to land. Moreover, this manager said, "I think a lot of [the gardeners] probably miss the gardening they used to do in [their home countries]," so they joined the garden. They continued, "A lot of the Somali gardeners have said they used to farm in spaces the size of the whole lot!" Through community gardening, participants could grow culturally relevant foods using their preferred techniques, which likely provided both improved food security and cultural benefits for their gardeners.

In addition to supplementing participants' diets with cheaper organic food and providing land access, gardeners at hybrid gardens could receive learning benefits from participating. Garden managers expressed cultivating collaborative environments where gardeners could learn from and teach one another. One manager said of their space, "It's a learning garden. It wouldn't work well for

people who are really set in their ways.” Like in food justice gardens, many hybrid gardens focused on building community and creating opportunities for gardeners to work with one another. Another manager explained that their garden was a “place to grow food, build community, and educate gardeners.” A gardener who was present during this interview shared with me that not only did they appreciate having “food for free...or, almost free,” but that the garden was also a way for them to be creative and experiment. Hybrid gardens made learning a core part of their mission and ensured that gardeners at any skill level could be involved in the learning process.

Hybrid gardens provided a multitude of benefits to their gardeners and their communities. They worked to bridge the purposes of food security and hobby gardening by cultivating accessible and flexible spaces that participants could shape into gardens that meet their needs. As a result, hybrid gardens turned out a variety of benefits for their diverse gardeners, resulting in multi-use spaces in which their varied forms followed their many intended functions.

Discussion

This research analyzed and defined the different forms that a sample of community gardens in the Twin Cities Metropolitan Area expressed. Community gardens are routinely characterized as shared spaces where food justice, community building, and neighborhood resilience are central to their existence. Yet, these findings show that while some community gardens in the area embodied this narrative, many others neither prioritized nor meaningfully

produced all of these outcomes. Although the gardens in this sample shared some broad similarities, they differed in distinct ways such that their internal features were characteristic of what I have categorized into three types of gardens: hobby gardens (n=18), food justice gardens (n=4), and hybrid gardens (n=12). In pursuit of their intended purposes, gardens established both physical and nonphysical features that defined how accessible and structured their gardens were, the rules in each space, and what outcomes participants derived. By recognizing these differences, community garden practitioners may be better equipped to design and manage gardens in specific ways to foster accessibility and community-wide benefits.

This study adds to the growing literature on community gardens that organize community gardens into varying management forms (Payne & Fryman, 2001; Kingsley & Townsend, 2006; Nettle, 2014; Fox-Kämper et al., 2018). Aspects of both top-down and bottom-up management were present in the gardens of this study, where hobby gardens operated in a more top-down fashion and food justice gardens utilized a more bottom-up approach. For instance, many hobby gardens in this study were operated by city parks departments, whose employees managed the gardens whether they themselves gardened there or not. In those cases, parks departments developed the initial garden designs, drafted the garden agreements, and then monitored and enforced the garden rules. By contrast, food justice gardens were community-run, where managers sought input from residents and neighbors on all decisions, including how to organize the garden's layout, what to plant, and when to schedule work sessions.

In these ways, the diversity of gardens in this sample demonstrated the range of management forms seen in other community garden studies. However, as Nettle (2014) points out, categorizations of management may be “blurred” such that gardens are not necessarily top-down nor bottom-up in all aspects. Hybrid gardens may occupy such a middle ground, where the gardens were typically planned, created, and managed by a select few individuals with governing power over the garden, but managers utilized input from gardeners to make on-the-ground decisions.

Although this research does not explicitly utilize a top-down, bottom-up management framework, it highlights similar aspects of management decisions that make gardens more or less accessible, influence how rules-oriented they are, and determine the outcomes gardeners receive. These features are important for garden managers and parks departments to consider as they negotiate the degree to which their gardens will be controlled from the top-down or bottom-up. The ways that gardens are used, and by whom, fundamentally depend on how gardens are structured and managed. Moreover, by not considering gardeners’ needs and preferences, it is possible that gardens will not be used by their target demographic, or that gardeners will ultimately choose to reshape the space to their liking.

One example is the now-raised South Central Garden of Los Angeles. Mares and Peña (2010) observed a unique internal garden conflict between the City of Los Angeles, who managed the garden, and the 350 gardeners who used it. During the garden’s formation, the city opted to divide the garden into

individual plots using chain link fences to demarcate each plot. However, gardeners preferred a more traditional *nopal* (cactus) fencing and worked to replace the fencing with cactus plants or in some instances, fruit-bearing trees and shrubs. Mares and Peña explained, “The issue of management was not really about making a choice between *nopales* and chain link fencing...[but that] the City of Los Angeles seemed not to respect this process of autonomy” in the garden. Although the garden was ultimately demolished in favor of development, such internal management conflicts may have been avoided if the garden managers worked directly with gardeners to co-develop the space, rather than assigning rules from the top without consideration of the gardeners’ preferences. Moreover, the use of gardeners’ expertise and their preferences could have been incorporated from the beginning to create a more functional space for everyone.

Some gardens, despite labeling themselves “community” gardens, realistically only serve a specific subset of the community. Indeed, several garden managers of the hobby gardens in this study described the tension of using the term “community” when referring to their gardens, because not everyone was necessarily welcome. My discussions with garden managers about the term “community” parallel Drake’s (2014) examination of governmentality in urban community gardens and Kurtz’s (2001) study of six community gardens in Minneapolis. These studies found that garden organizers’ intentions and perceptions of “community” are influential in molding how inclusive or exclusive the spaces are. My conversations with garden managers reached a similar conclusion: those managers who perceived their gardens to be for a community

of gardeners, rather than a garden for the community, were ultimately more exclusive.

In particular, hobby gardens were more expensive to join, had stricter expectations and rules about what gardeners could and could not do in their individual plots, and provided benefits to individuals more so than entire neighborhoods. At its core, this is due to the purpose of hobby gardens. Rather than seeking to cultivate open-access spaces for anyone to harvest from in the name of food justice, hobby gardens divided their gardens into individual plots for residents and their families to enjoy on their own. But the result of this structuring is that hobby gardens are less like “community” gardens, and more like privatized garden plots all grouped together. Further, as aforementioned, ten of the hobby gardens in this sample were owned and operated by city governments in suburbs of the Twin Cities, and most of these were located on city park property. Because participants must pay to access and utilize garden spaces created on public property, the establishment of community gardens on city park property may actually represent more of an enclosure of commonly held land than the creation of a community space for all.

In contrast, food justice gardens, as well as some hybrid gardens, were meant more to be gardens for the community. Because food justice gardens operated as open-access commons, any person was allowed to enter, participate in, and harvest from them. Food justice gardens sought to address issues of food insecurity, and as such ensured that the form of their gardens aligned with this intended function. By purposefully making the gardens highly accessible and

keeping the few rules flexible and simple, these spaces were able to provide some food benefits to a broader set of community members.

This is not to suggest that hobby gardens are not valuable assets for their communities; certainly, opportunities for residents to grow their own foods, meet their neighbors, and connect with nature in the city are to be lauded and supported. However, these findings challenge the notion that community gardens necessarily act as an avenue for serving the broader community, simply because individuals garden in a shared space. The physical structures, the expectations of gardeners, the rules-in-use, and the outcomes participants derive all work in tandem to create diverse garden spaces in which levels of food justice, community building, and benefits are highly context-dependent.

Moreover, it is important to recognize that community gardens are not inherently diverse and inclusive spaces. Community gardens, and urban agricultural initiatives more broadly, frequently invoke discussions of inclusivity and diversity (Horst, McClintock, & Hoey, 2017). Practitioners often claim that community gardens serve as welcoming gathering spaces for gardeners to connect with their neighbors and build community (Draper & Freedman, 2010). Yet, as Hoover (2013) points out, urban agriculture in many instances is a largely White and exclusive practice. Guthman (2011) compared the Whiteness of urban agriculture with that of farmers' markets, drawing a parallel between fallacious notions of food and health consciousness as being characteristic of White consumers more so than consumers of color (p. 270). Regarding community gardens specifically, research has shown that in Denver (Teig et al., 2009),

Philadelphia (Meenar & Hoover, 2012), and New York City (Reynolds, 2015), community garden initiatives are frequently led or controlled by White residents even in predominantly non-White neighborhoods and predominantly non-White gardens.

While questions of race and Whiteness were not explicitly asked about in my interviews, these topics often surfaced. Managers routinely shared that their gardens were primarily White, with few or in some instances no gardeners of color, even though many managers said they would have liked to cater to a broader demographic of gardeners. Considering the ways that gardens are managed internally may help researchers and managers determine how community gardens fit into the fabric of White-coded space in urban agriculture. As in the South Central garden where managers created rules that did not reflect the cultural preferences of gardeners, it is likely that community gardens in the Twin Cities Metropolitan Area may only cater to a specific set of gardeners because of their internal practices. Additional research on the demographics of community gardens in the Twin Cities area and connections between race, socioeconomic status, and culture as they relate to the management of gardens can elucidate the ways that contemporary community gardens may contribute to the Whiteness and exclusivity of urban agriculture.

Conclusion

In addition to enhancing our understanding of community gardens, this research may improve future community garden initiatives. Many of the gardens

in this sample created their rules based on the rules of other gardens in the region. Knowing this, as new gardens are created—especially in the context of the COVID-19 pandemic—or old ones are revamped, it is important for gardeners, city officials, and planners to engage in transparent discussions of gardening spaces to illuminate the varied structures and outcomes of different gardens. By better understanding existing practices, emerging community gardens can model their spaces on those gardens which achieve their desired outcomes. For instance, as the City of Minneapolis is instituting its first city-run community garden program, city planners are working with community garden leaders from food justice gardens in the hopes that new gardens in Minneapolis parks will similarly serve a broad demographic of residents and improve the local food system. As the City determines how to structure its gardens, it may consider having low fees and financial aid opportunities, tools available on-site, flexible rules, and gardener agreements available in multiple languages, in order to create a more welcoming and accessible space for a broad set of gardeners.

Through this research, interviews with garden managers presented only one angle on the gardens in question. Community garden managers cannot speak for all gardeners on how they perceive the environments and derived outcomes of participating in gardening spaces. As such, further research on gardeners' personal experiences may generate new understandings of gardens as food-justice-oriented or hobby-oriented, or as commons or enclosures. Furthermore, gardens selected in this sample all possessed some level of formal legitimacy through zoning, leasing, or institutional support. Many “guerilla

gardens” operate in urban environments without these formal permissions, where gardening practices may differ significantly from community gardens with formal titles. A deeper exploration into guerilla gardening practices in the Twin Cities Metropolitan Area may further contribute to our understanding of local community gardening initiatives.

It is important to recognize that the categorization of gardens in this paper is not absolute; gardens are extremely diverse. But exploring this diversity and the patterns that gardens exhibit is important because it challenges our understanding of what community gardens are. It is not necessarily the case that community gardens are inherently political initiatives through which gardeners confront social issues such as gaps in food access, the inequitable distribution of greenspace, and disparate outcomes of public health. Although ostensibly a shared purpose of many community gardens is to generate such outcomes, those gardens which operate through exclusive practices may instead perpetuate the forces which lead to inequitable outcomes based on race, class, and citizenship. On the contrary, those gardens which are more accessible through monetary and cultural means, establish welcoming atmospheres with flexible rules, and ensure their participants receive ample benefits may benefit a more diverse demographic of community members. To meaningfully engage with social issues through gardening, if that is what a given community garden intends to do, requires a commitment not only in purpose, but also in form.

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Appendix A – Index of community gardens

Garden	Type	Age	Region	Property ownership	Size of garden	Structure	Number of plots	Resident requirement
ID #	Hobby, food justice, hybrid	Years	Twin Cities, Suburb	Landowner	Acres	Individual, communal, both	# of individual plots	Yes, No, No but preference for residents
1	Hybrid	10	Suburb	Church	0.25	Individual	32	No
2	Hybrid	6	Twin Cities	Private	0.20	Individual	20	No
3	Hobby	8	Suburb	City	0.20	Individual	39	Yes
4	Hybrid	8	Suburb	Nonprofit	0.25	Individual	41	No
5	Hobby	8	Twin Cities	City	3.50	Both	105	No
6	Hybrid	8	Suburb	Church	0.10	Both	72	No
7	Hobby	45	Suburb	City	0.90	Individual	27	Yes
8	Hobby	76	Twin Cities	School	3.50	Individual	190	No
9	Hobby	9	Suburb	School	0.20	Individual	29	No
10	Hobby	10	Suburb	City	3.00	Individual	140	Yes
11	Hobby	15	Suburb	Church	1.50	Individual	196	No
12	Hobby	10	Suburb	Church	1.20	Individual	40	Yes
13	Hobby	15	Suburb	Nonprofit	0.90	Individual	42	No
14	Hybrid	8	Twin Cities	Private	0.10	Communal	-	No
15	Hybrid	7	Suburb	Church	3.60	Individual	165	No
16	Hybrid	8	Suburb	Church	1.10	Both	57	No
17	Food justice	20	Twin Cities	Nonprofit	0.25	Communal	-	No
18	Hobby	12	Twin Cities	School	0.30	Individual	30	No
19	Hybrid	17	Twin Cities	City	0.70	Both	50	No
20	Hobby	10	Suburb	City	0.25	Individual	20	No
21	Hobby	22	Suburb	City	0.50	Individual	47	No
22	Food justice	9	Twin Cities	Church	0.05	Communal	-	No
23	Hobby	18	Suburb	City	0.40	Individual	75	No

Garden	Type	Age	Region	Property ownership	Size of garden	Structure	Number of plots	Resident requirement
ID #	Hobby, food justice, hybrid	Years	Twin Cities, Suburb	Landowner	Acres	Individual, communal, both	# of individual plots	Yes, No, No but preference for residents
24	Hobby	8	Twin Cities	City	0.30	Individual	24	No
25	Hobby	10	Suburb	City	0.20	Individual	27	No
26	Hobby	10	Twin Cities	Neighborhood	0.40	Individual	24	No
27	Food justice	5	Twin Cities	Neighborhood	0.10	Communal	-	No
28	Hybrid	47	Twin Cities	Neighborhood	0.15	Individual	20	No
29	Hobby	8	Twin Cities	Neighborhood	0.10	Communal	-	No
30	Hobby	9	Suburb	City	0.15	Individual	15	No, preference
31	Hybrid	6	Twin Cities	School	0.05	Individual	14	No
32	Hybrid	4	Twin Cities	Church	0.25	Both	11	No, preference
33	Food justice	3	Twin Cities	City	0.25	Communal	-	No
34	Hybrid	12	Twin Cities	Private	0.80	Individual	40	No, preference

Appendix A – Index of community gardens, cont.

Garden	Annual fee	Financial aid	Shared tools	Requires volunteer hours	Externally fenced	Locked	Food justice focus	Members gardening for food security
ID #	Dollars	Yes, No, By request	Yes, No	Yes, No	Yes, No, Partial	Yes, No	Yes, No	Yes, No
1	\$32	By request	Yes	Yes	Yes	No	Yes	Yes
2	\$40/\$20/\$10	By request	Yes	Yes	No	-	No	Yes
3	\$30/\$20/\$15	By request	No	No	No	-	No	Yes
4	\$15	Yes	Yes	No	No	-	No	Yes
5	\$35/\$20	Yes	Yes	Yes	No	-	No	No
6	\$10	By request	Yes	No	No	-	No	No
7	\$108/\$72/\$54	No	No	No	No	-	No	No
8	\$35	By request	Yes	Yes	No	-	No	No
9	\$50/\$30	No	Yes	No	Yes	No	No	No
10	\$50	No	No	No	Yes	No	No	Yes
11	\$50/\$40	Yes, for residents	No	No	No	-	No	No
12	\$40	No	No	No	No	-	No	Yes
13	\$125	No	Yes	No	No	-	No	No
14	\$20	Yes	Yes	No	No	-	No	Yes
15	\$10	No	No	No	No	-	No	Yes
16	\$40/\$20	By request	Yes	Yes	No	-	No	No
17	-	-	Yes	No	No	-	Yes	Yes
18	\$40/20	By request	Yes	No	No	-	No	No
19	\$25	By request	Yes	Yes	Partial	Yes	No	Yes
20	\$35/\$15	No	No	No	Yes	No	No	No
21	\$35	Yes	No	No	No	-	No	No
22	-	-	Yes	No	No	-	Yes	Yes
23	\$25	No	Yes	No	No	-	No	No

Garden	Annual fee	Financial aid	Shared tools	Requires volunteer hours	Externally fenced	Locked	Food justice focus	Members gardening for food security
ID #	Dollars	Yes, No, By request	Yes, No	Yes, No	Yes, No, Partial	Yes, No	Yes, No	Yes, No
24	\$35/\$20	No	Yes	Yes	No	-	No	No
25	\$30	By request	No	No	Yes	No	No	No
26	\$20	No	Yes	Yes	No	-	No	Yes
27	-	-	Yes	No	Yes	No	Yes	Yes
28	\$25	Yes	Yes	Yes	Yes	Yes	No	No
29	-	-	Yes	No	No	-	No	No
30	\$35/\$25/\$20	No	No	No	No	-	Yes	No
31	-	-	Yes	No	Yes	No	No	Yes
32	\$40	By request	Yes	No	Yes	Yes	Yes	Yes
33	-	-	Yes	No	No	-	Yes	Yes
34	-	-	Yes	No	No	-	Yes	Yes

Appendix B – Map of the community gardens, by type

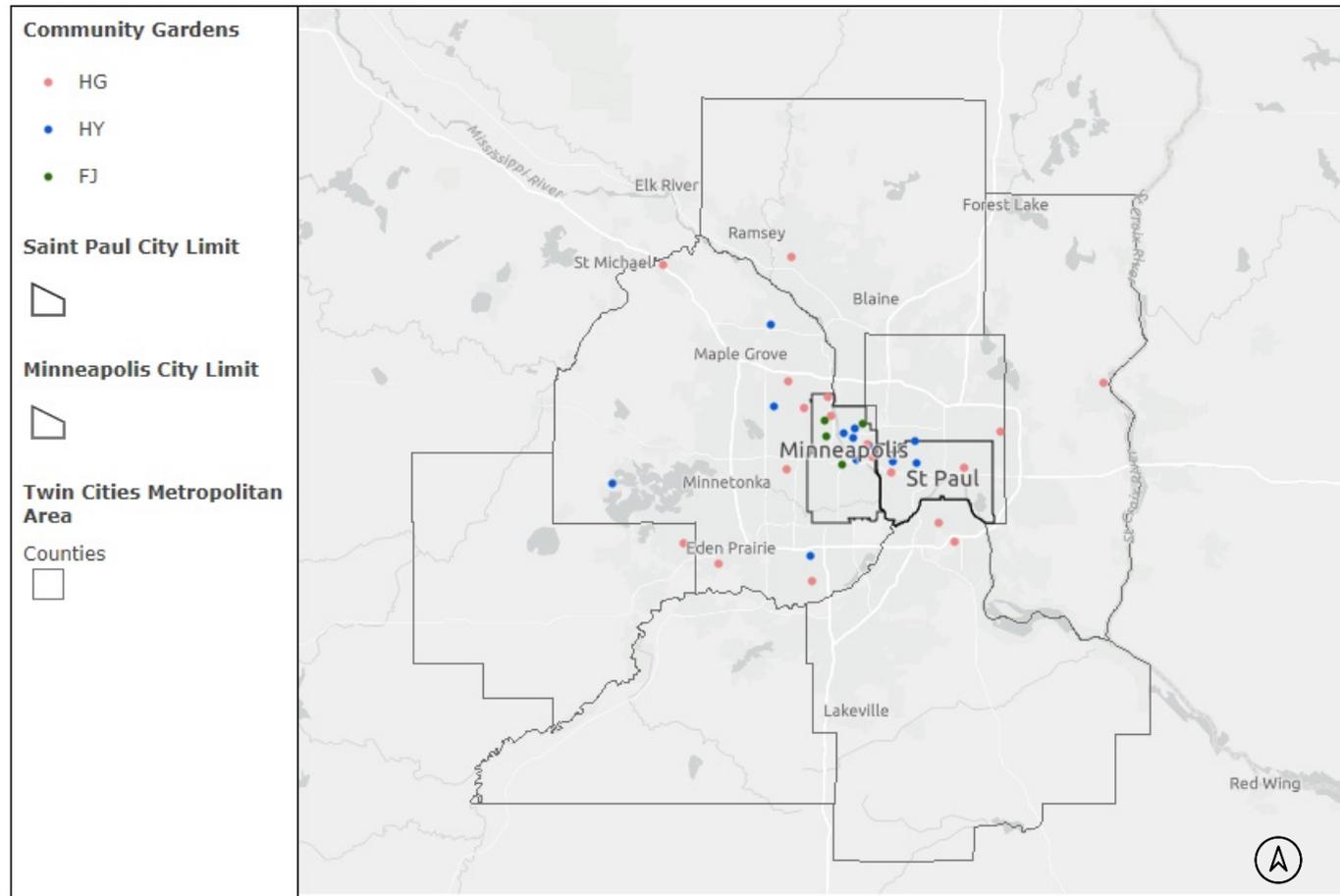


Figure 1: This map shows the distribution of the community gardens included in this study across the Twin Cities Metro Area. The pink dots are hobby gardens (HG), the blue dots are hybrid gardens (HY), and the green dots are food justice gardens (FJ). The bounds of the Twin Cities, Minneapolis and Saint Paul, are outlined in the center.