RECIPROCITY, INTERDEPENDENCE, AND THE COMMONS: HOW COMMUNITY GARDEN ORGANIZERS ENGAGE IN TRANSFORMATIVE PRACTICES IN A LOCAL CONTEXT

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A Thesis

Submitted in Partial Fulfillment

of the Requirements for the Degree of

Master of Arts

in Sustainable Communities

Northern Arizona University

May 2023

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ABSTRACT

RECIPROCITY, INTERDEPENDENCE, AND THE COMMONS: HOW COMMUNITY GARDEN ORGANIZERS ENGAGE IN TRANSFORMATIVE PRACTICES IN A LOCAL CONTEXT

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Globally and locally, we are living through the climate crisis and its effects (IPCC, 2021). Change is clearly needed, yet environmentalists differ in their approaches. In this research, I wanted to understand radical approaches to environmental action in the context of community garden organizing. Community gardens are often seen as local solutions to the climate crisis (Artmann & Sartison, 2018; Dor et al., 2021; Mancebo, 2018) yet they are often organized through mainstream environmental approaches that are limited in their ability to address the root causes of the climate crisis (Engel-Di Mauro, 2018; McClintock, 2014; Walker, 2015). I look specifically at ecofeminist organizing practices within six collective gardens by interviewing nine collective garden organizers. I define collective gardens as gardens where most if not all of the garden is collectively managed, and there are few to no individualized plots. I found that collective gardens engage with transformative practices by demonstrating practices of reciprocity, interdependence, and the commons. These community-building elements (reciprocity, interdependence, and the commons) help to make these gardens alternatives to the capitalist system in the ways that they relate to humans, more-than-human beings, and the land beyond capitalist relations. Collective gardens can help us imagine alternative futures beyond capitalist ideology. These findings suggest that collective gardens may be ideal spaces to engage in building resilience through community building, and are ideal spaces to connect us to the more-than-human world, a critical component to engage with the climate crisis holistically.

ACKNOWLEDGEMENTS

This thesis focuses on the interdependence we all have with our communities, and I recognize that this thesis would not have been shaped in this way without the support of my community.

To everyone at the SSLUG Garden, you are the inspiration for this thesis. I cannot thank you all enough for your inspiration, friendship, motivation, and more. Working in the garden and connecting with all of you always reminded me why I wrote this, and the garden always rejuvenated me. Thank you also to everyone at the CSV Office and Peter Friederici for your continued support of my service term. I am so thankful for the opportunity to have contributed to the SSLUG Garden and could not have done it without your support. I hope you all continue to bring energy and community to the garden, it really is the most special place at NAU.

To my cohort, I am so incredibly lucky to have met you all. Thank you for being there through all of the hard times and always being down to celebrate the wins. I know how lucky I am to have had the best cohort and I'm so sad our time together is coming to an end. Keep being awesome!

To Nora, Sean, and Teresa, thank you for taking the time to read through this lengthy thesis and for all your help and guidance. Thank you for sharing your passion for ecofeminism with me and for challenging me to help me make my thesis something I can be proud of. Nora and Sean, thank you as well for challenging me in your classes and for always inspiring me.

To Josh, thank you for moving to Flagstaff with me, for making me dinners after late night classes, for supporting me through all my breakdowns, and for always being there for me.

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INTRODUCTION

1. Problem Statement

Globally and locally, we are living through the climate crisis and its effects. In the Western US where I have lived for the past several years, forest fire season is becoming longer and more severe (Zhuang et al., 2021). Extreme weather events are increasingly common such as the atmospheric rivers dumping rain and snow over the western states (Corringham et al., 2019). A water shortage has been declared for the Colorado River which supplies a majority of the water for the southwestern states (Trujillo, 2021). The International Panel on Climate Change (IPCC) clearly describes what we can expect with each degree of additional warming, most notably an increase in heatwaves, drought, heavy precipitation, and extreme weather events (IPCC, 2021).

Change is clearly needed. However, many environmentalists differ in their approach to solutions (Hendry, 2020; Sturgeon, 2009). In this research, I want to understand radical approaches to environmental action in the context of community garden organizing. Community gardens are often seen as local solutions to the climate crisis (Artmann & Sartison, 2018; Dor et al., 2021; Mancebo, 2018) yet they are often organized through mainstream environmental approaches that are limited in their ability to address the root causes of the climate crisis (Engel-Di Mauro, 2018; McClintock, 2014; Walker, 2015). In this section, I will begin by identifying mainstream environmental approaches and then distinguish what critical environmental approaches are and specifically an ecofeminist approach. I will then contextualize community gardens in climate solutions and describe how the more common allotment gardens are organized through mainstream environmental approaches and how this limits their ability to be radical solutions to the climate crisis.

1.1 Mainstream environmentalism

Mainstream environmental approaches to climate action operate within dominant, oppressive ideologies and therefore do not address the root causes of the climate crisis (Gaard, 2011; Hendry, 2020; Sturgeon, 2009; Warren, 2000). Gaard (2015) argues that the traditional standpoint of environmentalism comes from the environmental sciences, such as geography, oceanography, paleoclimatology, etc., and while these fields do contribute to climate solutions, they also neglect important perspectives and values that women often organize around. Approaching the climate crisis from a techno-science perspective also does not engage in the underlying power dynamics that have led to the climate crisis (Gaard, 2015).

Sturgeon (2009) and Plumwood (1993) would additionally argue that mainstream environmentalism is based on some problematic assumptions. This includes a dualistic view of things like nature/culture, women/men, animals/humans which contributes to a sense that humans are separate from nature (Plumwood, 1993; Sturgeon, 2009). This is prevalent in mainstream conservation and preservation movements that see "wilderness" as spaces that need to be conserved/preserved from human impact (Hendry, 2020; Merchant, 2004). This dualistic view justified the forcible removal of many Indigenous peoples from traditional homelands for the sake of preservation of nature, especially in places that became national parks (Merchant, 2004; Spence, 1996).

Even our language framing contributes to this dualistic view by calling all non-human entities "nature" which is understood as separate from "humans." Abram (1996) uses the term "more-than-human" to suggest the capabilities and lived realities of non-human nature. Abram

would argue that this perceived separation from nature is at the root of environmental degradation and the climate crisis and that our language framing of non-human nature contributes to this perception. To invoke this more expansive idea of nature, I will continue to use “more-than-human” to describe “nature” and “more-than-human beings” to describe all non-human entities.

Another problematic practice of mainstream environmentalism is “naturalization” to justify the way things are by finding examples in nature that demonstrate a point of supposedly “natural” social order (Sturgeon, 2009). Naturalization has been used for both progressive and conservative justifications in many ways. One of the most well-known examples of this is the naturalization of penguins’ sexuality and family values to justify both heterosexuality and homosexuality (Hendry, 2020; Sturgeon, 2009). Naturalization has often been used to justify race, class, and gender inequalities and hierarchies (Sturgeon, 2009). Sturgeon argues that while naturalization has often been used in environmental narratives, environmentalists should be critical of these narratives since they can be used to justify oppressive systems.

Working within a capitalist, neoliberal ideology is another failure of mainstream environmentalism. Capitalism is of course known to be the dominant economic system for the USA (where my research is centered) and much of the Western world. In my thesis, capitalism refers to both an economic system and the underlying ideology that justifies this economic system. Capitalism dominates our ways of relating to just about anything. Capitalist ideology values and prioritizes profit which is gained through the exploitation of people and the more-than-human world (Wood, 2002). Capitalism reshapes all interactions through the lens of the market economy - where all means of production are accessed. This means that family care, cultural (re)production, land relations, the care economy, and more are most often viewed

through the lens of the market economy. As I will expand on in my Theoretical Framework chapter, filtering all aspects of life through capitalism leads to the exploitation of human and more-than-human beings.

Neoliberalism builds upon capitalist ideology and centers the individual over the collective (Brown, 2015). The focus on individual (neoliberal) profit (capitalism) prioritizes the wealth and well-being of the individuals who own capital wealth, and therefore the workers and the environments used to create that wealth are exploited and harmed. Neoliberal capitalism, therefore, backgrounds systemic injustices and contributions to the climate crisis (Brown, 2015).

Neoliberal capitalism is important to understand in the context of this thesis because mainstream environmental solutions that work within neoliberal capitalist ideology are not addressing the root causes of the climate crisis but rather "greenwashing" their "solutions" while maintaining the status quo. An example of this is g*reen consumerism* which both encourages solutions through market capitalism and places the responsibility on the individual and through the economy, thereby working within capitalist and neoliberal ideologies respectively (Gaard, 2015). Dualisms, naturalization, and capitalist and neoliberal ideology are prevalent in mainstream environmental perspectives and approaches (Gaard, 2015; Sturgeon, 2009).

1.2 Radical ecofeminism as an approach to the climate crisis

My research focuses on ecofeminism as an alternative approach to the climate crisis. Ecofeminism, at its root, is a framework that recognizes the interconnections between all beings and all oppressions (Gaard, 2011; Hendry, 2020; Warren, 2000). This view is focused on the interconnections of (1) human and more-than-human beings and (2) all oppressions. Patriarchy is

targeted as the dominant, oppressive system that contributes to both a separate view of human and "nature," and the numerous oppressions faced by humans and more-than-humans. As I will expand on in my Theoretical Framework chapter, ecofeminism provides insight into the interconnections between the human and more-than-human world and the interconnections of all oppressions.

I draw from the more radical approaches to ecofeminism, and I see these radical approaches as transformative forms of climate action. A radical approach is one that "challenges or threatens the roots or foundations of a belief system" (Hendry, 2020, p. 80). Radical environmental approaches take a standpoint that recognizes oppressive systems as the origin of the climate crisis and engages in shifting power dynamics and undoing those systems. Ecofeminism is not inherently radical, but some ecofeminist approaches would fall under this definition of radical. In this thesis, I am specifically using radical ecofeminist approaches, which identify how oppressions of various groups are "interconnected systems" (Warren, 2000, p. 2). The radical approach to ecofeminism that I use sees gender-based oppression and the exploitation of nature as both originating from the same root causes (i.e. oppressive ideologies, and political or economic systems) and therefore aims to address those root causes.

1.3 Community gardens as solutions to climate change

Urban agriculture, which includes community gardens, is often considered to be a local approach to climate change because of urban agriculture's ability to reduce transportation emissions, increase local biodiversity, provide green spaces that reduce the urban-heat-island effect, provide greater food access, increase social cohesion, and provide numerous health

benefits (Artmann & Sartison, 2018; Dor et al., 2021; Humaida et al., 2023; Mancebo, 2018; Wakefield et al., 2007). However, the way community gardens are organized and managed often falls into mainstream environmental approaches (Engel-Di Mauro, 2018; McClintock, 2014; Walker, 2015). These approaches to community gardens do not aim to challenge the oppressive systems at the root of the climate crisis.

The most common structure of a community garden is an allotment plot which has neoliberal qualities that limit the ability to provide a transformative solution to the industrial food system (Tornaghi, 2014). Allotment gardens are gardens that are broken up into individual plots that are rented out so that individuals are responsible only for their allotted garden bed. This reinforces neoliberal ideology since the garden is made up of individually managed garden plots (Engel-Di Mauro, 2018; McClintock, 2014; Tornaghi, 2014).

Community gardens may also reproduce patriarchal values of techno-science solutions as described by Gaard (2015) when they focus on the science of gardening in a mechanistic and reductionist way. A mechanistic approach to gardening can increase the perceived separation of human and more-than-human worlds in the garden rather than encourage relationships of reciprocity and interdependence.

If community gardens are considered a solution to the climate crisis, they must engage in radical practices that aim to challenge and dismantle the oppressive ideologies and systems that created and perpetuate the climate crisis. This research aims to consider what radical practices look like and how they can be facilitated in a community garden.

2. *Personal Motivation*

As a graduate student at Northern Arizona University (NAU), I am the coordinator of the SSLUG Garden on campus. When I came to this garden, it had been neglected for several years and was only just recently being cared for. However, this garden was much smaller than the previous garden I had worked at the University of Utah where we were harvesting dozens of pounds of produce a week for the campus food pantry. I did not see that same capability in this smaller garden and was at first nostalgic for the garden I left.

However, I quickly realized the strength and beauty of this garden were found in the dedicated SSLUG Club members who showed up to every garden shift and workshop. We quickly became a close community of friends which I know is what keeps many students returning week after week. I had not experienced this same level of community, reciprocity, and interdependence in the previous gardens I worked in. I found myself considering why this garden was different. I've had a plot at two community gardens designed in an allotment style where everyone has their own plot. In those allotment gardens, we were not reliant on the community of gardeners for the life of our plants. At the University of Utah campus gardens, we were dependent on one another, but we did not focus on engaging students, but rather on the production of food. While this is another important aspect of community food reproduction, this approach did not build community consciousness and reproductive knowledge. Through the SSLUG Garden, I have focused on building community consciousness and reproductive knowledge.

The SSLUG Garden is built on a community of students who are dedicated to climate action and to each other. This group of students continually inspires me and many students have voluntarily stepped up to take on more responsibility with the club and garden. The SSLUG Club

inspired my ideas for this research project which include: (1) how organizing through community gardens can be a form of radical climate action, (2) how relationships are formed and central to the "commons," (3) how reciprocity can be learned from the more-than-human world and encouraged in human-to-human and with human-to-nature relationships, and (4) how interdependence can build climate resilience, and shift us out of a neoliberal, capitalist ideology.

In my first semester as a graduate student, I read Tuck and Yang (2012) on decolonization which made me question my role as a white researcher on Indigenous land. I later read The Red Nation (2021) which makes a clear argument that climate action must be decolonizing because of how much colonization has contributed to the climate crisis, making it equally a decolonization crisis. I questioned and reflected on what I could or should do as someone who works closely with land relations and how to engage in decolonization. While I am not focusing my research on decolonization, I want to acknowledge the relationship between decolonization and climate justice. I would also like to acknowledge that many elements of ecofeminism that I will talk about in this research come from Indigenous knowledge. Reciprocity is a key element that I am looking into and this includes reciprocity with the Indigenous peoples whose land I am on. As a gardener, I am grateful for the land I work in a relationship with, and I also must remember the people who have been in a relationship with this land since time immemorial and be in a relationship with them in their decolonizing efforts.

3. *Research Question*

The research question that I aim to address through this research is: *how do radically ecofeminist community garden organizers facilitate a culture and practices of reciprocity and interdependence that build the commons in their gardening spaces?*

Looking at community gardens through an ecofeminist lens helps me identify radical approaches to the climate crisis. These are approaches that directly challenge oppressive ideologies and power dynamics. I want to gain the garden organizers' perspective to understand how radical practices are implemented, what challenges they face, and how they facilitate community consciousness of the values and reasons for radical practices. Some people consider radical community gardeners to be activists themselves since they are organizing spaces of resistance (Lloro, 2021). This framing of organizers as activists makes me think that organizers who consider their work as activism may put critical thought into organizing the garden in both social and physical ways. The organizers may or may not consider themselves radical ecofeminists but this framing points to the kinds of garden organizers I am looking to include in this research, ones who embody elements of radical ecofeminism.

4. *Significance*

The imperative for this research is to understand resistive ways collective gardens operate with the understanding that approaches to the climate crisis must confront dominating systems that have contributed to the climate crisis, such as patriarchy, neoliberalism, and capitalism. If we only engage in mainstream environmental action, we are only ensuring the continuation and longevity of these systems.

The purpose of my research is to understand how collective gardens demonstrate radical community-building. This community-building can contribute to building community resilience which is critical in the face of the climate crisis (Colding & Barthel, 2013; Feinberg et al., 2021; Menconi et al., 2020; Shimpo et al., 2019). More specifically, I am looking at radical,

ecofeminist organizing practices to envision more radical approaches to community garden organizing.

My research aims to contribute a visionary perspective to the academic research of potential ways that we could relate to human and more-than-human beings in alternative ways and ways that we could build community to ground climate organizing. I believe visioning alternative futures is crucial to climate organizing work because it is hard to imagine the end of capitalism, so we need to practice seeing and believing that we can move beyond capitalist dominance. The collective gardens I studied provide a tangible example of an alternative; they demonstrate an alternative way of relating to the land and to others in a radically different way than we do in capitalist spaces. This research will help me bring current practices into conversation with visioning the future potential of community gardens. I see collective gardens as effective spaces to organize both within the garden and for other forms of climate action (Walter, 2013). Therefore, envisioning what this space looks like and how collective gardens can be radical forms of the commons that build reciprocity and interdependence is important to climate organizing work.

This research will specifically benefit community garden organizers who want to engage in radical practices. The research aims to bring ecofeminist strategies and practices to light because there are activists engaged in transformative gardening practices but this is not the mainstream form of gardening and these practices may not be widely known. Having conversations and observing these radical practices will help me bring these into a conversation with the research already done on community gardens.

THEORETICAL FRAMEWORK: ECOFEMINISM

1. Introduction

The theoretical framework that I am viewing collective garden organizing through is ecofeminism. The primary assumptions that ecofeminism brings to my research are (1) an understanding of the interconnection between all beings including human and more-than-human beings and similarly that all oppressions are related through interwoven systems of domination and must be faced together (2) the belief that we are stronger in community than we are individually, and (3) that community-building is a crucial tool to withstand the numerous crises we face. I will expand upon these assumptions throughout this chapter.

I begin this chapter by describing the history of the ecofeminist movement to put this movement into perspective. I then go more in-depth with an overview of what ecofeminism is and how ecofeminism is distinguished from environmental and feminist movements. In this section, I also address the period when ecofeminism was essentially "canceled" and justify why ecofeminism has critical relevance to our current crises. I will end the chapter with a final section looking specifically at the three ecofeminist community-building elements that I focused on in this research: reciprocity, interdependence, and the commons, and describe what they are and how they fit into my research.

2. *History of the Ecofeminist Movement*

2.1 The death of nature, women, and magic

While the ecofeminist *movement* technically began in the 1970s, the parallel oppressions of gender and the more-than-human world go back to at least the European feudal societies of the Middle Ages (Federici, 2004; Merchant, 1980). At the time, feudalism was the dominant economic system (Federici, 2004). Serfdom grew as a way for the proletariat to gain safety from European landlords. For their work, serfs gained land to pass down through their families. However, this land and all their possessions were still the technical property of the landlords. This uniquely allowed for European serfs to have "access to the means of their reproduction" (Federici, 2004, p. 23). This meant that serfs were always able to provide for their families through their access to land.

However, class struggles became widespread between the serf and landlords and there was mass unrest as serfs organized revolts in an attempt to claim their surplus labor and be free of the landlords (Federici, 2004). On a mass scale, serfs would boycott their work in mass protest, so much so that landlords began to closely supervise their work antithetical to the beginnings of feudal society.

These class struggles can be understood as the struggle between the proletariat fighting for autonomy, and the bourgeoisie fighting for control that eventually led to the capitalist economic system. The need (in the view of the bourgeoisie) for constant supervision over the revolting serfs required a more disciplined labor force. Capitalism was in its infancy at this point, and the transition to a wage-labor force required a disciplined workforce. To do so, the bourgeoisie had to additionally fight for control over the proletariat body to turn it into a

"disciplined body" (Federici, 2004). This was happening at a time when pagan beliefs still heavily influenced the European proletariat. The proletariat would make decisions based on the positionings of the cosmos, or signs from the more-than-human world; in other words, the proletariat held on to a *magical worldview* (Abram, 1996; Federici, 2004). However, this magical ideology clashed with the new demand for a disciplined workforce, and the landlords needed to remove this earthly and bodily knowledge. To remove this worldview, the mechanistic worldview gained prominence (Merchant, 1980). Mechanism directly contradicts a magical worldview as this ideology views nature, the human body, and all entities and separate, controllable parts (Abram, 1996; Merchant, 1980). Therefore, for capitalism to become the dominant economic system, it had to "[attempt] to overcome our 'natural state,' by breaking the barriers of nature and by lengthening the working day beyond the limits set by the sun, the seasonal cycles, and the body itself" (Federici, 2004, p. 135), essentially breaking the world into controllable parts (Abram, 1996; Merchant, 1980).

To make this transition of economic systems, the proletariat was "encouraged" through violence - violence that focused on women's knowledge of their own bodies and the more-than-human world. Astrology, herbalism, and even the practice of abortion and contraception were seen as dangerous practices of magic. Magic was therefore violently attacked to rid the proletariat of this worldview. The witch hunts of the 17th century were a pivotal point in the shift to a capitalist economy. According to Federici (2004), "the witch-hunt was one of the most important events in the development of capitalist society" (p. 165). The witch hunts increased the disparity between men and women, and "[taught] men to fear the power of women" (Federici, 2004, p. 165).

For capitalism to emerge, nature-based knowledge had to be removed (Federici, 2004; Merchant, 1980). While this was done over the course of centuries as feudalism slowly gave way to capitalism, the tipping point was the 17th-century witch trials that brought a significant end to magical worldviews in Europe.

2.2 The ecofeminist movement

Moving into the 1970s, scholars started to recognize the ways that the oppressions of the more-than-human world related to gender-based oppression. French feminist Françoise d'Eaubonne named the movement "ecofeminism" after recognizing how patriarchy contributed to the environmental crisis and how women were left out of environmental management (Foster, 2021; Warren, 2000). Ecofeminism began in the 1970s from scholars who applied feminism and environmentalism together and realized the shared oppressions coming from the same dominating system of patriarchy (Warren, 2000). Rachel Carson is credited for galvanizing national and global awareness of environmental health problems and fueling the current environmental movement with her book *Silent Spring* (1962). *Silent Spring* provides a compelling case for the harms of pesticides which were gaining wide use at this time. Simultaneously, the harmful chemical DDT that Carson was concerned with was also being sprayed at large in South East Asia by the United States as they fought the Vietnam War. The influence of these seemingly unrelated topics was analyzed together by ecofeminists who "linked militarism, corporatism, and unsustainable energy production by joining together the antinuclear protests and the peace movement" (Gaard, 2011, p. 28).

While academics often focus on first-world organizing to define social movements, third-world women have been organizing around similar ecofeminist values and beliefs without the same recognition within the ecofeminist movement. For instance, the Chipko movement in the Himalayan region of India is a movement over 300 years old of women organizing to protect native forests (Shiva, 2016; Warren, 2000). Vandana Shiva, a prominent ecofeminist from India, has also led the movement against the biopiracy of native Indian crops (Shiva, 2005).

Ecofeminism incorporates a wide range of beliefs that all fall under the scope of the interconnectedness of human and more-than-human oppressions through the patriarchal system. There are a few somewhat distinct types of ecofeminism that are related to the types of feminism. Merchant (2005) identifies the four main types of ecofeminist thought as liberal, cultural (sometimes referred to as spiritual), social, and socialist. Liberal ecofeminism is generally most concerned with women's inequality within the capitalist system and is based on individuality. However, the focus on individuality and solutions through capitalism strays so far from the core of ecofeminism that "liberal ecofeminism" is not often considered a part of ecofeminism (Foster, 2021). Cultural, sometimes called spiritual, ecofeminism sees women as more closely related to nature than men and has often been accused of gender essentialism. Social and socialist ecofeminism look at how the market-economy impacts social and cultural reproduction. While these categories can be helpful to distinguish particular thoughts of ecofeminism, they are not mutually exclusive or exhaustive (Foster, 2021; Gaard, 2011).

Initially, many thought that ecofeminism would shape the future of feminist theory and even thought ecofeminism could be considered the third wave of feminism (Gaard, 2011). However, after its initial popularity ecofeminism was essentially "canceled" in the 1990s. This happened because ecofeminism received strong criticism and critique from environmentalists,

deep ecologists, and feminists for its supposed grounding in gender essentialism, the idea that biological sex determines your gender, rather than an understanding of how sex and gender are separate compositions. The criticism of ecofeminism was so strong that graduate students were advised to not use ecofeminism as a theoretical framework, and scholars were strongly encouraged to not publish anything with the term 'ecofeminism' (Gaard, 2011). While these attacks on ecofeminism have been disproven by numerous scholars, it is important to discuss what those critiques were and why ecofeminism maintains a strong relevance to today's crises to justify my use of ecofeminism and relate my sense of urgency in reaccepting this ideology.

There were several arguments against ecofeminism, but the most critical one was the claim that ecofeminist ideology essentializes gender. Ecofeminism has always encompassed many different beliefs, some that work well together and some that clash entirely in their belief systems (Gaard, 2011; Warren, 2000). Many cultural and spiritual ecofeminists essentialized gender. However, ecofeminist critics have mistakenly conflated the beliefs of this one section of ecofeminism with the wider field of ecofeminism as a whole. Some cultural ecofeminists considered women to be closer to nature than men and used symbols such as "Mother Earth" to signify this perceived connection by gendering nature as female. However, this is not an entirely true depiction of all cultural/spiritual ecofeminists. In many cases, the spirituality invoked was in reaction to dominant Western religions that worship a single, male deity. This deity is seen as in the heavens and is separate from the earth, demonstrating a symbolic picture of the hierarchical dualistic relationship that sees god/men as distinct and above nature/women. These spiritual ecofeminists looked for examples of spirituality that were centered in nature and demonstrated respect for the feminine principle. This could be found in many ancient, Eastern, and Indigenous religions. In some cases, spiritual ecofeminists were essentializing gender and considered women

to be closer to nature. However, this is not true even of all spiritual ecofeminists and to attribute this belief of a select few to the whole of ecofeminist thought is a significant overgeneralization.

Part of the reason for such controversy surrounding ecofeminism is that ecofeminism is open to many beliefs and ideas that fall within the central focus on patriarchy as a source of oppression for both human and more-than-human beings (Gaard, 2011; Warren, 2000). There is no authority that decides one specific ideology that explains what ecofeminism includes but rather it has organically evolved and attracted scholars and activists and invited them to situate ecofeminism to their own experiences in an inherently anti-hierarchical structure. A non-hierarchical structure is messy but allows for a diversity of leaders and global viewpoints to contribute to this school of thought. This non-hierarchical structure is also compatible with ecofeminism values relating to power dynamics. The diversity of beliefs that ecofeminism encompasses is both a beauty and a challenge; allowing for numerous beliefs can be somewhat liberating since there is no central knowledge system that disregards specific interpretations and beliefs. However, this also means that those who don't understand the varied approaches under the umbrella term of ecofeminism can falsely accuse the whole movement of following one particular belief system. As summarized by Gaard (2011):

> The charges against ecofeminists as essentialist, ethnocentric, anti-intellectual goddess-worshipers who mistakenly portray the Earth as female or issue totalizing and ahistorical mandates for worldwide veganism-these sweeping generalizations, often made without specific and supporting documentation, have been disproven again and again in the pages of academic and popular journals, at conferences and in conversations, yet the contamination lingers. (p. 32)

3. *What Defines Ecofeminism?*

The distinguishing aspect of ecofeminism is that ecofeminists see patriarchal systems as oppressing both human and more-than-human beings. The oppressions ecofeminism is concerned with include gender, sexuality, race, class, and more-than-humans, and includes the oppression of animals, land, air, water, and other non-human beings. As ecofeminist Karen J. Warren (2000) describes it:

> "Racism, classism, ableism, ageism, heterosexism, anti-Semitism, and colonialism are feminist issues because understanding them helps one understand the subordination of women. According to ecofeminists, trees, water, food production, animals, toxins, and, more generally, naturism (i.e., the unjustified domination of nonhuman nature) are feminist issues because understanding them helps one understand the interconnections among the domination of women and other subordinated groups of humans ("other human Others"), on the one hand, and the domination of nonhuman nature, on the other hand" (pp. 1-2).

An ecofeminist worldview understands all beings as interconnected (Gaard, 1993; Sturgeon, 2009; Warren, 2000). However, the focus on women and gender-based oppressions is not because their oppressions are seen as more important than any other oppression but because "a focus on 'women' reveals important features of interconnected systems of human domination" (Warren, 2000, p. 2).

To exemplify this, let's consider how industrial agriculture impacts numerous human and more-than-human communities. Mono-crop agriculture is a well-known environmental problem because these fields destroy biodiversity. The purpose of these fields is to maximize production

within the capitalist system. These fields contribute to habitat loss for pollinators and animals and create erosion of precious topsoil. The erosion carries harmful pesticides downstream, impacting the water source of human and more-than-human communities miles away. The people working directly on the farm are likely low-income, people of color, and often migrants and/or undocumented folks who are directly exposed to the pesticides. The demand for these cash crops is contributing to deforestation and the loss of Indigenous lands globally. Considering that eighty percent of farms in the USA are owned by men, it is likely that a woman does not own this farm or work in its fields (Horst & Marion, 2019). Looking at this one issue of the harms of mono-crop farms integrates movements for environmental justice, biodiversity loss, Indigenous sovereignty, abolition, class issues, BIPOC issues, and feminist issues. This is the framework that ecofeminism is based on: a holistic and interconnected understanding of these various movements.

The interconnected ideology that ecofeminists hold makes it an intersectional theory. However, this has not stopped some intersectional feminists from accusing ecofeminism of being too "concerned with everything in the world" or almost too intersectional and all-encompassing (Gaard, 2011, pp. 32-33). With the ideology that everything, human and non-human, is interconnected it makes sense that every oppression is also related. Interconnection as a way of knowing the world proves to be one of the main reasons why ecofeminists cannot simply assimilate into the mainstream environmental movement or even the intersectional feminist movement (Foster, 2021; Gaard, 2011; Warren, 2000).

Patriarchy is "an ideology whose fundamental self/other distinction is based on a sense of self that is separate, atomistic" (Gaard, 1993, p. 2). Patriarchy is fundamentally based on an ideology of individuality and values rights-based systems through the use of rules. Ecofeminists,

alternatively, have the understanding that we are intimately interconnected with one another and with the more-than-human world. Ecofeminists value "an ethic of responsibilities or care" (Gaard, 1993, p. 2).

4. Current Relevance of Ecofeminism

Despite the backlash, ecofeminism is regaining traction from activist scholars. Foster (2021) states, "while it is important to acknowledge the criticism of ecofeminism as essentialist…it is equally important not to completely abandon this scholarship" (pp. 199-200). It is not only worthwhile to revisit ecofeminist scholarship because of its past insights but because those insights are incredibly relevant and vital to the numerous crises we face today (Gaard, 2011; Sargisson, 2001).

One such relevance is ecofeminism's insistence on understanding the interconnections of human and more-than-human worlds and the cooperation that must take place between these systems. A strong faction of the environmental movement is pushing for technological solutions to our climate crisis (Gaard, 2015; Piepzna-Samarasinha, 2018; Shiva, 2016). These "solutions" do nothing to interrogate the ideologies and values that underlie the climate crisis. Instead, techno-science approaches are based on the belief that we can fix our way out of the crisis with future technologies and that we don't need to make changes to our current consumption and capitalist structures (Gaard, 2015; Piepzna-Samarasinha, 2018; Shiva, 2016). Individualism and progress narratives fuel techno-science solutions to the climate crisis and are a way to ignore the system change that is necessary to approach this crisis. The techno-science fix ideology is derived from patriarchal notions that one can come in and fix a crisis without the need for systemic change (Piepzna-Samarasinha, 2018). Ecofeminism alternatively understands that our

way through the climate crisis will require healing, not fixing (Foster, 2021). Healing means that there is time for rest and a need to rethink our capitalist ways. “Fixing” means that you can go about your life as usual because the problem is solved independently of your actions.

‘Fixing’ the environmental problem is targeted through individual consumption. In this way, mainstream environmentalism encourages environmentalists to buy more sustainably to solve the climate crisis (Foster, 2021). What this neglects is a conversation on the role of the capitalist system in creating and perpetuating the climate crisis (Gaard, 2015; Shiva, 2016). This also looks at solutions through individual action, rather than coming together collectively to work towards a better future as ecofeminism would encourage. This highlights my reasoning for looking at gardens that are managed collectively rather than individually. Even though both types of gardens could be considered “common spaces” in urban populations, collective gardens rely on a *community* to care for them, whereas an allotment garden relies on *individuals* working within their allotted space.

Ecofeminism can also help to transform intersectional feminism which is currently an anthropocentric field. According to Gaard (2011), “It is this human-centered (anthropocentric) feminism that has come to dominate feminist thinking in the new millennium, effectively marginalizing feminism’s relevance” (p. 32). While intersectional feminism has importantly demonstrated the need for feminism to include intersectional voices, leaders, and activists, we also need to consider how intersectional feminism often omits the more-than-human world. Carol Adams (2010) would even consider the inclusion of animals (and other non-human beings) to be an intersectional analysis. Taking an interconnected worldview, it is understood that "the liberation of women-the aim of all branches of feminism-cannot be fully effected without the liberation of nature, and conversely, the liberation of nature so ardently desired by

environmentalists will not be fully affected without the liberation of women" (Gaard, 1997, pp. 21-22). If all oppressions are interconnected on the basis that our world is intimately interconnected then it makes sense that human liberation cannot be done without also liberating the more-than-human world. The more-than-human world must be included in intersectional feminism. Collective gardens exemplify an interconnected sense of community.
More-than-human beings are incredibly visible and vital in the garden community. Through this thesis, I hope to demonstrate the relevance that my ecofeminist topic has to intersectional feminism.

Ecofeminism is not environmentalism or feminism, but an entirely new creation that came from the intersections of both these fields. Neither field adequately encompasses an ideology of interconnection in that way that interconnection serves as the foundation for ecofeminist thought and action. This interconnection happens through attention to creating an ethics of care for human and more-than-human beings. Ecofeminism can come across as utopian and not concrete enough to enact meaningful change (Foster, 2021; Sargisson, 2001), which is why it has been discredited as encompassing everything and not being specific enough (Gaard, 2011). However, ecofeminism “calls for something that is more visionary and, as a result, potentially more sustainable in the long run” (Foster, 2021, p. 201). As stated by Lucy Sargission (2001), “ecofeminism adopts a visionary tone. Ecofeminists dare to dream” (p. 55).

5. *Community-Building Elements: Reciprocity, Interdependence, and The Commons*

In this next section, I want to connect the values and belief systems that ecofeminism holds and explain their application and relevance to my research. I have decided to not specify

that I am using any particular type of ecofeminism for two reasons. As described above, one of the beauties of ecofeminism is its acceptance of various specific beliefs. With this understanding, I think categorizing different sections of ecofeminism is somewhat arbitrary and is not necessary for my research. One reason is that people within categories may even take different stances on certain issues that seem to define that category. As stated above, cultural ecofeminism is often associated with an essentialist view of gender. However, Starhawk, a prominent spiritual feminist, does not bring an essentializing view into her work (Foster, 2021). A close reading of her work demonstrates a non-essentialist view of gender which does not align with other cultural ecofeminists that are rightly criticized for their essentializing views. In addition, the way that I use ecofeminism in this thesis centers on the aspects that define ecofeminism as a movement or an ideology. I am focusing on the interconnected worldview, the interconnected oppressions of human and more-than-human communities, and patriarchal domination as a source of oppression. All of these assumptions distinguish ecofeminism from environmentalism or feminism and are not specific to one type of ecofeminism.

Below, I will describe three elements that I am focusing on that help me define an interconnected worldview within community gardens: reciprocity, interdependence, and the commons. I chose these three elements, which I will call "community-building elements," (1) because in my background research and personal experience in collective gardens, these are ideas that have recurring surfaced in various spaces; and (2) in some ways I chose these three for simplicity because there are many other elements of ecofeminism that I would have loved to explore, but being mindful of the scope of this research encouraged me to choose three to focus on.

5.1 Reciprocity

One element of ecofeminism that I am focusing on in my research is reciprocity. Reciprocity describes the idea of mutual benefit and responsibility and is prevalent in many Indigenous cultures (Warren, 2000). Robin Wall Kimmerer (2013) explores reciprocity throughout her book *Braiding Sweetgrass*. To Kimmerer, reciprocity is a gift that is given to you "through no action of your own…it is not a reward; you cannot earn it" (pp. 23-24). Receiving a gift is not a right, but an extension of generosity. This is not possible in a patriarchal context where rules and rights to ownership exist. Payment through capital exchange grants the consumer the right to ownership and makes a transaction "fair" and in no need of further generosity.

Reciprocity is extremely visible in the Native American growing practice of the three sisters (Kruse-Peeples, 2016). Corn, bean, and squash grow better together than they do on their own because they all give and take within this mutual relationship. Corn provides a structure for the beans to trellis up. Beans fix nitrogen into the soil to make this essential nutrient available to corn and squash. And squash shades the soil, reducing competition with weeds and shading the soil to retain water and regulate the soil temperature. This is an extreme oversimplification of the numerous ways each of these plants works together to grow stronger together but can demonstrate reciprocity. Each of the plants gives generously and in return, they are rewarded through the generosity of the other plants.

Looking at an intersectional feminist work, *Color of Violence: The INCITE! Anthology* (2006), the authors ask us to "build movements that not only end violence, but that create a society based on radical freedom, mutual accountability, and passionate reciprocity" (p. 226).

What this quote acknowledges is that to dismantle oppressive systems we must also imagine and create a system of care to replace the current oppressive systems. The use of "passionate" in relation to reciprocity here alludes to the idea of living in an abundance mindset rather than a capitalist mindset of scarcity. A scarcity mindset is used against community-building efforts to make us feel that we are in constant competition for limited resources. This encourages hoarding and considering only our own well-being in the future. Instead, an abundance mindset encourages us to share the wealth to ensure our communities needs are met because we recognize our reliance on and interdependence with our community.

In my research, reciprocity is used to interrogate where there are these mutual relationships that give abundantly. It often begins with an exclamation to the effect of "how to describe all the ways the garden gives to me!?" However, it is apparent through reflection and throughout the interviews that these gardeners give so much more than is expected of them, and in return, the garden gives abundantly.

5.2 Interdependence

Interdependence is another element of ecofeminist theory that I will look at. Interdependence describes how we are reliant on human and more-than-human beings. In her book *Feminism and the Mastery of Nature,* Plumwood (1993) considers how Western thought is based on dualisms which are power relations between two categories that are seemingly mutually exclusive and exhaustive. For example, man/woman, culture/nature, and master/slave are specific categories with no overlap and are related through a position of power where the first item (man, culture, and master) is dominant over the second (woman, nature, slave). These

hierarchical dualisms are denials of dependency. Interdependency, therefore, is a key aspect to ecofeminism to recognize and undo these dualisms, which predicate all oppressions.

Mutual aid is based on an understanding of interdependence as critical for community survival. Mutual aid is the act of providing care and support networks based on relationships of responsibility that directly engage with dismantling oppressive systems (Spade, 2020). Mutual aid has had a resurgence in reaction to the COVID-19 pandemic, yet it is a historical practice that communities have relied on for generations.

However, interdependence is not limited to human interdependence but also interdependence with the more-than-human world. Indigenous languages, religions (as a way of life), and survival are often dependent on the more-than-human communities they live and engage with (Abram, 1996). Interdependence is also recognized in historical organizing such as India's Chipko, or the tree hugger movement. This women-led movement is over three hundred years old but was revived in the 1970s to stop the destruction of native forests in favor of cash crops such as eucalyptus (Warren, 2000). This movement is founded on the knowledge of interdependence with the forest communities that give India the name "Aranya Sanskriti" or "forest culture." Indian women are the ones who primarily engage with the forest to gather and produce food, fuel, and medicines and are therefore most directly affected by deforestation. While the fight for Native forests benefits the women's engagement in their communities (re)production, this protective stance also benefits the forest and the local biodiversity that relies on this land for life and sustenance.

Leanne Betasamoke Simpson (2017) brings up the idea of grounded normativity which is the understanding that humans are interdependent with the more-than-human world. Grounded normativity is an Indigenous, place-based knowledge that "teaches us how to live our lives in

relation to other people and nonhuman life forms in a profoundly non authoritarian, non-dominating, non exploitative manner" (Coulthard & Simpson, 2016, p. 254). This concept incorporates interdependence specifically. Understanding humans and more-than-humans as kin, as family, reshapes the way that we relate. The Indigenous understanding of humans and more-than-humans as kin recognizes the ways that we are all related. As stated by the Red Nation (2020), "Land is not a gift freely given, but a relation…there can be no ownership of our relative" (p. 7).

We can understand this Indigenous concept of grounded normativity through collective gardens that put us in direct relation with one another necessitated by the need to care for the garden collectively. A garden is also an ideal example of this as opposed to spaces in the built environment that attempt to build community because gardens act as an oasis for more-than-human communities in an increasingly developed world.

Interdependence is a critical component of my research because it looks for where and how garden organizers realize their role within the greater human and more-than-human worlds; realizing that this garden is a larger space than themselves. It can almost be a spiritual understanding to realize how small you are in this "interconnected web of mycelium" (Ren, interviewee). Interdependence is the realization that the garden is not and cannot be worked alone. What the garden has become is only possible through the numerous relationships and interactions with humans and more-than humans.

5.3 The commons

The final element of ecofeminism that I am focusing on in my research is the idea of the "commons." The commons are mutual spaces built on social relations that bring "common wealth" to a community (Caffentzis & Federici, 2014). This mutuality is "oriented toward the future security of both" human and more-than-human communities (Martusewicz et al., 2011, p. 211). In a commons, resources are shared in a way that allows for equitable access to the means of (re)production and decision-making (Caffentzis & Federici, 2014). The commons embody ecofeminist principles through the mutual and reciprocal relationships formed between the human and more-than-human worlds.

History reveals that pre-colonization, every society had a form of commons (Caffentzis & Federici, 2014). These historical commons were not small-scale examples but ones that spanned continents as was so in the pre-colonized so-called American continent. The commons are not only visible in our past but are also current spaces of resistance, especially so in Indigenous communities such as the Zapatistas who took over the Zócalo in San Cristobal de las Casas (Federici, 2011). The importance of understanding the historical and current context of the commons is to recognize that the commons are not an unrealistic utopia but have been a way of life for thousands of years.

While the commons were the historical norm, they now serve primarily as transitional spaces beyond capitalism (Caffentzis & Federici, 2014). This means that commons created today may work to some degree within a capitalist framework but intentionally serve as interstitial spaces of transition out of capitalism.

The Red Nation (2020) situates the commons in Indigenous communism. The Red Nation (re)claims communism as an inherently Indigenous way of life. Indigenous communism recognizes land as a gift that cannot be owned and understands that the land and all beings are relatives and that the land is sacred.

The enclosure of the commons and the creation of private property directly attacked these ideas and objectified the land and the more-than-human world. According to The Red Nation, capitalism and the enclosure of the commons "alienated people from their kinship bonds, literally forged through communal relationship with the land" (Red Nation, 2020, p. 6). Understanding the land as a relative meant that there was no concept of owning the land, or any being within the land. There is a relationship with the land that many Indigenous peoples have, and that capitalism directly attempts to attack by commodifying the land and buying and selling land as property to own.

If we go back to my definition of the commons as grounded in social relationships, the land is one of those relationships. In capitalist ideology, common spaces are there for the individual taking, and the way to ensure a cohesive society is to sell off land for individual ownership. This mindset cannot be applied when you consider the land to be a relative because the land is not an object to be taken or dominated but rather is a part of your more-than-human family (Red Nation, 2020).

The enclosure of the commons not only objectified the more-than-human world; it also harmed human-to-human relationships that were required when living collectively with the land. According to the Red Nation (2020), Indigenous "communism is based on…generosity and collectivity" (p. 6). Collective gardens can demonstrate a form of Indigenous communism. They are spaces that demonstrate alternative ways of engaging with the land and human communities.

These gardens can help us imagine an alternative future based on radically different values such as care, generosity, and kinship that inform our decision-making.

I will dig more into the academic literature on the commons in the literature review chapter which dives into how we can conceptualize community gardens as a form of the commons. However, to specifically situate how the commons shows up in my research, the commons demonstrates an understanding of collectivity in the land which requires decision-making and conflict resolution that allows for many voices to be heard. The idea of commons is also a recognition that gardening spaces are not only used by human participants but are also home to many more-than-human beings. Working together means that you need to have respect for diversity, and be inclusive to anyone who engages with the land. While the commons are a challenging space to operate within the dominant capitalist land relation, they are necessary for envisioning transformative futures and new ways of relating to one another as kin rather than as others.

LITERATURE REVIEW

In this chapter, I explore academic research on urban community gardens. Urban community gardens are researched in a variety of fields (Guitart et al., 2012) so I will begin by giving a general overview of past research done on urban community gardens and then look more closely at highly researched topics that relate directly to my research inquiry into the community-building efforts of collective gardens. The topics that I determined were highly researched and closely related to my research were (1) community gardens defined as a form of the commons, (2) neoliberalism's influence on community gardens, (3) the governing structure of community gardens, and (4) knowledge sharing within community gardens. This literature review helps me situate my thesis in the context of past research on community gardens and sheds light on the gaps that I aim to address.

1. *Trends in Research on Community Gardens*

There is a vast array of published research articles on community gardens. Guitart et al. (2012) did a systematic quantitative literature review on all academic research concerning urban community gardens from 1985 to 2011 and reviewed the trends found in 87 peer-reviewed papers. They found that a majority of research on urban community gardens comes from the social sciences, with about 75% of it situated in geography, environment and planning, and society and culture. The next most populous research field on urban community gardens is health and education. Relatively few articles come from the economics and conservation biology fields (Guitart et al., 2012). Guitart et al. found that a majority (66%) of authors look at gardens in the USA, however, their review only looked at articles published in English so this concentration may be due to a language bias in the methods. Their review found that five studies used

quantitative methods alone, so a vast majority of the research is done using qualitative methods or mixed methods.

1.1 Defining collective gardens and allotment gardens

An interesting thing to note about the research on community gardens is that a majority of scholars do not feel the need to define community gardens in their research, potentially because they believe this term to be self-explanatory (Guitart et al., 2012). In addition, there are multiple terms used to describe gardening spaces such as community garden, urban garden, collective garden, allotment garden, urban farming, and urban agriculture. Some of these terms overlap, for example, Rogge & Theesfeld (2018) consider urban farming to be a subset of urban agriculture, and community gardening to be a subset of urban farming, however not all urban agriculture can be considered community gardening.

The authors that do define these terms don't always align with how other scholars define them. For example, many researchers use the term "community garden" as a more general term to refer to any form of gardening with multiple individuals (Gottl & Penker, 2020; Guitart et al., 2012) while Tharrey & Darmon (2022) would call this a collective garden. Colding & Barthel (2013) use the term "community garden" to refer to gardens worked collectively. Colding & Barthel (2013) and Tharrey & Darmon (2022) use the term "allotment garden" to refer to gardens with individual garden plots rented out to individuals within the same space.

There are no definitive definitions to describe the various forms of gardening. I am deciding to use the term "collective garden" to describe the type of garden that I studied in this research. Collective gardens to me describe gardens where most if not all of the garden is

collectively managed, and there are few to no individualized plots. This means that relationship building is essential to how these gardens operate since they must be worked collectively. The more traditional or popular form of gardening that I am distinguishing collective gardens from I will call "allotment gardens." I am defining allotment gardens as gardens broken up into individual plots that are rented out. Allotment gardens, therefore, rely on individual "ownership" for the garden to be maintained and gardeners do not necessarily need to interact to get work done in the garden.

When looking for past research to situate my own research within, I included variations of terms including community gardens, urban gardens, allotment gardens, collective gardens, and urban agriculture. This is because of the ambiguity of terms used and in some cases the specific type of garden is not necessary to the points being made. For example, the section on neoliberalism's influence on urban gardens extends beyond collective and allotment gardens. I point this out so that the use of various terms in this section makes sense and justifies why I didn't only look for literature on "community gardens."

The first section of my literature review focuses on community gardens as "actually existing commons" (Eizenberg, 2012, p. 765). This section disentangles the variety of approaches to considering gardens as commons and justifies why and how community gardens are lived examples of the commons. The next section complicates this idea of community gardens as radical, resistive spaces and questions whether community gardens should even be considered anticapitalist alternatives, given how they are inherently embedded in capitalism. The following section engages with the benefits and challenges of different organizational structures. I move on to describe how community gardens are often spaces that build an array of knowledge and build agency. The final section discusses the research on the kind of "community" that is

formed within community gardens. At the end of this chapter, I situate my own research into the existing bodies of research literature on community gardens and explain the gaps that my thesis addresses.

2. *The Commons and Urban Community Gardens*

There is an abundance of research that looks at the commons in relation to community gardens, which is partially why I chose the commons as one of the ecofeminism community-building elements to focus on.

Many scholars identify community gardens as examples of the "commons." However, there is no singular way to define how gardens demonstrate the concept of the commons, and several researchers have sought to clarify this. Rogge & Theesfeld (2018) attempt to address this by providing a means for categorizing the degree of collectivity of gardens. Their study looked at a highly urbanized area in Germany where they utilized a case study and survey to determine the degree of collectivity of each garden. To determine the degree of collectivity, Rogge & Theesfeld took into account the collectivity of several different categories: resource systems (such as garden plots or beds), infrastructure (such as a tool shed or greenhouse), resource units (such as tools, or seeds), work (such as planting or weeding) and social time (such as garden parties or cultural events). Every garden in their study demonstrated at least one form of collectivity, validating their assumption that community gardens can be considered a form of the commons. They acknowledge that a significant limitation of their study is that the success of a garden does not necessarily correlate to how collective it is. Knowing the degree of collectivity is only one way to describe and justify calling community gardens a commons, but that does not mean it is a successful example of a commons or a garden. While my research is not comparing the success

of different degrees of collective gardens, I hope to contribute to the ways that gardens with higher degrees of collectivity can be radical sites of community building.

Another attempt to categorize community gardens comes from Gottl & Penker (2020). These researchers looked at 51 gardens across several English and German-speaking countries (USA, Canada, UK, Germany, Switzerland, and Austria) to compare gardens between countries. This analysis was done by using mixed-method research that included data on community garden web profiles, books, blogs, and articles, along with a cluster analysis. From their analysis, they determined that the community gardens could be categorized into three different types of gardens.The three types of gardens are (1) participation gardens, (2) closed group gardens, and (3) gardens with volunteer options. *Participation gardens* are gardens that are open to any volunteers and are mostly accessible for free. These gardens have few if any individual plots and most of the garden is collectively managed. *Closed group gardens* are gardens that require formal membership, often in the form of payment for an individual plot. While there are some collectively managed beds in these gardens, a majority of the garden is dominated by individual plots. The third type of garden, a *garden with volunteer options*, falls in between the organizational structures of the first two types. These gardens have formal membership and individual plots but allow for volunteers to come at specified workdays.

While Rogge & Theesfeld (2018) and Gottl & Penker's (2020) research may help us define community gardens as forms of the commons, Engel-Di Mauro (2018) would argue that naming community gardens as a commons does nothing to confront social divisions. For Engel-Di Mauro, a key purpose of commons research is to question "how the commons, even in a broadened understanding of the term, can help overcome social divisions, not just confronting them" (p. 1381). Rogge & Theesfeld and Gottl & Penker focus on the material and

organizational basis for what constitutes a commons, while Engel-Di Mauro stresses the importance of social reproduction, relationships, and overcoming social divisions.

Engel-Di Mauro (2018) brings up an important part of my definition of the commons that Rogge & Theesfeld (2018) neglect to consider; “commons, after all, emerge from social relations” (Engel-Di Mauro, 2018, p. 1380). Social relations are the foundation of the commons; a commons cannot be described by material ownership alone. This is because commons are organized with mutual relationships which are necessary to move together through the same space (Caffentzis & Federici, 2014).

An interesting takeaway from Gottl & Penker's (2020) study is that all of the participation gardens are located in European countries, meaning that gardens in the USA and Canada were either closed group gardens or gardens with volunteer options. This suggests that gardens in North America are more often allotment-style gardens. While their research only looked at 18 gardens in North America (which is estimated to have over 18,000 registered gardens), this conclusion that gardens in North America are more often allotment gardens is supported by Tornaghi (2014) and Hou et al. (2009) whose work demonstrates that allotment gardens, which would fall under “closed group gardens,” are a more common form of urban gardening in the USA. These researchers support my anecdotal perception as a gardener myself that the collectively managed gardens that I studied, which would fall under “participation gardens” are less common in the USA than allotment gardens. What I hope to do with my research is to look at gardens that have higher degrees of collectivity, or could be considered participation gardens, and demonstrate how this collectivity facilitates community building.

Another way to conceptualize the commons is to consider the commons to be spaces that are neither public, nor private, but rather *liminal spaces* (Eizenberg, 2012). Liminal refers to transitional spaces, or spaces that occupy both sides of a boundary. In this case, liminal refers to transitional spaces beyond the public/private dualism, or that embody both qualities simultaneously. Private spaces obviously fall under capitalist land relations. Land that is sanctioned by the state is what is considered public, but not all public land is democratically governed. Take public parks for example, there are unspoken rules that are determined by city governance, such as what activities are allowed and who is allowed in this space (Brown & Rose, 2021). The people most directly utilizing this space have no agency over what happens within it. A critical component of the commons is the relationships that are necessary for communal relations to happen within the space. The relationships are central because without them the space would be governed by individual interests. As stated by Eizenberg, (2012), "The commons is a way of thinking and operating in the world, a way of organizing social relations and resources" (p. 764). So public spaces cannot inherently be considered a form of the commons using this definition from Eizenberg since they are state-controlled. Community gardens, in this sense, can often be understood as liminal space that is neither public nor private but a blend, or somewhere entirely in between. To some degree, the people within the garden community have agency within the space and must communicate and cooperate to work the land together.

The enclosure of the commons is not only a historical process but unfortunately, continues today, especially so in urban environments where public, free, and accessible space is becoming harder to find (Colding & Barthel, 2013; Linn, 1999; Pinker et al., 2020).

Urban commons may be critical to future community resilience (Colding & Barthel, 2013; Sardeshpande et al., 2021). Both Colding & Barthel (2013) and Sardeshpande et al. (2021)

consider how urban commons can build resilience in urban populations. The focus on urban resilience is critical as two-thirds of the global population is projected to live in urban areas in the next few decades (Colding & Barthel, 2013). Colding & Barthel look at how cultural diversity contributes to resilience in urban communities. Diversity is known to be essential to the resilience of nature's ecosystems, but the researchers wanted to determine if diversity is as essential to human community resilience. They reviewed relevant literature to look at three examples of what they call *urban green commons*, including community gardens and allotment gardens. Their research looks at the potential for urban green commons to encourage diverse participation amongst community members to build greater community resilience. They suggest that urban green commons could "reduce potential social conflict" and "promote the ability to build capacity for learning and adaptation in urban settings" (Colding & Barthel, 2013, p. 164).

Sardeshpande et al. (2021) consider the resilience of the food system after the Covid-19 pandemic. The pandemic demonstrated a lack of trust in the global food system and resulted in panic buying which stressed global supply chains. Sardeshpande et al. "propose the use of edible urban commons to alleviate the impacts of the pandemic to diversify food sources to increase urban resilience (p. 1). Edible urban commons can provide all community members with food sources, even those without access to private land. Post-covid, many urban residents took up gardening to provide fresh food, which demonstrates the demand for local food sources during times of crisis.

Diversity, as stressed by Colding & Barthel (2013) is what will help build resilience in local food systems, and will help communities reduce their dependence on the global food system, which is especially critical during times of crisis. With the climate crisis at our door, building community resilience is more critical now than ever.

Gottl & Penker (2020) and Rogge & Theesfeld (2018) contribute different ways to specifically define community gardens as a form of the commons. Engel-Di Mauro (2018) reminds us that social relations are a critical part of the commons, and must not be forgotten in order to provide an oversimplified definition. My own research looks more at the organizational structure similar to Gottl & Penker's categorization. However, I focus more on the social relation aspect that Engel-Di Mauro (2018) stresses as important groundwork for building a form of the commons. Eizenberg (2012) contributes a sense of the commons as neither private nor public but liminal, which I think accurately describes the collective gardens that I am looking at as they are not easily defined as public or private. My research aims to contribute to the ideas on how urban commons can build community resilience by focusing on the community-building aspects of collective gardens.

3. *Is Urban Agriculture Transformative or Complacent?*

Defining community gardens as an expression of the commons is challenging because of the dominating influence of capitalism and neoliberalism over our land relations. The commons are often described as radical alternatives to the capitalist system, but are community gardens actually contributing to neoliberalism in urban spaces? There is a debate within the literature as to whether community gardens contribute inadvertently to neoliberalism or if they are resistive alternatives (McClintock, 2014; Tornaghi, 2017). In this section, I aim to give context to the spaces that urban community gardens take up in the capitalist city and grapple with whether they can be considered radical alternatives to neoliberalism.

The key to understanding the elements at play here is to understand how "communities emerge and reproduce themselves within predominantly capitalist relations" (Engel-Di Mauro, p. 1382). Capitalist accumulation and individuality devalue the reproduction of cultures.

Are urban community gardens inherently resistive to capitalism? Engel-Di Mauro (2018) and Tornaghi (2017) would say no, not inherently. While community gardens can resist the individuality and inequity produced by neoliberalism, they may also inadvertently reproduce neoliberalism and therefore contribute to further injustices within the food system (McClintock, 2014).

Engel-Di Mauro (2018) recognizes that some community gardens have "a narrow definition of community that goes no further than being nearby flat-owners living in an adjacent block of flats" (p. 1382). These gardens don't demonstrate community-building that works to dismantle social divisions. Tornaghi (2014) similarly views gardens in the USA, which are most often allotment gardens, as more individual-focused rather than communal spaces.

McClintock (2014) researches this specific debate: whether or not urban agriculture (which includes urban community gardens) subsidizes capitalism. Researchers that view urban agriculture as subsidizing capitalism point out that grassroots efforts to provide food for a community provide a supplemental source of food to offset the rising cost of food. The efforts of ensuring access to affordable, and healthy foods fall on community groups and nonprofits rather than the companies responsible for increasing prices, or the state which could regulate prices and food access.

Egerer & Fairbairn (2018) studied the often hidden social tensions with three community gardens in gentrified areas of Silicon Valley. Through a mix of semi-structured interviews and participant observation, Egerer & Fairbairn found that the social tensions of culturally diverse

neighborhoods often permeated the garden "community." One of the gardens studied is actually one of the most culturally diverse gardens in the area. However, gardeners are increasingly fencing in individual plots to avoid produce theft. As stated by Egerer & Fairbairn, "fencing raises visible questions about what it means to be a community within a community garden by exerting a strong notion of individuality" (pp. 65-66). The cultural tensions in this garden divided gardeners instead of bringing them together. This supports Engel-Di Mauro's (2018) insistence that urban commons are not inherently cohesive, community-building spaces. Gardens that reproduce social divisions seen in the greater community are not transformative, or appropriately considered a form of the commons.

The challenges within this garden may foreshadow future challenges with increased climate impacts: "Tensions emerge over how to maintain a socially cohesive, diverse community under stressed environmental conditions" (p. 65). With the threat of stressed resources from the impacts of climate change, the social realities of this garden are something to take seriously.

However, there are also examples of gardens producing beautiful community cohesion, resilience in the face of challenge, and resistance to the industrial food system (McClintock, 2014). The intention behind most urban agriculture is to "reconnect production and consumption while re-embedding both with meaningful social relations" and that does prove to be true in many cases (McClintock, 2014, p. 153).

One such place where urban agriculture has visibly transformed a city is Detroit, Michigan. The disinvestment and hard times that struck Detroit left many city lots abandoned and neglected (Davison, 2017; White, 2011). The abundance of abandoned lots has given way to grassroots community farms and gardens cared for by community members-turned-activists (Davison, 2017). Access to locally grown, and culturally appropriate foods might help Detroit's

obesity and other diet-related health conditions. And Detroit is blessed with access to fresh water. This has galvanized Detroit neighborhoods and community members to reclaim their right to the (re)production of culture and food (Davison, 2017; White, 2011). Devita Davison in her Ted Talk described Detroit as an "agrarian paradise", effectively reshaping the public image of Detroit through the agency of the local communities (Davison, 2017). Exemplifying this transformation, Davison states that "this is the story that Detroiters are changing, through urban agriculture and food entrepreneurship" (Davison, 2017, 00:25). White (2011) similarly studied the experiences of eight Black women in Detroit who were highly active in gardening and found that "gardening becomes an exercise of political agency and empowerment" (p. 19). The transformation of Detroit is an example of a community (re)claiming their means of cultural (re)production. Detroit's urban agricultural revolution is an example of urban agriculture's radical possibilities.

Rather than debate whether community gardens subsidize or resist capitalism, McClintock (2014) believes that both sides are right, and that understanding this complexity can help us understand "urban agriculture's transformative potential" (p. 147). McClintock argues for a *both/and* approach that directs the conversation outside of a false dualism of urban agriculture as either good or bad. Instead, McClintock looks at the transformative and complacent aspects of urban agriculture together to understand how urban agriculture is situated *both* within a neoliberal context *and* works towards transformative ends. While capitalism may dominate our land relations, there are "actually existing commons" which "are live relics of the ideal of the commons; they are never complete and perfect and may even have components that contradict the ideal type" (Eizenberg, 2012, p. 765). These existing commons demonstrate alternative systems and alternative ways of relating to the land and to one another. Understanding the complexity of urban agriculture can help us realize the transformative potential of urban

agriculture because we can understand both its radical potential and current limitations (McClintock, 2014).

Part of the inspiration for my research came from a similar question of whether gardens are transformative spaces of climate action. My research is based on the assumption that collective gardens are more transformative than allotment gardens are. Rather than debating this in my research, I am centering my research around why collective gardens have this transformative quality, which is due to their community-building efforts.

4. Governing Structure of Community Gardens

The way that community gardens are structured can impact their longevity. Often, brownfields are the most suitable and accessible land to garden on in urban spaces (Davison, 2017), but community gardens are often allowed for short-term beautification and reinvestment before giving way to development plans (Tornaghi, 2017). Other gardens may begin in completely interstitial spaces and not ask permission to garden (Eizenberg, 2012), and they too are at risk of having their land claimed for the never-ending development of urban spaces (McClintock et al., 2021). Community gardens that are part of institutions such as city governments might have more land security due to their institutional privilege. But formal, government-sanctioned gardens mean potentially giving up a more radical vision that some gardens have to be a site of the commons that defies capitalism, and an interstitial site beyond the reach of institutions such as city governments (McClintock, 2014). This section discusses the benefits and challenges of different types of governing styles of community gardens.

In recent years, many long-standing community gardens have been formalized, or officially recognized by city governments (McClintock et al., 2021). Many gardeners have

questioned whether formalization is worth the added security of land tenure. Formalization often comes with its own set of rules and regulations, in exchange for the use of tools and utilities provided by the city. According to McClintock et al. (2021), “Governance is thus a process of defining problems, constructing solutions, and setting the normative bounds of appropriate behavior” (p. 502). While clarifying problems and finding solutions sounds ideal, the norms of behavior often fall within a neoliberal sphere of acceptable behaviors, therefore limiting the resistive qualities many gardens are created by in an attempt to demonstrate an alternative society through the garden. An example of this could be that a garden is set up to “embod[y] neoliberal values of self-help” rather than transformative values of community interdependence with one another (McClintock et al., 2021, p. 502). Formalization brings regulations and bureaucratic processes that often inhibit resistive and transformative forms of gardening (McClintock et al., 2021).

A lot of urban agriculture has been formed intentionally as a site of “‘everyday resistance’, where those who practice it seek to avoid, slow down, divert, and otherwise undermine state agendas" (McClintock et al., 2021, p. 500). Guerilla gardens are an example of this everyday resistance. Guerilla gardening is a form of unsanctioned gardening where community members, often in intentionally underfunded neighborhoods, (re)claim abandoned lots and transform them into beautiful gardens and green spaces to take control of the (re)production of culture, foods, and medicines in their communities (Crane et al., 2012; McClintock et al., 2021). Guerilla gardening fights capitalist and colonizing land relations through the act of gardening (Crane et al., 2012). Guerilla gardens are a form of everyday resistance that challenge the “normalized understandings of what a community garden should look like” and bring critical studies into praxis (Crane et al., 2012, p. 87).

However, the security of long-term land tenure is not something to take lightly. Guitart et al. (2012) reviewed the literature on community gardens and found land access to be the greatest challenge and the only negative outcome perceived by community gardeners. Tornaghi (2017) considers the inability to access land to be one of the most significant sources of food injustice. Tornaghi claims that the food justice movement has not addressed communities' (re)productive rights to produce food. Yet this can be addressed through the commons as spaces that challenge the commodification of food (Sardeshpande et al., 2021).

Eizenberg's (2012) research on New York City's community gardens demonstrates a way that formalization processes worked to the detriment of the gardens. In the 1990s New York City's strongly neoliberal administration determined that community gardens were not productive enough, and their land was needed for development and progress. This agenda galvanized community garden supporters, and three methods for securing gardens were put into place. The Parks and Recreation Department conserved the vast majority of the gardens. These gardens needed to maintain an active community of gardeners for the continued protection of the gardens, but even then some gardens were still destroyed. The Trust for Public Land also preserved some gardens as land trusts. This organization also required community engagement for the continued protection of the gardens. And finally, the New York Restoration Project protected some gardens as well. However, their requirement for long-term preservation required the spaces to maintain their green space beauty, and they redesigned many of the gardens without the engagement of the gardeners themselves, distancing the gardeners from the gardens. Eizenberg's analysis demonstrates both the insecurity of land tenure that urban gardens in particular face and the loss of community autonomy within formalized spaces.

It is important to be critical of oversimplified binaries, and Engel-Di Mauro (2018), McClintock (2014), and ecofeminist scholars such as Plumwood (1993) would urge us to dive into the complexity to better understand the holistic context of community garden governance. There is no perfect way to organize a community garden, and all governing structures face their own challenges and benefits. Many of the gardens I am researching are organized as a non-profit which allows for additional security of land tenure and longevity of the garden through a more formal organization. However, it is also important to be critical of the non-profit industrial complex and how it works in a neoliberal context (Mananzala & Spade, 2008).

Working with existing institutions can be a great way to integrate collective gardening into an already established community. For example, university campuses often have abundant open green spaces that could be converted into community gardens and engage with the student population. Other examples of spaces and institutions that may have the capability to include a community garden in their structure are city governments (through parks or vacant lots), businesses with surrounding land, or non-profits (Colding & Barthel, 2013). While these gardens may not be envisioned to be radically transformative, they can help various populations (re)connect with gardening and ecological knowledge and gain a greater appreciation for the numerous benefits community gardens can provide.

Governing structure plays a role in my research, as I consider how these gardens are able to both survive capitalism and also provide a transformative community space. The collective gardens that I researched offer great examples of ways to balance the need to pay for land, utilities, and supplies while maintaining their ability to serve the community's needs.

5. *Knowledge Sharing*

5.1 The imperative for knowledge building around growing food

Urban communities are largely losing knowledge on how to grow food (Colding & Barthel, 2013; Tornaghi, 2017). As stated by Tornaghi (2017) “There is little or no food and horticultural literacy in primary and secondary education, rare exposure to edible plants in public space, and there are no systematic opportunities for urban farming and foraging” (p. 791). Due to capitalist profit and consolidation of markets, 87% of farms are owned by men, and 98% are owned by white folks (Horst & Marion, 2019). Women and people of color make significantly less money than their white, male counterparts (Horst & Marion, 2019). While growing knowledge was once a form of widespread cultural and local knowledge, it is increasingly becoming consolidated into knowledge held in capitalist corporations.

This capitalist consolidation of food production allows for a global food system, but despite the ability to source crops from around the world, seed diversity is intentionally lost (Shiva, 2005). Industrial seed companies are stealing seeds from Indigenous communities and then refabricating the seeds so that they lose their reproductive capacity. What this means is that farmers can not save seeds for next year's crop, but are instead reliant on seed companies to buy seeds every single year (Shiva, 2005). These capitalist seed companies are able to get away with this because they falsely claim to have increased efficiency, and create herbicide and pesticide-resistant seeds so that our fields of “food” are monocultures lacking any amount of diversity; they are essentially dead zones that are producing crops for the global food production (Shiva, 2005).

The loss of our seed diversity is happening in the name of capitalist profit (Shiva, 2005). In addition, ecological literacy rates are declining in urban areas, where two-thirds of the population is projected to live in the next few decades (Colding & Barthel, 2013). With the loss of ecological literacy, less people are connected with the natural world and less likely to care enough to fight for nature's rights.

Our future depends on building up community knowledge to learn how to grow in the face of challenges to the global food system (Sardeshpande, 2021), to build seed diversity for resilience in our food system (Shiva, 2005), and to build ecological literacy to build a connection to nature that brings activism for nature (Colding & Barthel, 2013).

This next section will look at a variety of ways that community gardens facilitate knowledge sharing. Knowledge sharing in this literature encompasses a variety of topics such as environmental education, civic engagement, movement organizing, and more. Knowledge sharing is one way to look at building community resilience, and all of these topics may contribute to community resilience building.

5.2 How gardens facilitate knowledge sharing

There are many research studies that look at the educational benefits that community gardens provide. Research on the knowledge-sharing benefits of gardens spans a variety of topics including more formal education (Ruhl & Lordly, 2021), informal education (Ostertag, 2015; Sardeshpande et al., 2021; Walter, 2013), ecological literacy (Colding & Barthel, 2013), empowerment to marginalized groups (Braga Bizarria et al., 2022; White, 2011) engaging with

social movements (Tornaghi, 2017; Walter, 2013; White, 2011), build mutual knowledge (Moore et al., 2015; Tornaghi, 2017) and more.

Camps-Calvet et al. (2016) did a study to learn about the ways that urban gardens benefit the residents through a mix of interviews, participant observation, and a survey in Barcelona, Spain, and found that learning and education were the most commonly stated benefit that a garden provides.

Walter (2013) looked at how community gardens can be incorporated into the environmental education field. Walter "argues for the conceptualization of learning in community gardens as a form of public pedagogy and social movement learning" (2013, p. 524). Community gardens can be ideal sites for informal education because learning to garden necessarily involves learning more about the plants and gardening knowledge which incorporates attention to local climates. Sardeshpande et al. (2021) state that edible urban commons will increase self-sufficiency by allowing urban residents to engage with and learn how to grow their own food.

Walter (2013) also identifies the ways that community gardens aid in social movement activism and learning. Through workshops, more formal education, and casual interactions, community gardens "can raise environmental consciousness to a more ecocentric worldview" (p. 530). In Detroit, Black, women gardeners found that gardening was a way to teach resistance as gardeners, especially young gardeners "learn how to grow food, but they also learn the power of their own voices" (White, 2011, p. 24).

In addition, the community forged within the garden can facilitate collective learning, especially about social movements related to food systems such as environmental sustainability and food justice. Braga Bizarria et al. (2022) similarly found that community gardens can serve

as spaces for consciousness-raising. They highlight how a horizontal sharing of gardening knowledge engages with the politics of knowledge. The collective knowledge sharing that takes place in community gardens "opened opportunities for women to recover their pre-existing cultural knowledge" (Braga Bizarria et al., 2022, p. 7). Moore et al., (2015) looked at two school gardens in Tucson, Arizona from the perspective of school gardens providing educational alternatives to more traditional neoliberal education. Moore et al. concluded that "alternative futures can be fostered in the midst of school gardens, providing leverage for different ways of being and doing" (p. 413).

Colding & Barthel (2013) review recent literature related to urban green commons to consider how cultural and ecological diversity plays a pivotal role in urban community resilience building. In their discussion, Colding & Barthel stress the importance of urban green commons in building ecological literacy. Urban green commons provide a direct connection and increased knowledge about the importance of biological ecosystems and can demonstrate our dependence on diverse ecosystems. Simultaneously, urban residents demonstrate a decrease in ecological literacy. Tornaghi (2017) considers how there is a lack of edible foods growing in cities and a lack of coordinated space to learn and grow food. The way our food is grown is not visible in most urban spaces (Colding & Barthel, 2013; Tornaghi, 2017). With the projections that two-thirds of the global population will live in urban areas in the next few decades, urban green commons are critical spaces to (re)connect urban populations with ecological systems and to demonstrate our reliance on and connection to biological ecosystems (Colding & Barthel, 2013). Davison (2017) demonstrates how urban populations will engage with their food system given the chance and how the visibility of growing food can (re)connect populations to nature communities and their food system.

There are a variety of educational benefits that community gardens provide. These indirectly benefit the well-being of individuals, their communities, the more-than-human world, and our food system.

Knowledge sharing came up directly and indirectly in many research articles and also played a significant role in my research interviews. Gardens are ideal sites to gain a variety of knowledge from knowledge specific to planting, learning the native plants and animals, to knowledge more related to social movements and the climate crisis.

6. *Community-Building and Empowerment*

One of the most recognized benefits that community gardens provide is community (Camps-Calvet, 2016). The significance of community-building in community gardens is reflected throughout the research (Braga Bizarria et al., 2022; Davison, 2017; Linn, 1999; Moore et al., 2015; Teig et al., 2009; Tharrey & Darmon, 2022; White, 2011). As recognized by Devita Davison, “These aren’t plots of land where we are just growing tomatoes and carrots either. You understand, urban agriculture in Detroit is all about community” (Davison, 2017, 3:11). This final section will focus on the “community” aspect of community gardens.

Camps-Calvet (2016) looked at 27 urban gardens and used a combination of participant and non-participant observation, semi-structured interviews with key informants, and a survey to determine the perceived contribution urban gardens provide humans. There was a diversity of answers, demonstrating the array of benefits urban gardens provide, and within that diversity there was “an overwhelming dominance of cultural services” (Camps-Calvet, 2016, p. 18). Cultural services include services such as social cohesion, biophilia, and place-making, all elements that contribute to forming human and more-than-human communities. Teig et al. (2009)

similarly found that “the gardens were described as a location for growing friendships, not just vegetables and flowers” (p. 1117). Teig et al. wanted to understand the social processes that take place in gardens to understand the connections between gardens and health. They found that “gardeners frequently described gardens as a place to connect across different cultural backgrounds, to feel a part of a community, to connect with family and neighborhoods and a place for social activism” (p. 1117). Tharrey & Darmon (2022) also looked at health in relation to community gardens. They did a systematic literature review of quantitative research studies and found that most studies had a positive relationship between social health and gardening. In addition, Tharrey & Darmon found that “collective gardeners from a low-income population reported higher sense of community, community empowerment, and organizational empowerment than did nongardeners” (2022, pp. 16-17).

Braga Bizarria et al. (2022) reviewed recent research on community gardens from a feminist geography perspective, looking at “the relatively small number of articles that focus on tangible and intangible benefits for those working in community gardens who identify as women” (p. 15). One study in their review that was based in the USA found that community gardens provide a safe space for women to feel empowered to challenge the gendered norms expected of them. These women also engaged in leadership roles, clearly demonstrating the agency they found in the garden. White (2011) similarly used an ecofeminist perspective while interviewing eight Black women farmers in Detroit. White found that these women demonstrated agency by “creat[ing] the farm as a safe space, a community space where they are able to develop meaningful relationships with their neighbors” (p. 22).

Both Braga Bizarria et al. (2022) and White (2011) uniquely considered how gardening has empowered women of the Black diaspora. Despite the traumatic intergenerational memories

that farming can bring up for Black folks, these researchers demonstrate how gardening can surprisingly have a "restorative effect" (Braga Bizarria et al., 2022, p. 5). Braga Bizarria et al. considers the perspective of a Black woman from Cape Town, South Africa who found gardening restorative, despite the fact that this act was illegal for Black people during apartheid. White eloquently expresses her research results, stating that:

> For Detroit's women activists, transforming public spaces enables them to resist the social, economic, and gendered oppression that complicates the accessibility of healthy food for poor people and the communities of color who have not left the impoverished city. Instead of petitioning the city government to demand greater access to healthy food, these women turn their strategies inward. These findings suggest that through their work, they connect the oppression and pollution of the earth with their own oppression and view the earth as an ally in the respective liberation struggles. (p. 25)

Despite the troubling history that the Black diaspora has faced, gardening proves to be healing in a radically transformative way.

7. *Contextualizing my Research, Gaps in the Literature*

My research aims to fill some gaps in the literature on community gardens. While some of these sources have considered various types of gardening styles and degrees of collectivity, a majority of the literature focuses on more traditional allotment-style gardens. Tornaghi (2014) verifies that in the USA community gardens are "generally more similar to allotment sites than to genuinely collectively run spaces" so the collectively-run spaces that I am looking at are not the standard gardening style (p. 557). There is also a lack and discontinuity in defining what a

community garden is and what styles of gardens there are, so I have contributed to this by giving my own definition of a community garden and defining collective and allotment gardens.

While a major focus of research on community gardens comes from the social sciences (Guitard et al., 2012), there is a significant gap in research perspectives from an ecofeminist perspective which is concerned with the interconnectedness of human and more-than-human communities. White (2011) takes an ecofeminist perspective looking at Black women's empowerment engaging in urban agriculture in Detroit, Michigan. There are several scholars taking a feminist approach such as Braga Bizarria et al. (2022), Lloro (2021), Sachs (2021), and Trevilla Espinal et al. (2021). Community-building has been an identified benefit, but looking at these practices from an ecofeminist lens can shed light on *how* gardens facilitate community building. Some of these articles used a feminist perspective, but I found only one article that looked at gardens from an ecofeminist perspective. As I clarified in my Theoretical Framework, while ecofeminism is informed by feminism, it is justifiably a distinct field. The commons are an important part of ecofeminism, but most of the papers that talked about community gardens and the commons were either using other theoretical frameworks or using the commons as its own framework, not naming ecofeminism. I believe that part of the reason for a lack of ecofeminist perspectives on community gardens might have to do with the attacks on ecofeminism and the continued effects.

In their review of the research on community gardens, Bragga Bizarria et al. (2022) found relatively few articles centering on the experiences of women in gardens, and no literature looking at non-binary or trans experiences. While my research similarly goes "beyond issues of gender" to unpack ecofeminist spaces, I am also centering the experience of women and gender non-conforming beings. All of my interviews have been done with garden organizers who

identify as women and/or gender non-conforming individuals, therefore centering these marginalized experiences and contributing this perspective to the academic literature on community gardens.

While I am not necessarily filling any specific gaps in the research on knowledge sharing, this was a central finding in my research and so I included this section to provide context to my findings. In my research, knowledge sharing was spoken about as a form of reciprocity and interdependence that all the collective gardens that I studied provided.

METHODS & METHODOLOGY

1. Methodology

I am using a critical ethnographic approach to this research. Ethnography developed out of anthropology and is a methodology that attempts to gain an insider perspective to understand a particular culture, often through interviews and participant observation (Blair, 2016). Culture in this context refers not only to cultures based on ethnicity, race, or nationality but also to the culture of specific groups, in this case, the culture of community gardens.

A critical approach to ethnography situates the research issue in the context of oppressive structural forces (Castagno, 2012). Critical ethnographers take a standpoint that recognizes the injustices perpetuated by oppressive ideologies and aims to understand the culture they are researching in relation to these oppressive ideologies. Critical ethnography attempts "to [illuminate] power differences, injustice, agency, resistance, and larger analyses of structures" (Castagno, 2012, p. 375). This methodology works from the assumption that oppressive ideologies are embedded in political, economic, and socio-historical structures.

In my research, a critical ethnographic approach helps me identify these oppressive ideologies and structures alongside the cultural observations. Rather than simply *identifying* how these community gardens organize, I bring in theory *to situate* these community gardens within larger power dynamics inherent in neoliberal, patriarchal structures. Using this approach allowed me to examine my observations from a critical view that considers historical context, power dynamics, and dominant ideologies.

I am not stating that I am using ethnography, but rather an ethnographic approach. As I will expand on in the next subsection, I changed my research methods from an initial plan to use both interview and participant observation data to primarily using interview data. I did not have

the ability to do extensive ethnographic research, but I am using ethnography as an approach to my research because I am focusing on the cultural aspects of collective gardens. I want to learn about the behaviors, practices, and beliefs of these gardens. However, I cannot state that I conducted a full ethnography since I was only able to focus on interviews and it was not feasible for me to engage in site visits and observations at each garden.

1.1 Change from initial plan

My initial plan for research was to do a case study of 3-5 gardens. My plan was to visit these gardens for several days to gain qualitative data through participant observation and in-person, semi-structured interviews. However, I had to shift this plan to accommodate some unexpected circumstances and ended up using semi-structured interviews as my primary source of data and included Zoom interviews as an option. This change allowed me to interview more people since I was spending less time with each garden organizer (1-2 hours versus 3-7 days). I believe this actually improved my research outcomes because it allowed me to get a more comprehensive idea of the diverse experiences of collectively run gardens.

The most pressing challenge was getting Covid days before I planned to visit one of the community gardens. This was the last week they were operating before shutting down for the winter, so my only option to include this garden was to do a Zoom interview. I also realized that travel was much more expensive than I had anticipated and was proving to be a significant challenge. After doing this first Zoom interview, I realized that I could still get quality data and conversation over Zoom.

Using interviews primarily and adding Zoom as an option allowed me to expand my reach and talk to more garden organizers in places I would not be able to visit otherwise. I think this is beneficial to my research because this allowed me to get more perspectives on the diverse ways that collective gardens operate. There is no set way to run a collective garden, so this allowed for a more comprehensive overview of various organizing practices. Overall, I am pleased with this change in scope and believe that this has only improved my research outcomes.

There are tradeoffs with each approach I could have taken. Visiting 3-5 gardens, spending several days at each garden, and gaining participant observation data could have strengthened my project by providing multiple data sources to verify research findings (Bernard, 2011). Triangulation would have helped me compare results from interview data and observational data. However, collecting data from more gardens means that some of the research findings in the contexts I studied might apply to other gardens.

Instead, I interviewed nine garden organizers from six different gardens. Interviewing a few organizers from the same gardens helped me build validity in my results as I could see the overlap in their responses. In addition, I found many recurring themes and responses across the gardens. I did not anticipate finding so many similar outcomes given that each garden operates in a unique way, but I believe this validates my results to focus on findings that were recurring in multiple gardens and in multiple organizers' views.

2. *Methods*

I used semi-structured interviews to collect data and used supplemental observational data for two of the gardens. According to Bernard (2011), semi-structured interviews are the most suitable method when you only have one time to speak with knowledgeable informants.

This flexible structure allowed me to have a structured plan of questions to ask, yet allowed for flexibility to follow up on questions that came up in the interview. I interviewed community garden organizers, the people who are responsible for organizing the garden because I wanted to talk to knowledgeable informants who have more insight into how the garden operates behind the scenes to better understand the intentions and the effectiveness of such radical practices. Semi-structured interviews allowed me to ask relevant follow-up questions to probe where needed. I looked at six gardens and interviewed nine organizers in total (for two of the gardens I interviewed two to three organizers from the same garden) which allowed me to get a good idea of the diverse ways that collective gardens operate and the types of community-building efforts that happen in these gardens.

I am still including participant observation data for two gardens that I was able to visit in person. My role as an observer was that of an "active membership role" (Adler & Adler, 1998) because I was engaging as a volunteer, but I was not a long-term member of any of these gardens. I attended open garden hours and was in the position of a regular garden volunteer. This allowed me to experience how the organizer(s) interact with volunteers and allowed me to interact with long-term volunteers. As a participant observer, I tried to understand the experience that volunteers have while also identifying observations that relate to my research questions. I took field notes on any observations that were relevant such as the layout of the garden, the types of plants growing, how volunteers interacted with the garden, informal conversations with volunteers, etc. These descriptions were all qualitative.

Since I ended up changing the strategy of my methods at the beginning of my research I've reflected a lot on how this may have shaped my research differently. Initially, I wanted to get a lot of qualitative data on a few gardens as case studies. This is why I originally planned to do

both interviews and observations. However, I now realize that while I may have gotten richer data (more data about each individual garden) from these sites, the inclusion of more gardens allows me to explore different approaches to collective gardens. I think this shift has only improved my findings.

2.1 Selection criteria and sampling strategy

Several criteria determined my selection of gardens. Gardens that fit my selection criteria were: (1) collective gardens (which I am defining as gardens where most if not all of the garden is collectively managed, and there are few to no individualized plots), (2) primarily run by women and/or gender-nonconforming organizers, and (3) included at least another example of reciprocity, interdependence, or the commons.

Collective gardens were the most important selection criteria. I hypothesized that these types of gardens are more conducive to community-building than the more widespread allotment garden adopted by many institutional structures (e.g., city governments) as the primary form of urban gardening. While allotment-style community gardens can be considered commons (Rogge & Theesfeld, 2018), I see their individual structure as a limitation to building rich community connections and embodying the idea of the commons. Allotment gardens do have their place in expanding local food access and growing knowledge but for this study, I wanted to focus on gardens that I believe to be more radical spaces of community building.

Second, I looked for collectively run gardens that are organized primarily by women and/or gender-nonconforming folks. I think this is important because while women historically engaged in more of the (re)productive work related to agriculture and food preparation, the

majority of farmers and farmland owners today are cisgender white men (Caffentzis & Federici, 2014; Warren, 2000). I also think that it makes sense to focus on women and gender-nonconforming folks since I am using ecofeminism as a theoretical lens, which allows me to consider how gender influences these organizers' work (Braga Bizarria et al., 2022). In community gardens with multiple organizers, I have included those that have a majority of women and genderqueer folks in organizational roles.

Third, I looked for community gardens that demonstrate at least one other element of community-building, such as reciprocity, interdependence, or the commons. Since I wanted to inquire more into how these values are put into practice, I wanted to be sure there was more than one ecofeminist practice at play in each of my cases. This was determined through initial background research on the community garden organizations, looking at their online presence through websites and social media, and by getting accounts from my peers who have experience with these gardens.

I initially planned to limit my research to gardens that I could travel to, but with the inclusion of Zoom as an interview option, I was able to expand my geographic scope. Due to personal and peer knowledge of gardens located nearby, many of the gardens I included are located in the southwest region, but there are a few that are in other parts of the United States.

The sampling strategy I used was nonprobability sampling, which is appropriate for studies that look at fewer cases to gain in-depth knowledge of a particular culture (Bernard, 2011). This type of sampling is also ideal with expert informants, which is how I would describe community garden organizers since they are the ones that are responsible for what happens within the garden. Since my selection criteria were somewhat specific, this was the primary factor that contributed to my sampling strategy. To be more specific, Bernard (2011) would call

this “purposive sampling” which is a sampling strategy that seeks out participants who can serve the specific purpose you need. I needed participants who could give me insight into the way that collective gardens are organized, so I sought out garden organizers.

2.2 Data collection

My research was approved by the NAU IRB. My primary form of data collection was through semi-structured interviews with community garden organizers. These interviews were one to two hours long and the questions were specific to several categories of interest: reciprocity, interdependence, the commons, knowledge building, and organizing practices [see Appendix A]. For gardens that I did not also visit in person and collect observational data, I also included some questions that described the layout of the garden, the primary volunteer/community interactions, and other questions to help me get an idea of what the garden looks like and how it operates [see Appendix B].

My interview questions were semi-structured so that I could address the same central questions in every interview yet also have the flexibility to ask questions that come up through observation and/or conversation (Fontana & Frey, 1998).

For participant observational data collection, I observed day-to-day activities that garden volunteers engaged in. After participating and observing, I wrote field notes of the observations. This included observations of relationships, organizing practices, the physical layout of the space, informal conversations with garden volunteers, and how each of these observations engages with reciprocity, interdependence, and the commons.

My position as a fellow community garden organizer helped me understand the context of organizing a community garden and allowed me to ask questions that are specific to this type of organizing work. It also helped me to feel comfortable and capable as a volunteer since this type of work is not new to me. I have been a garden organizer for collective gardens for four years and have been a garden participant at two allotment gardens. This past experience has led me to these research questions, wondering why the different styles of gardens produced such different forms of community.

2.3 Data collection reflections

Interviewing eight people has allowed me to gain diverse interviewing experience. Some interviewees needed little direction and had a lot of wonderful details to provide for each question. I did not have to ask too many follow-up questions in these interviews. Other interviewees needed a little more direction and additional follow-up questions to focus them on what my intentions were for each question. I enjoyed the diverse experiences between interviews as they challenged me to be present in each and understand the needs of the interviewee. I have previous experience asking interview questions as an undergraduate student, so this felt more familiar to me and I started off with confidence in my capabilities.

I took notes on my computer for each interview since I was either using it for Zoom or as a backup audio recorder. While I wanted to maintain a comfortable and casual environment, using my computer did not feel uncomfortable in any situation. This allowed me to take notes more discreetly and in more depth than I could with handwritten notes.

Getting observational data proved to be more challenging personally. I have had experience conducting interviews as an undergraduate student but have never done participant observation before. I found it challenging to engage as a participant and then later recall all the thoughts that were going through my mind and the observations I had. Since I wanted to get an immersive experience and was engaging with other volunteers, it didn't feel appropriate to keep a notebook on me to stop working and take notes every few minutes or while in a deep conversation. I think the limited amount of time I had to spend at each garden made it hard as well to collect so much descriptive data in such a short amount of time. The observation did help me get a clear idea of the layout of the garden and how volunteers are oriented in this space. Spending several weeks at each garden would have made observation more comprehensive and effective, but was not a feasible option, so I am glad that I opened this research up to more interviews.

3. Analysis

The analysis process began when I started transcribing the interviews. I transcribed the interviews by getting an initial rough translation from Zoom and then listening through and making modifications as needed.

For my analysis, I coded the interviews using ATLAS.ti to identify where and how reciprocity, interdependence, and the commons show up (Blair, 2016). I analyzed the codes [see Appendix C for full code list] for (1) answers to my specific research questions regarding reciprocity, interdependence, and the commons, (2) concepts that came up in multiple interviews, (3) concepts or experiences that might have come up in one or a few interviews but were

significant, and (4) ideas that challenge or support ecofeminist theory and the academic research on community gardens.

Reciprocity, interdependence, and the commons did not always show up explicitly. I did have questions at the end of each interview section that specifically defined and asked about these concepts, but often these concepts came up previously or in response to other questions.

For reciprocity, I was looking for examples of mutual benefit and a responsibility to the relationship. An example of reciprocity that showed up in one interview was talking about how some neighbors to the garden helped feed the garden by giving the garden animal manure which was a waste/abundance that they had raising animals. When the neighbors were sick, the garden organizer would bring them tea made with plants from the garden to keep them healthy. In both exchanges, the health of the land/people was tended to and a responsibility to the health of the other helped to build this relationship.

For interdependence, I was looking for an understanding of the ways that we are intimately connected to and reliant on human and more-than-human communities. For example, one garden organizer described their relationship with the greater community as a web of mycelium, which demonstrates an understanding of being constantly connected, whether visible or not, by networks that support one another.

For the commons, I looked for an understanding of collective spaces or shared "ownership" that is built upon relationships. One garden organizer described how they realize that while they put in a lot of personal, unpaid work to keep the garden running, the extent of what they have going on at the garden is only possible with the help of numerous volunteers and could not have ever been accomplished by one person alone.

For some garden organizers, this might have been the first time they heard of some of these terms. However, some organizers came in with preconceived ideas about these terms. In these cases, it was obvious because after I gave my own definition they began with 'my conception of the term has been…'. In these cases, I encouraged them to talk about both definitions. I am also bringing in the analysis of these preconceived definitions and conceptions. For example, one organizer initially brought up the tragedy of the commons and the idea that common spaces are often depleted due to individual greed. However, they used this to justify their management style, which maintains anti-hierarchy, as my conception of the commons but also has an intentional structure and rules to accommodate for the challenges of a collective space that they brought up in their own definition when relating the commons to the tragedy of the commons. Their personal management philosophy accommodates the importance of collective spaces but finds solutions to the challenges that collective spaces are known to bring up.

4. Garden Selection

I decided to keep the gardens names and organizer names confidential in this research. I thought that confidentiality might help organizers feel more comfortable speaking their honest truth about their experiences and thoughts about their garden without the risk of their identity being revealed. The questions I had were not terribly invasive or on difficult topics, and I probably could have decided to not have this research be confidential. However, there were some difficult topics that came up organically, such as challenges working with partner organizations, and I am glad for the confidentiality in this research to not feel like I am calling out particular institutions but rather describing systemic challenges. Below, I will give an introduction to the

gardens and organizers that were a part of this research. Each garden is given a name that represents a quality of theirs, so these names are descriptive. I thought this would be an easier way to keep the gardens confidential but make it easier to remember their context when naming them in the next few chapters. All organizers are given pseudonyms as well.

4.1 Introducing the gardens and garden organizers

In the introductions below, I will specify how the gardens are organized, as a volunteer-based garden or as a nonprofit-based garden. This distinction was useful for specifying variations in responses in my analysis. Including both organizational structures helps me to get an understanding of differently-structured collective gardens. However, this distinction does not mean that gardens in each category were organized identically; there is a large amount of variation in how each garden is organized and I will be more descriptive below. I will begin by describing the volunteer-based gardens and then introduce the nonprofit gardens.

Table 1

Garden	Interviewee	Location	Type of garden	Volunteer or paid
Femme & Queer Garden	Ren	Intermountain West	grassroots organization	volunteer
Teaching Garden	Keri	Intermountain West	nonprofit	paid
Cultural Garden	Erin	Southwest	nonprofit	paid
Mutual Aid Garden	Skye	Southwest	grassroots organization	paid

The Museum Garden	Kara	Southwest	owned by museum	volunteer
The Museum Garden	Fran	Southwest	owned by museum	volunteer
Grassroots Garden	Kiley	Midwest	owned by HOA	volunteer
Grassroots Garden	Genevieve	Midwest	owned by HOA	volunteer
Grassroots Garden	Abby	Midwest	owned by HOA	volunteer

Table 1 lists the pseudonyms that were chosen for each garden and garden organizer, and explains the geographical location, type of organizational structure, and whether the garden organizers are primarily paid or volunteer-based.

The first volunteer garden is the Femme and Queer Garden. This garden is intentionally a space for femme and queer folks to feel safe. This garden is located in the Western US in an agricultural neighborhood adjacent to the main urban downtown. The organizer I spoke to was Ren who started the Femme and Queer Garden. This garden has several core organizers that help run the garden. This garden is a small community farm and apothecary. They have annuals but focus most on medicinal perennials such as lavender, cannabis, or peppermint.

The next volunteer garden is the Museum Garden. This garden is affiliated with a local museum that owns the land the garden is on. This garden is located in the southwest at a high elevation, and the garden itself is located just a few miles outside of the central downtown. This garden has one central organizer that has run this garden for the past few years, and a few other people who have taken on leadership and an organizer role. I spoke to two organizers at this garden, Fran, who is the central organizer, and Kara, who has been helping out the last few years and was employed there this last summer. They focus on growing a variety of annuals, perennials, and native plants.

The next volunteer garden is the Grassroots Garden. This garden is associated with the neighborhood association which owns the land they are on. This garden is located in the

Midwestern US and is centrally located in an urban downtown neighborhood. This garden was started organically from the efforts of the central organizer, Kiley, whom I spoke with. Kiley and her wife, Abby, both joined the interview together, so I spoke with both of them in one interview. Abby has also been a central organizer alongside Kiley. I also spoke with Genevieve separately, a member and volunteer with the garden who has helped out a lot over the past five years. This garden grows annuals and flowers and grows for eight Community Supported Agriculture (CSA) shares to make enough money to pay the gardens' bills.

The next volunteer garden is the Mutual Aid Garden. This garden has some paid organizers but is volunteer-run. This garden is located in the Southwest in an urban area. I spoke to Skye, who is a central organizer of the garden. This garden is a self-described mutual aid garden that is funded by a fiscal donor who supports the mutual aid aspect of the garden and so this sponsorship helps offset the price of their produce. They focus on providing food access within a food desert.

The following two gardens are nonprofit-run gardens. The first is the Cultural Garden which is located in the Southwest. The garden is located on the outskirts of the central urban downtown. I spoke with Erin who organizes the garden and manages the volunteers. This garden has sections of the garden that provide a history of the people who settled in this region including several Indigenous tribes and more recent immigrants. Each section of the garden has crops that are important to that cultural group. The intention of sharing cultures through agriculture in this garden is why I am calling this garden the Cultural Garden.

The last nonprofit garden is the Teaching Garden. This garden is located in the Western US in a high-elevation climate. The garden itself is located within the urban center. I spoke with Keri who is one of several paid coordinators of this garden. The main purpose of this garden is to

teach students various topics within the garden. While they began as a teaching garden for children they have expanded their programming to include adults as well, though children are still their primary group.

RESULTS

In the results chapter, I will dive into the themes and insights that came out of my analysis of the interview data. I will use quotes from the interviews throughout this chapter to exemplify the themes and ideas that the garden organizers had. In this chapter, I attempt to answer my research question, *how do community garden organizers facilitate a culture and practice of reciprocity, interdependence, and the commons?* My research question was intentionally left open-ended to let the interviewee's answers shape the outcomes of my research. I asked more open-ended questions and followed up to gain deeper insight into the interviewee's answers and to direct them back to the main questions. The specific interview questions can be found in Appendix A.

I have broken the results chapter into several sections. I begin with themes and ways that garden organizers build the commons since the commons section was the most robust. I then look at reciprocity and interdependence together in the next section since I realized that these ideas and conceptions tended to overlap quite frequently. I end the results chapter with a section discussing alternative futures and radical hope. Alternative futures and radical hope were themes that were brought up organically through these conversations, and because my research is visionary research, it is beneficial to describe the visions of garden organizers and the ways their collective gardens bring them radical hope.

1. The Commons

Q: How do garden organizers build a sense of the commons?

1.1 By creating an organizational structure that allows for intentionality

The organizational structure of the gardening space as a common space was important to all of the gardens. In these results, organizational structure refers to the social ways the garden is organized, through formal and informal rules and agreements. This section on the commons looks at how the garden organizers described the structures of their spaces and how these structures allow for intentionality in the vision, mission, and/or goal of the garden.

An interesting point that came up only with two gardens that are entirely volunteer-run, the Museum Garden and the Grassroots Garden, was that they both have a central organizer that takes responsibility for running the garden. Fran and Kiley aim to include various opinions and ideas for what is grown and how the garden looks, and they allow for individuals to develop agency and leadership informally. Their leadership style encourages volunteers and garden members to build agency within the garden. The organizers of these two gardens possess this unique leadership quality which requires knowledge of not only growing but also people skills to welcome volunteers in and community connections to build partnerships and get the word out about the garden in a grassroots, organic manner. Fran states that she "happens to bring this leadership skill to [the garden] but that's just one of my skills (Fran)." In speaking with Fran, it's clear that Fran knows that leadership is a skill she brings to the garden. This could be considered "empowering leadership" since she encourages agency from garden members rather than simply dictating herself how the garden should look. This empowering leadership that Fran demonstrates she is critical to a collective space.

Kiley from the Grassroots Garden had a similar experience:

> And we've discovered that we always are trying to foster more communal leadership. And people are like I really just want to show up and have you tell me what to do. Again for better or worse, so. But the idea with that is, people can show up who have no experience and get their hands in the dirt immediately. They don't have to know what they're doing.

The organizers of the Grassroots Garden would love to have more people in leadership roles but most of their volunteers don't want to, don't have the capacity to, or feel they have the skills to. Having one or two people take on an organizing role allows for others to engage with the garden who might not otherwise if they had to assume more responsibility. This is one specific instance where the collective garden is more inclusive than an allotment garden where every gardener assumes full responsibility of their garden plot. Collective gardens are more inclusive of people who don't know how to garden or may not have the time to commit to greater leadership.

Abby from the Grassroots Garden expands on the role that the central organizer of the Grassroots Garden (Kiley) plays:

> There are people who have that passion but aren't organized or don't have the relationships. Or, Kiley is just like, people trust her. They come and are like, great. I want to do what you are telling me to do. I trust you. I feel safe with you.

While Kiley and Abby would love for more people to take on leadership roles, there are many people who do not desire to take on leadership but still want to engage with the garden. Genevieve acknowledged that for some volunteers, their time in the garden is more of a hobby and not a responsibility they want to take on.

Another garden organizer stated that:

> Commons require structure in order to thrive. I think if commons just become like totally chaotic spaces, and I don't want to say, like anarchistic, because I think anarchism has, there's a lot of organization in anarchism, but just this concept of lawlessness. That feels more like wilderness, you know, just like wild, unbridled, open, free, space. And while we really value expression, we also like to kind of curate and be intentional about what we're bringing into the space. (Ren)

Here, Ren explains their approach to the commons. To Ren, an organizational structure allows for a collective space to maintain *intentionality*. For the Femme and Queer Garden, intentionality of the space means ensuring the garden is a safe space for femme and queer folks and serves the community by producing food, herbs, and medicine. The structure of the Femme and Queer Garden is maintained through community agreements or rules determined by the core organizers. To Ren, the commons are not just open spaces, such as wilderness, but rather are organized collectively through community agreements.

> We do have rules about the space like. If you bring dogs, they have to be on a leash and um no smoking cigarettes, and if you do just like, make sure that you clean everything up, and um, you know it's a femme and queer led space. So if there is a cis dude, who is taking up a lot of space like somebody will go put him in his place. It will be like, hey? This is actually um a femme and queer-led collective, and it just kind of it feels pretty palpable. (Ren)

The structure that these rules provide allows for organization within this common space without the need for someone to own the land as private property. Rules can help to demonstrate

what is expected of people within a collective space to avoid potential conflict and allow for the collective to recognize when someone is not behaving as agreed upon. In the quote above, Ren describes how the intentionality of the Femme and Queer Garden being centered around femme and queer folks to provide a safe space means that if other folks are taking up too much space, they will deal with the person to ensure the space maintains a sense of safety.

Organizational structure allowing for *intentionality* was directly mentioned by two other garden organizers and is demonstrated in the description of how every garden I researched is organized. Rules are necessary for a commons to function cohesively because there are a diversity of people and ideas for what the common space could be. Structure helps the Femme and Queer Garden work in a collective space without a need for private property.

Q: How do garden organizers build a sense of the commons?

1.2 By creating safe, healing, and accessible spaces

One way that *intentionality* is important to these gardens is that it can allow for common spaces to be *safe, healing, and accessible spaces*.

> But I think about the merits of building common ground and simultaneously kind of protecting what is kind of sacred about spaces like the [Femme and Queer Garden]. You know, the fact that we're like a femme and queer-led space makes it feel really safe for certain people, and maybe more hostile for other people. (Ren)

While building common ground is important, there is also importance in creating affinity spaces to help historically marginalized folks feel safe and have a space to build empowerment and agency. The Femme and Queer Garden in particular has the intention of being a safe space for femme and queer folks. Without an organizational structure that upholds these values, the Femme and Queer Garden, or any of the gardens I researched, could default into heteropatriarchal-organized spaces, or spaces that lack such a feeling of safety for femme and queer folks.

While not all of the gardens I researched are specific affinity spaces for femme and queer folks, many of the gardens aim to be safe spaces for people to come together. The Grassroots Garden is not targeting a specific audience but has still been a safe space to gather.

> My thought is that the structure is remarkable in the way that it gives people a safe place to just be. Like, so many people have found grounding, safety, and connection in the farm. At times they were really struggling, me included, and the like unique structure of it being community work days, communal, like a place. You can come and go when you are able to, has been life-saving for some people, and I don't say that casually like it actually has been. (Abby)

Being a safe space is a recurring theme in each of the gardens I researched. The Femme and Queer Garden specifies being a safe space for femme and queer folks. The Grassroots Garden speaks of the garden as being safe in general for people facing crises or challenging times. The Mutual Aid Garden is a safe space for organizing work. The Teaching Garden and The Museum Garden are safe spaces for children. And the Cultural Garden is a safe space for

cultural recognition. Being a safe space for marginalized populations is a key aspect of the collective gardens that I researched.

In addition, collective gardens can be sites of healing, as implied by the last quote by Abby. Healing was brought up in both a human and a more-than-human context. Kara brought up a similar idea to the quote above, that the garden was a healing space for garden members going through tragedy. The garden provides a supportive community and the people are clearly there for one another when someone is going through a hard time, which demonstrates the level of connection found in these gardens.

Skye also brought up how the Mutual Aid Garden can bring about a healing relationship with the earth:

> I feel like there's a healing connection with the earth. So, I feel like for the people who are working there, I want them to be able to take time while they're farming and experience a slower pace of work. (Skye)

Skye brings up healing between human and more-than-human communities in the quote above. Skye demonstrates that one of the roles the Mutual Aid Garden serves is to provide a space for this inter-being healing to take place.

On a similar note, three of the six gardens were considered to have spiritual significance, or even hold a sense of magic.

> A lot of people have reported just like coming onto the land and feeling, for lack of better words, like a vibe, and I think there's a general sense of like, oh, I'm here, and it's an intentional healing space, and I'm going to be respectful. (Ren)

The Museum Garden is located in a place significant to an Indigenous nation's place of creation. A medicine man of the nation came to the garden and explained the importance of the garden as a place where wildflower seeds were spread in their creation story. The Cultural Garden is on a site that has been cultivated for thousands of years.

Accessibility is a topic that was important to each garden organizer I interviewed. Accessibility can mean a lot of things, and the topic was brought up in many different contexts. For example, financial accessibility came up directly or indirectly with every garden. The gardens that are run as nonprofits reflected on how they try to find ways to maintain financial accessibility while realizing their organization's limitations and the need to make some amount of money in order to survive. For example, the Cultural Garden needs to make money off of the produce, workshops, and events to survive. However, sharing is such an important value of theirs that they aim to share half the harvest and sell the other half to local chefs and at local farmer's markets. Similarly, the Grassroots Garden has about eight Community Supported Agriculture (CSA) shares that make enough money for them to replenish tools, seeds, and other garden needs to survive. However, the Grassroots Garden still shares a significant amount of the harvests with volunteers that give their time.

The Cultural Garden goes a step further to create intentionality with produce that is sold in the market economy. When Erin gives local chefs access to "regionally and culturally appropriate" crops from the Cultural Garden she asks that the chefs share where the crop came from and identifies to their customers why that variety or crop is so important. Skye similarly considers how accessibility should be considered for human and more-than-human communities. They talk about accessibility as also being for "the insects, and flora and fauna" and maintain

accessibility for other species by intentionally planting and creating habitats that make their garden an oasis within an urban space.

Another significant way that accessibility is brought up is by making knowledge accessible. Knowledge sharing is such an important part of these gardens that I will speak more in-depth on this topic in the section on reciprocity, but here I want to discuss how knowledge is central to accessibility.

> I think also like a lot of knowledge, is gatekept, and so the accessibility for like knowledge and learning these different sorts of practices is a really just great opportunity that I'm trying to incorporate, impart to the folks who are there. (Skye)

Skye recognizes how the Mutual Aid Garden plays a role in making gardening knowledge accessible, approachable, and affordable.

To sum this section up, Abby describes the community that has grown within the commons of the Grassroots Garden:

> Never have I lived in a neighborhood that actually felt like a neighborhood, and I've lived a lot of places - I lived in North Carolina and Massachusetts - but being here because of the farm, I know everybody in the neighborhood by name. Like we show up for each other. We check on each other. We see each other when we're out walking and catch up. Like, I've just never, I kind of feel like that true neighborhood, is not really a thing anymore, but it is here because of the farm. Like even people who don't necessarily work at the farm walk by the farm. Talk to us. Look at the flowers. Say, hi to that - there used

to be chickens there - say hi to the chickens, and or like, come to events, we do. There's just this like way that people have become connected because of this shared space.

To Abby, the Grassroots Garden feels like the definition of community where people know one another and look out for each other. The physical space of the farm allows for human connection to take place. Social relationships are central to the commons, but the commons are also central places to build relationships.

Q: How do garden organizers build a sense of the commons?

1.3 By building a relationship with the land to learn its needs

Another way that garden organizers build a sense of the commons is by creating a relationship with the land, with the earth, and with more-than-human beings. As stated by Skye:

> I think a really important aspect of the commons is respecting the earth itself. So a lot of times, you see that folks will be farming on areas that are like literally bogs or swamps, right? And that swamp is never going to be a prairie-side. And so it really is about respecting the earth. And learning about the land that you're working on, reintroducing native species in responsible ways. Tending to rivers as well. That's really unique, I think, to some farms. But, I think that respect and responsibility is inherent in the idea of the commons, at least for those who are providing that space and stewarding that particular thing.

As stated in the quote above, Skye feels that respect is an important part of the commons. One way to create a relationship with the land is by recognizing and respecting its needs. Skye engages in a relationship with the land by considering what types of plants and ecosystems the land can handle. This allows Skye to respect the needs of the land.Skye states that respect for the land is how you can really be a responsible steward because you are cultivating that which the land wants and needs.

In order to know the needs of the land, we need to listen to the land. The lack of continuity of land-based knowledge (Colding & Barthel, 2013) for many of us in Western society means that we don't always know what those needs are so it is important to listen and observe in order to better understand the needs of the land.

This section overlaps with reciprocity since Skye is talking about giving to the land. The "giving" part of creating relationships is a form of reciprocity, and creating a relationship with the land is a form of the commons. In addition, Skye states that "the commons is a place of reciprocity." In order to give to the land you must first learn its needs. This is true of any relationship and gets at the core of what reciprocal relationships look like. To care for the land and build a relationship with the land, we need to learn how to give in meaningful ways. Reciprocity, interdependence, and the commons are interrelated ideas, and not easily untangled.

Conclusion

The responses to where and how the commons shows up in the gardens that I researched centered on (1) the intentions or purpose behind the garden, (2) the ways that each of these collective gardens provides a safe, healing and accessible space, and (3) the ways that collective gardens allow for a relationship with the land to be fostered within the gardens that I researched.

As I will expand on in the discussion chapter, the garden organizers that I interviewed focus on the ways that relationships are central to the idea of the commons, rather than focusing on physical objects and how collective those objects are. It is clear through the description of each garden that most items in the garden are viewed as collectively owned, or intended for use by anyone in the garden.

2. *Reciprocity/Interdependence*

How do garden organizers build a sense of reciprocity and interdependence?

Something that I noticed in coding and analyzing these interviews is that many of the interviewees confused my definitions of reciprocity and interdependence with one another or talked about both ideas simultaneously. I don't think confusing reciprocity and interdependence is the fault of the interviewees but rather it speaks to the way that reciprocity and interdependence are closely related ideas. All three community-building elements (reciprocity, interdependence, and the commons) are very closely related and so they cannot always be teased out and neatly separated. In this next section, I will cover reciprocity and interdependence together since many of the responses to how community garden organizers build a sense of reciprocity and interdependence are related and talked about together.

Q: How do garden organizers build a sense of reciprocity?

2.1 Through an abundance mindset rather than a scarcity mindset

"Ahh, how do you convey, in words, what a garden gives to you?" This emotion came from a few of the garden organizers when asked about reciprocity and what they receive from the garden personally. The garden organizers clearly struggled with how to put into words all the tangible and intangible ways a garden gives. I could feel the joy these organizers felt from being asked what they received, feel the way the answers fell flat beside the emotion in the interviewee's voice. It is clear that each of these organizers gives abundantly; they give their physical labor, emotional labor, care work, free time, and more. As stated by Fran, "a lot of work goes into the garden, but a lot of joy comes from it as well." One way that these gardens give back is through an *abundance mindset*, often learned by recognizing the ways that the more-than-human world gives abundantly.

> The garden gives like pretty much everything you know when it's maintained. And I think that's the root of the question like, you know. You put your time into gardening. You put your energy into it, and it's hard work sometimes. And then the reward of seeing growth happen, like the reward of working on those like types of restorative projects when you reintroduce a particular mushroom species to the forest that you haven't seen before. And so I think that the garden really gives what you put into it. (Skye)

Skye clearly articulates a relationship of reciprocity; the garden gives abundantly when it is cared for and maintained by the gardeners. Reciprocity takes effort on both ends of the relationship but ends up benefiting both parties more so than they could accomplish on their own.

Some of the garden organizers mentioned seeing the efforts of all their hard work coming together in community gatherings, or as mentioned in the quote above the reward of restoration of native species. None of the organizers mentioned the food they get through the garden as the reward, the reward came in more social, emotional, and nature-based ways. For example, Genevieve talked about how she has gained friendships through the garden, an example of social reciprocity. Keri stated that she receives "a lot of laughter" and "a lot of fun" and Fran mentioned the joy she receives, both examples of emotional reciprocity. Skye also talked about how the garden can connect us to the more-than-human world, demonstrating nature-based reciprocity. Kiley called the food from the garden a "promised reciprocity" that is a part of each of the gardens that I researched but acknowledged that there are so many other ways to receive reciprocity from the garden.

Q: Is there even a sense of reciprocity?

2.2 Garden organizations that do not prioritize rest demonstrated degrees of organizer burnout

While every organizer voiced how abundantly the garden gives, there were a few organizers that voiced or reflected burnout in their responses. There were three organizers that demonstrated degrees of burnout.

> There were 2 fires at the farm that destroyed a lot of property last year like house fires. Homeless people burning trash to keep warm. One of them, we had a straw bale stacked against the side of the shipping container. And one of the fires burned like a little privacy

> fence we had behind, between the compost pile and the neighbor's yard, and then the second fire burned the whole pile of straw bales and damaged a bunch of stuff in the shipping container. We lost most of our supplies and tools. And so that was like a discouraging like beginning to the season that then felt like I just never really caught up. And it was our first year as parents, and we didn't sleep for 8 months. And it was pretty discouraging of a year, having thoughts like, is this even worth continuing? But then, like we take our little baby out there, and it's just magical, and he knows which row cover has the turnips under it, and it goes over and is lifting the row cover because he loves to just like walk around eating a turnip. And he like started crying because I wasn't giving him a turnip, and I'm like, wow! Just like having him grow up like with all these people that are just a consistent part of his life. (Kiley)

The quote above demonstrates the way that several of the organizers that reflected burnout mentioned the challenges they faced, but then something sparked them and while they may have been emotionally worn out at the moment, there was a spark of joy and hope that the garden brings to them, and that's what keeps them there despite the periodic burnout. The quote above speaks about real problems that face common spaces, particularly in urban environments. For the volunteer-run gardens, the weight of problems is put on the person who takes primary responsibility for the place. Despite efforts to incorporate everyone's ideas about what the space should look like, when problems arise the organizers are the ones that bear the full weight of the problem. One garden organizer also exhibited burnout through her emotions - she didn't speak about burnout but I could hear it in her voice, and in the way that the problems she mentioned felt heavy within her voice. This organizer seemed to feel burnout due to a lack of sufficient support for the garden tasks that needed to be done; this person sounded overworked.

Q: How do garden organizers build a sense of reciprocity?

2.3 By allowing for rest

However, not all of the organizers demonstrated burnout. Keri shared many progressive ways that the nonprofit work culture at the Teaching Garden was incredibly supportive.

> I think I see [reciprocity] more like internally of just like how we do the work together as a team. I think that there is a lot of give and take, and accountability, and making sure things happen, and letting people rest when they need to rest. (Keri)

The Teaching Garden takes measures to avoid burnout and the nonprofit organization demonstrates real care for its employees. The Teaching Garden exhibits reciprocity in how their organization is run; reciprocity is a part of the work culture. For example, Keri mentioned that employees maintain accountability with one another to avoid overworking by checking in on how many hours their co-workers worked every week. In addition, the Teaching Garden works on a four-day work week to allow for a three-day weekend for their employees' work-life balance. The nonprofit also provides health insurance to all employees which is not the case for all of the gardens that I interviewed. Listening to this conversation, I could hear the joy that Keri had in her work culture, she mentioned joy, fun, and laughter in her work. The Teaching Garden demonstrates a visionary step where the garden organization prioritizes care work in their employee work culture.

The reciprocity demonstrated in the work culture of the Teaching Garden can be understood as *reciprocity in rest*. As stated by Skye:

> Without that rest period, gardening is almost impossible. Like for our body, you really need to calm down and do nothing for you know that 3-month [winter] break if you can have it.

These garden organizers give so much physical and emotional labor for these gardens to run and be engaging community spaces. Reciprocity for the garden organizers can also be reciprocity in rest as a way to heal, gain back strength and balance the amount of energy that is given during the growing season. In the quote above, Skye stated how rest is an important value they learned from the more-than-human world; the garden naturally has a rest period. That doesn't mean that the garden is dead or nothing is happening.

Q: Where do reciprocity and interdependence show up?

2.4 In knowledge sharing

Knowledge sharing came up as important to how the garden organizers received reciprocity, by the knowledge gained from the garden, and also came up as a way the garden demonstrated interdependence, by sharing knowledge (most often) for free with the community. As stated by Kara, "I think that's the beautiful thing about [gardening] is you're continuously learning all the time. The land is always teaching you something." Every garden organizer stated that the garden gives back through knowledge sharing. Learning from the land is important to each of these organizers, and is central to each of these gardens.

The Teaching Garden and the Museum Garden are located in particularly challenging, high-elevation climates. For these two gardens, another aspect of sharing knowledge is sharing

the knowledge that you can garden in high-elevation environments and even produce many warm-season crops that the general public doesn't realize are possible. As stated by Kara:

> The garden has a lot to share within the possibilities of growing food in [a high elevation climate]. So my intentions are, again, to serve community and to serve the land that we're walking on and if that could be through ways of sharing knowledge of like sustainable practices from harvesting to water conservation within the Southwest.

Keri voices the same idea of growing in a challenging climate with the Teaching Garden:

> It is possible to grow food here. It takes a little bit of creativity and different timing than other places, so trying to break down like seasonality of what you can grow here, how to protect things from cold temperatures just to encourage people to try. (Keri)

While the knowledge that you can grow food even in challenging, high-elevation environments may seem obvious to more seasoned gardeners, making this visible to the general public can help encourage more backyard gardeners to experiment with growing and increase the accessibility of growing.

Every garden organizer stated that knowledge sharing was a key purpose of their garden, a way that the garden benefits the greater community.

> The main things that we do are providing food for the community, and sort of like an educational resource for this for the community. So I think those are our main forms of interdependence. (Skye)

Skye's quote is an example of knowledge sharing as a form of interdependence since the Mutual Aid Garden is building community knowledge, most often free of charge. For most of

these gardens, providing food for the community was not the main purpose of the garden but knowledge sharing, formal and informal, was a main purpose. Providing food was one of the main purposes for the Mutual Aid Garden, but as stated by Skye in the last quote, community education is an equally important purpose to the Mutual Aid Garden.

> I think that [kids] learning where their food comes from, knowing that it takes work and effort, getting excited at what they pick at the farm versus what's at the grocery store like, I think that piece of resiliency and relying on people to grow food is really a big piece of what we're about. (Keri)

Here, Keri states how she perceives resilience in the food system. To Keri, resilience in the food system comes from community food systems, where numerous people grow and have knowledge of how to grow food. Without that collective knowledge and collective effort, we are reliant on industrial agriculture. As Ren alludes to:

> The concept of independence is so beloved by America. It's like, I don't need anybody else to survive or to be good to. I have my stuff figured out, you know, and I think that just feels really misguided because it leads to a lot of invisible dependence.

As Ren points out, independence is often *invisible dependence*. Invisible dependence in the food system refers to the way that we are so reliant on industrial agriculture to feed us.

Some of the organizers talked about how learning from the more-than-human world allowed them to better understand the needs of the soil, plants, and land and therefore be able to better provide what the garden needs and better reciprocate what the garden gives back. Skye called this *sensitivity* to the needs of the more-than-human world.

> In terms of the plants, it is being sensitive to their beings. And so, like in the example of the squash, corn, and beans like figuring out what plants grow well next to each other. Companion planting is really important. It kind of cuts against this idea of, like mono-cropping and having plants interspersed with each other, like actually, it helps them grow more. So, you know, you have to…have that sort of sensitivity. (Skye)

Sensitivity to the needs of the more-than-human world brings the gardener into a relationship with other beings and the environment and that relationship is then reciprocated back in the form of more abundant harvests. The challenge of learning the needs of the plants demonstrates the importance of building a relationship with the more-than-human world; how can we work to heal the land that is stressed by climate impacts if we don't even know what the land needs? Skye also related sensitivity to human communities and explained in the same way how sensitivity to a community's needs can help you offer reciprocity that is appropriate for their needs and desires.

> And the same for building community, right? You might think that your community needs like a CSA, but they're like no, we don't. We need someone to teach us how to cook the food, right? We need recipes for the food that you're sending. We need access to this program, like we're not interested in this program, so that's all learned, and I think that gardening is big picture. So, taking the time to like, see how your events did, the feedback from your volunteers. (Skye)

Skye also recognized that in many communities there is a lack of place-based knowledge when it comes to gardening, a direct result of continual colonization. The discontinuity of gardening knowledge is why it is important to have gardening spaces where we can experiment

and make mistakes. Collective gardens are an ideal site for experimenting, learning, and listening to the land because a group of people can collectively share and build knowledge. These gardens are uniquely ideal for learning sensitivity to the land and to people since their primary purpose is more centered around community than it is feeding people.

The fact that knowledge sharing came up as a form of reciprocity for the organizers and as a way to give back to the greater community demonstrates that knowledge sharing is one of the central aspects of collective gardens. None of these gardens stated that the producing food was the main reason for the garden to exist in the same way a production farm would. Rather, having a space to learn collectively, and in the process build a community was what each organizer described as the central purpose of their garden. While these gardens are not the primary way anyone receives food, they are building resilience in communities by sharing growing knowledge and creating community connections.

Q: Where do reciprocity and interdependence show up?

2.5 By learning from nature to create a relationship with nature

Another way that reciprocity and interdependence showed up is by (re)connecting with the more-than-human world. This section builds upon the idea of sensitivity as a way to forge a connection with nature and looks at how the garden organizers I interviewed learn from the more-than-human world.

> And in community, I think, when it comes down to it, all these things are interconnected like a web of mycelium. (Ren)

This metaphor, which imagines community like a web of mycelium, came up when asked about reciprocity, but is a great example of learning interdependence from nature. Mycelium forms connections between plants and helps share nutrients where needed. This demonstrates the importance of being in community with nature because of how much we can learn from nature.

> I feel like we're so disconnected from just, you know, like soil, everything! Like Earth, and this is something I didn't know, like how essential the soil is, until I started gardening. You know, if you care for the soil, if you give it the right nutrients it will thrive, like the garden. Things will thrive, and it's like, it's a process. You're always forward-thinking within it as well. Like who are you thinking about in the future? What plants are you growing in the future? How do you give back? (Kara)

The quote above illustrates both reciprocity and interdependence. Reciprocity is visible in the sensitivity to the needs of the soil. But this quote takes reciprocity further to incorporate interdependence, which is demonstrated here in the recognition of how soil health relates to plant health which relates to human health. In addition, the quote above considers the interdependence of the past, present, and future because it considers how you can give "back" to your future self by thinking of the future needs of the garden. Giving to the future also expands to future generations, and Kara also described an Indigenous idea of thinking about how your current actions will affect relatives seven generations from now. Considering the well-being of future generations demonstrates an understanding of how one's current actions are interdependent with future generations.

Q: Where do reciprocity and interdependence show up?

2.6 In community relationships

The final, and perhaps most important way, that collective gardens build reciprocity and interdependence is in community relationships. Genevieve addresses the way that community relationships are central to the Grassroots Garden:

> What pulls me back in [to the Grassroots Garden] every season, because…I moved a little bit further away, and my landlords have an empty lot. So there's like a small space where I can have my own garden. So it's not really the produce anymore that keeps pulling me back to [the Grassroots Garden]. It's just that, I like everyone. And I enjoy the work. I know that if I go there during the growing season, I'll see at least one or two or five people that I really like, and may only see just in that setting. So it's really more of a community. And the friendships that I guess, are now what I would consider what I get back the most. I still take some produce, but I don't need a lot of it anymore, because I have my own [garden].

As exemplified through this excerpt, the Grassroots Garden is not just about getting produce but more importantly about the community that is formed around the collective space. Kara echoes reverence for the community built at the Museum Garden "the community that's been cultivated there is unlike any community."

Building community is inherent to the way the collective gardens that I researched operate. As Genevieve stated:

> "It's a nice medium for starting friendships or getting to know other people…like if you're sitting right next to someone doing the same thing and it's just silent, generally you can feel conversation, just kind of springs forward from that."

Working collectively provides the ideal opportunity to get to know the person working beside you. Ren suggests that prioritizing relationship building has become a more foreign concept in our society:

> When I think about relationship building. It's like it goes to the root like where we came from, how we emerged into this world. And there's like a feeling of trust there in this like root place grounding. Then there's a feeling of home, and there's this sense of purpose that's like pretty undeniably healing. And, I think it's challenging for a lot of people to work with that paradigm, because we live in a world that's very detached and disposable. And so I think, as the [Femme and Queer Garden], we build relationships in order to go to the route with them and to kind of build home together.

In this quote, Ren describes how "detached and disposable" our society in the US is. Ren contrasts this detached and disposable world with how the Femme and Queer Garden is a space that connects and regenerates relationships.

Conclusion

Gardens are ideal sites to learn reciprocity and interdependence from nature. The natural abundance of a garden can model reciprocity to garden members. However, garden organizations must prioritize rest to avoid burnout of the garden organizers who take on so many roles. Learning from the garden is a key way the garden reciprocates back to the garden organizers, and

sharing knowledge with the community is a way collective gardens demonstrate an understanding of interdependence with the greater community. Building a stronger relationship with the more-than-human world comes naturally when working so intimately with plants, soil communities, pollinators, insects, and more. Gaining a deeper understanding of the interconnectedness of more-than-human communities can help the gardener recognize their own interdependence with the greater community, and listening more closely to the needs of the plants or soil can help gardeners better reciprocate the generosity of the garden. Collective gardens in particular are structured in a way that naturally encourages relationships to form, since gardeners are working collectively.

3. *Alternative Futures and Radical Hope*

Q: How do garden organizers envision alternative futures to the capitalist system?

3.1 Envisioning alternative futures

Since my intention for this research is to use these conversations and collective gardens as a way to envision alternative futures, I also highlight the visions that these organizers had about the future. This final section of my results looks at how the garden organizers see collective gardens as transformative alternatives, and how they imagine radical, transformative futures.

> So it's unique that it's the only garden that I've come upon [that has] this unique component to it that you don't have a plot base, like [where] each plot is very individualized. And [the allotment gardens are] like a really reductionist ideology I'd say.

> Like, hey, if you have the money to buy this plot for the year then here you go… but I think there are a lot of inhibiting factors to that plot-based system that [the Museum Garden] really tries to ameliorate through this understanding of a holistic, reciprocal relation-based garden. (Kara)

Every garden organizer that I interviewed recognized that collective gardens are not the most common form of gardening. The collectivity of the space is based in "this understanding of a holistic, reciprocal, relation-based garden." Kara recognizes the ways that allotment gardens are reductionist forms of gardening; they get people gardening but in an individualized way. Alternatively, collective gardens are accessible to people who don't have any gardening knowledge, don't have space, or don't have the time to commit full responsibility. In addition, collective gardens are relation-based since they require collective volunteer efforts for the garden to function.

> Yeah, I don't think that we would be succeeding if it didn't, there's nobody here wants to just make this a garden. It's supposed to be a public garden, or it's not just a farm, you know. We care. You know it's unique from other farms or community gardens that it's not just about growing food or creating a space for people to learn, but it's like, we also think about it as a space of reconciliation, we hope. (Erin)

Erin demonstrates the ways that every garden organizer talked about their space as being more than just a space to grow food, but more importantly, a space that brings people together in community. Erin's emphasis on how the Cultural Garden is not *just* a garden is a way that she articulates the importance that community involvement brings to the garden. Fran, Kara, and Kiley all specifically compared the experience of their garden with allotment gardens, and

acknowledged the surprising lack of community in those gardens compared to the collective gardens they are part of. Every garden organizer recognized the unique community qualities their garden held and articulated that it's not your average garden, that there is something special in the community that is formed in these gardens.

However, many of the organizers also expressed the challenges that come with being an alternative and going against the capitalist norm for how land and organizations operate.

> I guess it's hard to be an alternative, while embedded in capitalism, because it is like funding, is an issue. So it is volunteer-run. I have been the only person who's ever really been employed there. (Kara)

The collective gardens I studied demonstrate an alternative way of relating to land and to one another beyond mainstream capitalist society. While collective gardens are examples of alternative systems, there are challenges that come with being an alternative which the garden organizers recognized. The primary challenge is funding, as stated by Kara. The Museum Garden and the Grassroots Garden also may face challenges sustaining engagement if their primary organizers leave since there are no long-term paid positions.

3.2 Building climate-resilient futures

> So I mean the intentions are just like, we're facing a climate crisis. We have been, and I think gardening and knowing how to produce your own food together is going to be essential when we can't rely or depend on this capitalistic food system so I think it's a period of to continuously share knowledge. I think knowledge is power. (Kara)

Kara importantly demonstrates that being an alternative is not just for fun, but is actually an essential way to build resilience in the face of the climate crisis. One way Kara works to build resilience through the Museum Garden is through knowledge sharing. Erin expands on the imperative to grow local food for climate resilience:

> I think as our environment changes and we see more radical weather patterns, drier conditions here, hotter conditions here, that these plants are being identified more and more as having real relevance and importance in the broader community.

In the quote, Erin is referring to the importance of native plant species and locally adapted seeds in climate resilience. Many of these collective gardens are growing and saving seeds in challenging environments, from high-elevation mountain climates to low-desert environments.

In addition to building local climate resilience, gardens are also spaces that can bring healing to organizers of the climate movement. “Everyone needs healing and sanctuary when it comes to revolution” (Ren). Gardens provide the space to heal, with one another and with the more-than-human world. As stated before, these collective gardens are accessible spaces of healing, and healing is an important part of social movement longevity.

3.3 Radical hope

Many of the organizers brought up ways that their gardening spaces give them hope, and I thought this would be an appropriate way to end this analysis section to consider the hope these garden organizers have for a better future.

> I do feel like [the Museum Garden] is this alternative still embedded within, like, the museum's bureaucracy. But it does provide some type of hope, and we think envisioning of future possibilities of what gardening could be, and hopefully, one day will be. Because if we can network and all work together and continuously year-by-year step outside of this hegemony within capitalism like, I think that's so more empowering especially within the climate crisis. (Kara)

Kara sees hope in collective gardens as a way to work towards a post-capitalist society. In addition, Kara views this form of climate activism as one that empowers people.

> And my hope is that, like this network just keeps growing, and the more skills that are introduced, I mean just through, like a day of volunteering that might plant a seed that grows into like a whole other community garden, or even a little garden box in an apartment, you know, that makes a huge difference. Some people are like - that is how a beet grows! You know, with the hope that one day all of our cities will feel like forests again. (Ren)

Ren sees hope in more people engaging with growing, (re)learning this crucial skill. Collective gardens can help teach gardening skills and can inspire community members to grow food and medicine.

> My hope is that with knowledge of this you know, tangible stuff, and appreciation or understanding that there's some connection there like oh, you like this? I like that! That we have a stronger community with more awareness and a deeper understanding of history, we can build a stronger future. (Erin)

Erin's hope comes from the way their garden is used to teach about various cultures and bring a greater appreciation for diverse populations. Erin hopes that this community-building and teaching space can promote cultural cohesion. Collective gardens can help us learn the history of the land, learn about other cultures through food, and can help build connections with our fellow community members.

Conclusion

Collective gardens are perceived as alternatives to the traditional allotment gardens, alternatives to capitalist land relations, and radical ways to form community. They can contribute locally to community resilience in the face of the climate crisis by adapting local and native seeds to local climate variability, building community knowledge and relationships, and providing a space for healing within climate organizing. The garden organizers find hope in the community built around each of these gardens working to undo capitalist land relations, building growing knowledge, and building a deeper awareness and respect for all cultures.

DISCUSSION

This chapter will contextualize the results of my interviews by putting my own research analysis into conversation with my theoretical framework, ecofeminism, and my literature review, which looked at research specifically on community gardens.

In the analysis of this research, I was surprised to find so many common ideas and practices throughout these six gardens. Since allotment gardens are the more common type of garden, there is essentially a "blueprint" for how to organize an allotment garden, both in terms of spatial organization and social organization. Allotment gardens share many similar qualities such as individual plots and a shared tool shed. Since collective gardens have grown more organically without this same blueprint, they each look very different in spatial organization and social organization.

When I initially considered which gardens to include in this research, I was not sure how I would piece together these very different types of gardens. There is no standard way to organize a collective garden, they each seem to grow organically from community needs and desires. However, I was shocked by how similarly the organizers approached collective gardens. For example, the accessibility of the garden came up for every garden in this research. While accessibility looked different in each garden – ranging from financial accessibility to ADA accessibility, or accessibility of gardening knowledge - the ideas and intentions behind accessibility within a garden came from a similar place. The similarity in values across collective gardens leads me to believe that these values may stem from the very fact that collective gardens are interstitial spaces. Being alternative spaces to the norm might indicate a certain understanding of the groups that are often marginalized in the normal spaces, such as allotment

gardens. It would be interesting for future research to explorehow and why these seemingly unique collective gardens have such similar values and beliefs.

1. The Commons

1.1 Theoretical and empirical divergences in "the commons" research

After completing my analysis, I noticed an interesting disparity between the sections I wrote on the commons in the theoretical framework section and the literature review. The authors I used in the theoretical framework were writing about the commons in a more theory-based, abstract way. These authors focused on social relationships and equitable access to the means of (re)production and decision-making within the commons (Caffentzis & Federici, 2014; Engel-Di Mauro, 2018). However, in the literature review, the authors were looking at community gardens specifically as a form of the commons. These authors focused more on the spatial and tangible aspects of how communal a space is and whether that can be considered a commons (Gottl & Penker, 2020; Rogge & Theesfeld, 2018).

My research bridges this theoretical and empirical research gap because the main selection criteria for which gardens I included was gardens that were collectively run; i.e., selecting for tangible and spatial aspects of the commons that the authors in the literature review focus on. Simultaneously, my research questions centered on the more theoretical community-building aspects that the theoretical framework authors focused their research on. What my analysis, therefore, contributes to the literature is empirical research that focuses on the community-building aspects that commons theory is grounded in, and that the empirical research on community gardens lacks. For example, one of my interview questions was *how do you*

collectively build relationships in this garden? This question is aimed at finding a tangible way to describe the more abstract idea of "the commons." Reciprocity and interdependence are similarly abstract concepts that I attempt to ground in real examples through my research.

1.2 (Re)claiming the commons and building ecological literacy

Most of the gardens I looked at could be considered participation gardens. Participation gardens, as Gottl & Penker (2020) note are gardens that are mostly free and accessible to any volunteers and have few or no individual allotment plots. Five of the gardens I studied clearly fall into this category. The fact that a majority of my research sites fit into the most collective definition of community gardens makes sense since my search criteria were centered on more communal forms of gardening.

Eizenberg (2012) discussed how commons could be considered a liminal space. The volunteer-based gardens fall into this category since they are truly communal spaces for people to come and visit and engage with. The non-profit gardens fall in this category as well since their mission is for these spaces to serve the community. And while there is some internal decision-making about the intention with these gardens, they are open spaces for the public to engage with, however, this may be in specific times that the garden is open to the public.

One of the most important aspects of the collective gardens that I researched is the resistance to the continual enclosure of the commons. All of these gardens were located in urban spaces, and therefore part of what the organizers are doing is caring for commons in increasingly neoliberal, urbanized spaces where land is continuously bought, sold, and developed for individual needs. Keri from the Teaching Garden and both Kiley and Genevieve from the

Grassroots Garden recognized how their garden provides green space for urban residents to find a connection to nature. Every organizer I interviewed recognized how their garden helped the greater community connect to their food system and to more-than-human communities. According to Colding & Barthel (2012), urban green commons, such as urban collective gardens, can help community members form a connection with nature.

Urban green commons are critical to building ecological literacy. Colding & Barthel (2012) found that ecological literacy is an important way to get community members engaged with the climate crisis. Ecological literacy is declining, specifically in urban environments (Colding & Barthel, 2012). A drop in ecological literacy suggests that there will be fewer people who care enough to fight for the more-than-human world, a critical component of climate organizing work. Some of the garden organizers I interviewed expressed an understanding of this societal disconnect from nature. For example, Kara from the Museum Garden stated that "I think interdependency [with the more-than-human world] is so important. It's something, again, we're so disconnected from. I think it's so essential moving forward." However, the garden organizers also recognized how these collective gardens can help you learn about the more-than-human world. For example, Skye at the Mutual Aid Garden described how reciprocity with the more-than-human world is learned over time, and listening and learning about the needs of the plants and the soil can help you learn how to better care for these beings and give back more appropriately.

1.3 How do collective gardens survive capitalism?

US society is entrenched in capitalism (Wood, 2002), and therefore even alternative systems to capitalism, such as the community-based systems demonstrated in collective gardens, necessarily must interact with the capitalist system. Here, I consider how collective gardens provide land access, how this differs from the land access allotment gardens provide, and how these gardens manage to function without capitalist relations as the primary economy. Then I will consider the question McClintock (2014) wrestles with: whether collective gardens subsidize the capitalist system.

Collective gardens can address issues of land access in a way that allotment gardens are limited. As Tornaghi (2017) stated, lack of land access is a major contributor to food injustice. Security of land tenure is also one of "the most common challenge[s] faced by USA gardeners" (Guitart et al., 2012, p. 368).

Allotment gardens do not provide land access to the same degree that collective gardens do. Allotment garden plots often fill up and cost money to secure an individual garden bed (Göttl & Penker, 2020). This means that while allotment gardens are providing some space for growing food for some people, there are others for whom allotment gardens are not accessible, affordable, or there is not enough space for. This is an example of where the individual focus of the style of allotment garden management limits its ability to radically address issues of injustice. While allotment gardens provide important gardening access to some, there are many urban residents that do not have the privilege of securing a garden plot.

The collective gardens that I studied took alternative approaches to the traditional allotment garden model to provide food and knowledge for their community. The Museum Garden, the Femme and Queer Garden, and the Cultural Garden provide land access by holding

open volunteer shifts. These gardens also have more room for volunteer agency and decision-making in what is planted and are able to take harvests home. The Mutual Aid Garden shares food with volunteers and through their CSA program. The Teaching Garden's primary purpose is to teach through the garden. This still addresses land access since having land to work on and build knowledge of growing food is a significant part of mutual aid - not just charity but sharing knowledge. Each garden included in my research addressed the 'inability to access land' and therefore was working to some capacity within a food justice context (Tornaghi, 2017). None of the six gardens that I examined limited volunteer numbers. If we consider collective gardens to fall under Göttl & Penker's (2020) "participation garden" category study, my findings support theirs. They found that none of the participation gardens had waitlists, and a majority did not have a fee to become a member. This suggests that collective gardens as I've defined them, can better address the issue of land access that comes from capitalist ownership of land.

As McClintock (2014) demonstrates, many academic scholars debate whether community gardens subsidize the neoliberal food system by providing a free source of food through unpaid labor. Kara from the Museum Garden acknowledged that "it's hard to be an alternative, while embedded in capitalism." Each of the gardens I looked at had to wrestle with this question to determine how to provide a community-growing space while still paying the bills. Because while we would ideally love to have these collective gardens be "perfect" examples of anti-capitalist spaces, the reality is that our society is so entrenched in capitalism that everyone must engage with capitalism to survive.

The ways that these gardens make ends meet while paying the bills is quite simple. The volunteer-based gardens rely primarily on volunteer efforts, including volunteer garden organizers. Some of the volunteer gardens had a few paid positions but they are primarily

volunteer powered. The nonprofit gardens are able to pay garden organizers through their organizational funds.

The volunteer organizers of the Museum Garden and the Grassroots Garden take on a significant amount of leadership. These organizers are unpaid, but they are willing to put in the work. However, what does that do to the long-term sustainability of the garden if no one else can pick up the work when they leave? Two organizers of the Museum Garden and the Grassroots Garden noted that having a paid position would help, but that this might change the structure of the garden to be able to afford to pay someone. For example, one of the organizers of the Grassroots Garden considered that in order to have a paid position they may be required to produce and sell more of the harvests for there to be income to pay someone. There is a give and take in these alternative spaces and each garden has to decide what is right for them to both be an alternative and survive within a capitalist system.

Each garden that I researched provides an example of how to resist dominant capitalist notions of profit, competition, and individuality. For the volunteer-based gardens, they do this through volunteer time, partnering with organizations that have land access, and having events, selling produce, or writing grants that cover baseline costs to run the garden. The nonprofit gardens take a different approach - they are organized as an official non-profit and are able to acquire land of their own and pay for employees.

Instead of asking whether these spaces subsidize neoliberalism, I think it's more accurate to ask how these radical gardens survive capitalism. This question reframing can help other organizations and community groups imagine ways that they can be anti-capitalist spaces and survive capitalism. We need more anti-capitalist spaces and more commons, making it clear how

organizations are already doing that can help inspire and encourage other community groups looking to do the same.

Ren described the society of the USA as “detached and disposable.” What Ren is referring to is how capitalism influences all aspects of society, to relate everything to the economy and perceive the world as mechanistic pieces that are able to be controlled (Federici, 2004; Wood, 2002). This detached and disposable world even permeates our relationships with one another and the more-than-human world. Since capitalist and neoliberal ideology prioritizes independence, self-sufficiency, and a mechanistic worldview (Federici, 2004; Wood, 2002), focusing on relationships based on care, reciprocity, and interdependence is a radical act because it goes against the core values of the dominant systems at play. This is why such a seemingly simple value of building community is actually a way that collective gardens engage in radical paradigm shifts.

1.4 Structure and intentionality of collective gardens

In the literature review, I looked at how the governing structure affects the intentionality of a garden to interrogate whether formal processes, such as gardens being adopted into city governance, provide more benefit with greater security or if they give too much to neoliberal structures and end up losing the intentionality of the space. What came out of the interviews instead was how the *structure* of these collective spaces maintained the *intentionality* of the space. Each garden is set up in a way that allows their specific mission to flourish. For example, the Teaching Garden is one of the more formalized gardens that I looked at. However, their “formal” nonprofit status allows them to be a space that serves youth and the community through

education. Being set up as a nonprofit allows for full-time staff to ensure a reliable and well-coordinated educational experience in the Teaching Garden.

None of the gardens that I looked at were part of local governments, but the non-profit gardens could be considered more formalized gardens. However, these gardens maintain intentionality through their mission, or purpose within the community. For example, the Cultural Garden needs to balance making enough money to cover the costs of the garden while still abiding by their mission to share the produce from the garden. The way that Erin maintains this balance is by selling half the harvests and sharing the other half. Erin goes a step further to ensure that the produce that is sold is still respected; she asks chefs that buy produce to share that these ingredients came from the Cultural Garden, and to share why that particular crop is significant.

The Grassroots Garden is a volunteer garden but similarly needs to sell some produce to make ends meet. They have eight CSA shares that help them pay the bills, and on CSA harvest days all the harvest goes to the CSA's. But volunteers that come to other shifts during the week can often take home produce as well. The Mutual Aid Garden similarly has CSA offerings but allows for volunteers to take home produce as well.

The Museum Garden is a volunteer garden, but their relationship with the museum has brought some bureaucratic challenges. Both organizers interviewed brought up the challenges and limitations of working with the museum. While the museum covers general costs for the garden, they also limit the potential to advertise volunteer opportunities since all communications must go through the museum's specific outreach channels. This means that volunteer opportunities are listed through an email listserv, which is a method more utilized by older generations. The Museum Garden is not allowed to start their own social media account,

which could be a better way to reach younger audiences. In addition, the museum has not stepped up to offer a paid position to coordinate the garden.

One of the organizers interviewed from the Museum Garden was the only person to ever be paid to work at the garden, and that was only funded for one season. The organizer that is the main leader of the garden is older, and both organizers questioned what would happen when she eventually cannot maintain the level of commitment she currently gives the garden. One of the organizers said that they have debated whether to organize the garden as a separate non-profit to allow more autonomy in the space and the ability to expand the capacity of the garden. The bureaucracy with the museum was one of the greatest challenges this garden faced and demonstrates that partnerships with organizations have their limitations. However, this partnership also allows for long-term security in land tenure, a challenge other volunteer gardens may face without such a partnership.

2. *Reciprocity and Interdependence*

I will now consider the implications of the results from the reciprocity and interdependence section. Interdependence showed up alongside reciprocity in the interview responses which was not something I anticipated. A significant space where interdependence showed up was in urban interdependence with the more-than-human world. Urban spaces can be seemingly devoid of green spaces, and as Genevieve recognized, these gardens can be "an oasis in [an] urban space." Each of the gardens I researched connects urban communities to the more-than-human world. The Teaching Garden does this most specifically with children through outdoor education. The Cultural Garden specifically connects their community to plants that are important to different cultures.

While every garden organizer demonstrated reciprocity (i.e. through an abundance mindset, knowledge sharing, creating a relationship with nature, and/or in community relationships), the organizers and gardens that did not prioritize rest demonstrated a lack of reciprocity in some ways. The amount of *intentional rest* in each garden made the difference between the organizers that expressed burnout and those that did not appear to have significant burnout. The organizers that spoke about resting in the off-season, or how their work culture is supportive of mental and physical wellbeing demonstrated a strong amount of reciprocity. They spoke of the abundance the garden provides them. However, the organizers that did not prioritize rest demonstrated degrees of burnout. Part of this may be due to the fact that I was interviewing the garden organizers at the end of the season. All the organizers had been working hard for months and I was reaching them at the end of their busy season. It is understandable that some of them may have experienced burnout since they had not yet had the winter down-time to recuperate. However, I think the role that rest plays in reciprocity is an important lesson to any garden organizer. In response to where reciprocity shows up at the Mutual Aid Garden, Skye responded with "what do we owe the land? And what do we owe ourselves?" We need to think of a reciprocal relationship as not just what we are giving away, but how we are nurturing our own needs as well. If we give too much of ourselves it fails to be a reciprocal relationship. Giving abundantly does not mean we should be harmed in the process. When we feel ourselves giving more than we can handle, we need to step back and take time to rest, just as the land takes time to rest.

Industrial agriculture, which fuels our global food system, is void of reciprocity (Trevilla Espinal et al., 2021). Industrial agriculture neglects the needs of the land and only focuses on the needs of the humans in the "relationship." Similarly, industrial agriculture is void of a sense of

interdependence. The health of the soil communities, pollinators, animals, humans and more are interdependent to one another. In addition, the health of all these interacting beings relies on biodiversity. However, biodiversity reduces the "efficiency" and profit margins of industrial agriculture and is therefore absent. Gardens that care for and nurture biodiversity and the health of all the beings that interact with the garden receive abundantly, as demonstrated by the gardens I researched.

3. *Knowledge Sharing as Central to Collective Gardens*

Knowledge sharing spanned all three community-building elements and was a major part of each garden that I researched. As stated in the literature review, Camps-Calvet et al. (2016) found education to be the most common ecosystem service provided by a garden in their study. Education, or knowledge sharing, was a significant form of both reciprocity and interdependence in my study. Every garden organizer stated that knowledge sharing was something they personally received from the garden (reciprocity) and was a service that the garden provided for the community (interdependence).

To expand on Camps-Calvet et al.'s (2016) findings, knowledge sharing was not only a service given but every garden organizer voice that this was a central part of the reciprocity they received from the garden and was a way that the garden demonstrated interdependence since sharing knowledge is a way to build community resilience. Knowledge sharing was a central component of all the gardens in my study. For the Teaching Garden, sharing knowledge is the central mission of this garden. Similarly, sharing the place-based history of the land was the central mission of the Cultural Garden. The Museum Garden, The Mutual Aid Garden, and Grassroots Garden all voiced that building ecological knowledge is a key way that their gardens

give back to volunteers and to themselves as organizers. This demonstrates the way that these gardens engage in mutual aid practices (interdependence) through knowledge sharing since they are hands-on ways to engage in food/ecological knowledge.

Skye recognized how knowledge is often gatekept, especially knowledge around growing our food which has consolidated to very few people over the past several decades (Horst & Marion, 2019). Caffentzis & Federici (2014) and Figueroa (2022) consider how much of our knowledge has become hidden behind paywalls. When we think of where knowledge comes from and where we learn, schools and universities are one of the first things most of us might consider in Western society. But within universities, where knowledge is considered to be "found" often, most academic papers on research findings are hidden behind steep paywalls (Figueroa, 2022), and to be a student is becoming significantly more expensive. Skye in particular, spoke about how they view the Mutual Aid Garden as playing a role in making growing knowledge accessible to the community. Every garden that I researched demonstrated an effort to make gardening knowledge more accessible by providing volunteer shifts where anyone can show up and learn, through workshops for the community, and by engaging youth in garden education. Accessibility of the commons, whether that's the intellectual commons or the land commons, is important because "the earth is literally for everybody" (Skye). As stated by Caffentzis & Federici (2014):

> The task for us is to understand how we can connect these different realities and how we can ensure that the commons that we create are truly transformative of our social relations and cannot be co-opted. (p. 97)

Transformative social relations cannot be based on elitism, by reserving knowledge to a select few. Instead, we must work to make knowledge accessible to transform our social relations and engage and empower our communities in their own (re)production of culture. The collective gardens that I researched each demonstrated a purpose in sharing knowledge widely with the greater community. Since knowledge sharing was central to the purpose of each garden, they all engage in transformative social relationships.

4. Limitations/Areas for Future Growth

While there is strong evidence for the ways that these nine garden organizers demonstrated ecofeminist values, there are a few places where I noticed that they might be able to expand or extend their radical potential. This final section of the discussion will critically consider the places where ecofeminist theory can help garden organizers recognize and deepen their practices in the future.

As I discussed in the reciprocity section above, prioritizing rest is key to fully embodying the practice of reciprocity. Lack of intentional rest correlated with signs of burnoutGarden organizers who spoke of rest as a form of reciprocity did not demonstrate burnout, whereas those who did not discuss rest, did feel burnout. Feeling the need to constantly work, constantly progress, and not care for the well-being of oneself is characteristic of capitalist values of never-ending progress. It is important to recognize the ways that we internalize these practices because, as demonstrated by this sample of garden organizers, capitalistic values and norms can be harmful. Garden organizers can more fully embody the ecofeminist value of reciprocity by allowing and practicing rest.

A second area where I identified potential for further growth is in the interdependence that gardens build (or not) with the greater human community near to the garden. This shows up in several different ways specific to each garden, so I will address them all here. To start, the Museum Garden demonstrated community interdependence by holding free, community workshops, events that engage both the local and Native communities, and offering open volunteer shifts weekly. However, I feel they could improve their sense of community interdependence by communicating more about these opportunities and about their open gardening space so that more people in the community know about the garden and can benefit from them. We did talk about this in the interviews, and this is area where the museum's bureaucracy limits their potential. The museum wants the garden to only advertise through their own outreach platforms which are antiquated, slow, and don't allow the Museum Garden to increase their outreach in the ways the garden organizers would like to. This is both a limitation I noticed but also is clearly restricted by the museum's control.

In addition, the Museum Garden often has large harvests of food to give away which are left on a table as an open offering to the community. This is one of the gardens that I was able to visit and see this practice, and it made me wonder if any of the harvests go to waste. It sounds like the produce is usually taken by the next day, but the organizers do not know who is taking the produce. Having more of an intention behind where the produce goes could be another way to serve their community even more.

Another area where I saw potential to build deeper community was through intentional emphasis on interdependence with the more-than-human world, i.e. the plants, animals, soil communities, and more that interact with the garden. Every organizer mentioned soil health as something they care for, which demonstrates an understanding of the interdependence that plants

and soil communities have. When answering my question about interdependence with the more-than-human world, many of the organizers talked about the ways they incorporate plant diversity for pollinators and try not to harm rodents in the garden, but many of their answers did not get too deep into the ways that more-than-human beings interact with the garden. I think it may have benefitted me to probe more, to really understand how each organizer perceives the animal interactions or insect interactions. I also think that long-term observation would have helped to recognize how the organizers interact with the more-than-human world. Do they get upset seeing gopher holes or plants chewed up by squirrels? Or do they have a native plant area where snakes can roam? Do they accept that deer need to eat too? This is an area that many of the organizers appeared to be lacking in a full demonstration of reciprocity with the more-than-human world, but this also could be for lack of better communication of the more-than-human world.

As Kimmerer (2013) and Abram (1996) demonstrate, our language affects the way that we perceive the world around us. Both authors demonstrate that English is limited in its ability to describe experiences with the more-than-human world. The dominant, Western perception of nature as inanimate objects is reflected in the way that English attributes nouns to most aspects of the more-than-human world, rather than expressing these aspects as active as many Indigenous languages do. I bring this up to question whether I could have more easily understood the connections the garden organizers have to the more-than-human world through observation instead of through interviews since the English language is limited in how we describe, perceive, and experience the more-than-human world. Observation of more-than-human interactions in collective gardens could be an important area for future research.

CONCLUSION

1. *Motivations and Intentions Behind this Research*

Going back to the beginnings of this research, I had hoped to address several layers of inquiry. The first is that I wanted to study a radical approach to climate change at a local level. Urban agriculture and community gardens are often considered to be local solutions to the climate crisis (Artmann & Sartison, 2018; Dor et al., 2021; Humaida et al., 2023; Mancebo, 2018; Wakefield et al., 2007), however, the most common form of community gardening, allotment gardening, has many neoliberal qualities that I perceive as limitations to their effectiveness as an approach to the climate crisis (Tornaghi, 2014). While I did not compare allotment and collective gardens in this research, I can say that the community-building aspects of collective gardens may contribute to building community resilience in the face of the climate crisis (Colding & Barthel, 2013; Feinberg et al., 2021; Menconi et al., 2020; Shimpo et al., 2019). In addition, collective garden organizers perceived their gardens to be radically stronger forms of community-building than they have experienced in allotment gardens.

While collective gardens themselves will not change the structure of our society, they can introduce more people to alternative ways of relating to one another and to the land. Collective gardens are one way to approach building resilient, sustainable communities. Municipal sustainability leaders and community organizers should consider the benefits of collective gardens and consider providing collective gardens in addition to allotment gardens.

I also wanted to consider how ecofeminism can contribute to climate organizing work and intersectional feminism. As ecofeminist Greta Gaard states, "the liberation of women-the aim of all branches of feminism-cannot be fully effected without the liberation of nature, and conversely, the liberation of nature so ardently desired by environmentalists will not be fully

effected without the liberation of women" (Gaard, 1997, pp. 21-22). Liberating the human world cannot be done without liberating the more-than-human world. While intersectional feminism has importantly demonstrated the need for feminism to include intersectional voices, leaders, and activists, we also need to consider how intersectional feminism often omits the more-than-human world. Similarly, we need to understand the role that patriarchal domination plays in the environmental movement. Ecofeminism as a movement and ideology can help us connect these important ideas and organize more effectively to recognize the interconnected ways patriarchal domination oppresses human and more-than-human beings. Collective gardens help us do this by bringing us into community with human and more-than-human beings.

The core of this research focused on understanding how collective gardens demonstrate radical community-building, so this is what I specifically looked for within the interviews. These collective gardens demonstrated several significant ways that values and practices of reciprocity, interdependence, and the commons can be understood as radical community-building. Collective gardens can help us imagine alternative futures beyond capitalist ideology since they are already spaces that engage in alternative ways of relating to human beings, more-than-human beings, and the land. Collective gardens do this by embodying reciprocity, interdependence, and the commons.

Reciprocity and interdependence are closely related ideas that are often seen working together. Collective gardens are spaces where people can build knowledge about the more-than-human world by engaging in the garden and learning the needs of the plants and the land. All of the garden organizers felt reciprocity in the knowledge they gained from the garden. Simultaneously, these collective gardens engage in community interdependence by sharing this growing knowledge with community members who come to the garden.

By maintaining intentionality in these spaces, garden organizers can create safe, healing, and accessible spaces. Collective gardens can help bring communities into a relationship with the land, which is an essential part of creating the commons (Red Nation, 2020).

Collective gardens can help us (re)imagine land relations outside of capitalist values of ownership and property rights. These tangible examples of anti-capitalist spaces can help movement organizers envision alternative futures beyond capitalism. Visioning an alternative future is an essential step to move towards an alternative system.

As stated in the introduction, I intended for this research to contribute visionary ideas to climate organizing so that we can practice imagining the end to capitalism. Looking at community-building practices is one way to vision for future organizing work as grounded in community building. In addition, the garden organizers that I interviewed contributed their own perspectives on how these gardens serve as a vision of an alternative future. The organizers talked about reciprocal, relation-based gardening as a unique aspect of their gardens. Each organizer considered how their collective garden is divergent from the normal allotment garden in a way that allows for greater community to form. These organizers don't see these gardens as only spaces for food, most importantly these gardens are spaces for building community.

In addition, collective gardens are vital spaces that can build climate resilience. The garden organizers brought up seed diversity and local seed saving as ways to build resilience in our seeds. Many of these gardens were in challenging high-elevation or low desert environments, and so saving seeds in these already challenging climates can build resilience in our food system. Sharing growing knowledge is another way these organizers saw climate resilience happening in these gardens, as building community interdependence through knowledge sharing is vital, especially so in our food system.

Collective gardens also build hope for the future in the garden organizers. Collective gardens build hope for a future beyond capitalism. They are also a way to get people interested in building a relationship with the more-than-human world by developing a curiosity about where their food comes from. These gardens can also be ways to build intentional cultural appreciation by growing and learning about plants that are important to different cultures.

2. *Limitations and Directions for Future Research*

There are several limitations to this research. I was only able to interview nine garden organizers from six collective gardens. These experiences and findings do not explain how every collective garden works, but rather can describe trends and ideas that are commons within these six gardens. My intentions behind this research were not to generalize the ways that collective gardens work. Collective gardens, more so than many other gardens, operate in unique ways as there is no blueprint for how to run a collective garden. Most of these gardens grew organically out of local needs and desires. While each garden in my study operates in a unique manner, I was surprised to find so many commonalities behind the intentions and experiences of the garden organizers. It would be beneficial for future research to include a larger sample of collective gardens to see if these common intentions and experiences come out of a majority of collective gardens.

Another potential direction for future research would be to visit collective gardens to gain observational data. One limitation of this research was that I was not able to visit every garden to see community-building practices in action. This would help to verify the community-building practices that organizers described, and potentially notice other ways that the organizers might not have thought about. While I don't think this took away from my research findings, I think it

would be beneficial for future research to learn more about collective gardens through observational data for an additional layer of validity.

Another direction for future research on collective gardens would be to directly compare collective gardens to allotment gardens. This could help to better identify the differences in community-building between these two types of gardens. As I stated in the literature review, there is not much research done that looks specifically at collective gardens, so it is hard to define the differences in community-building by looking at separate research studies alone. In addition, one benefit to collective gardens over allotment gardens that several organizers brought up was that collective gardens allow for better growing practices that consider the health of the soil when working collectively. I think that future research could look at the differences in soil and ecological diversity and health in collective gardens versus allotment gardens to determine if there are significant differences.

3. *Relevance and Significance*

Overall, this research uniquely focuses on collective gardens to determine how they build community. This research contributes to research on community gardens, collective gardens, gardens as a form of the commons, and ecofeminist research. This research can benefit a diversity of people given the diverse intentions and outcomes for this research. This research will most directly benefit garden organizers looking for better practices to build community. This research can benefit city planners and garden organizations looking to implement new gardens as they might consider the benefits that collective gardens bring. Ecofeminist researchers may also benefit from the application of ecofeminism to current practices, demonstrating ecofeminism's current relevance. In addition, local climate organizers might benefit from the understanding that

collective gardens are ideal sites to build strong community relationships and work on local climate action.

I intend to share this research beyond the academic world to avoid gatekeeping this research and so that it can hopefully inspire change. I plan to make a key points summary that I could share with garden organizers. I also plan to share these findings in an approachable way to the general public, such as through a podcast or through an op-ed.

4. Final Thoughts, Personal Reflections, and Radical Hope

This research has informed my own gardening practice significantly. As a garden organizer myself, I consider how to encourage volunteers to form relationships with the more-than-human world, how to make gardening approachable to the college students I work with, and how to put effort towards care work for my garden community. In the past two years working at the SSLUG Garden, I have seen volunteer numbers quadruple. I credit this "success" to the efforts I take to care for the community of volunteers. I don't call the people that come to the garden volunteers, but rather garden members to let them know that they are a central part to the garden.

While my experience is anecdotal, I have seen my own experiences reflected in the results of this research. I've found rest to be critical to my own wellbeing since I give so much care and attention to the garden and garden members. Taking time off during the winter helps me build and restore energy for the spring. I have seen the garden connect students to one another and to the more-than-human world. It would shock you to realize how excited college students can get about seeing worms. As the organizer of the garden, I have found that the organizational structure I implemented helps us work collectively. I take my role as an organizer seriously - I try

my best to incorporate the ideas of how others think this space should look but maintain my purpose of using this garden as a way to provide college students with a space to connect to the more-than-human world, find respite from anxiety and depression, and build agency in climate action. I also use the garden to demonstrate alternative ways of relating beyond capitalism. Many students have suggested that we sell the produce, obviously considering how the garden could become a profitable space. While funding is an issue we also face, similar to the volunteer-based gardens I researched, I try to explain how this garden serves a greater purpose by sharing food rather than selling it.

The SSLUG Garden has taught me a lot, and this research has been my attempt to answer questions that I had in my own organizing practice. I have found this research project to help me realize that the transformative qualities of the SSLUG Garden are not so unique; these qualities are shared among the six collective gardens that I researched. While these gardens are not the norm, I hope that more people can realize the transformative practices that collective gardens nurture and that they become more widespread so that every community has access to a collective garden.

My hope is that collective gardens encourage people to relate to the land and to one another in radically transformative, anticapitalist ways, viewing the land and all the beings within as kin rather than as Other. There are many practices that I will take directly from the results of this research and apply to my own garden organizing practice.

In my own organizing work, I have wrestled with how much to include everyone's suggestions versus focusing on ones that align with the mission of the garden as I interpret it. For example, I have had many people come to the garden for the first time and suggest that we use the food produced in the garden to make money for the garden. While this is a valid way to make

money, I have decided to resist these capitalist responses and try to explain my reasoning behind my hesitation to capitalize on the garden. I personally see the SSLUG Garden as a way to demonstrate anti-capitalist relationships, and instead promote mutual aid by sharing food and knowledge simultaneously. Not everyone agrees, but while the garden can survive with other funding sources, I think it is important to stand by this intention for the garden to share produce widely with students rather than capitalize on the food produced.

This research has taught me the importance of taking time to rest. This lesson applies to all aspects of life, not just gardening but any work that I take on. I know that in the past I have neglected rest and felt the need to constantly work and grow. For example, in the wintertime, when the garden is resting I have worked to find ways to keep students engaged with events but I found that student engagement in the winter is extremely low. At first, I kept trying new things and getting disappointed by the results, but found that engagement went right back up in the spring once the garden had work again. I am now realizing that it's okay to let the winter be a break for students and myself, and to instead focus energy on resting and rejuvenating myself for the upcoming gardening season. I have experienced burnout in gardening and as a student, and I think that taking the lesson of rest to heart might help me maintain energy for these things in the future.

Overall, listening to the intentions these garden organizers bring to their daily gardening practice has been so inspiring to me. It has strengthened my stance that gardening is an important part to climate action in the ways that it builds connected communities, is a form of local habitat restoration, and builds local resilience through knowledge sharing. Researching collective gardens has also reinforced that the things I saw happening in my own garden organizing, such as the strong community the SSLUG Garden has fostered, are shared by other organizers. These

nine garden organizers give me hope for the future despite all the climate anxiety I face. As long as we work together with intention, we will create something beautiful together despite the challenges we will face. We need more community spaces that are making a difference, bringing us together, and giving us hope for the future.

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Appendix A: Interview Questions

1. *Commons*
    a. How do you collectively build relationships in your garden?
    b. What does ownership or property look like in this garden? How do you work against dominant ideas of ownership and individual property in this space? In other words,
    c. One concept that I'd like to get your take on is the idea of the commons. To me, the commons are collective, communal spaces that rely on social relationships to flourish. The commons are spaces that resist hierarchies and instead work more as a mutual aid space to provide benefit to all who interact in the space.
        i. Where in this space do you see yourself nurturing this idea of the commons, if at all?
2. *Reciprocity*
    a. What do you give to the garden and what does the garden give to you?
    b. In what ways does your garden engage in mutually beneficial practices?
    c. Another concept I'd like your take on is reciprocity. Reciprocity is the ideal of mutual benefit and a responsibility to a relationship. This idea is visible in the Native American growing practice of the three sisters where growing corn, bean, and squash together helps each plant flourish more than they would growing on their own because they all give and take in this relationship with the other sisters.
        i. Where does reciprocity show up in this garden? Do you feel like there is a reciprocal relationship with the garden and yourself, the garden volunteers and the community?
3. *Interdependence*
    a. How do you see this garden connected to the greater human and nature communities? In other words, how does this garden interact with the greater *town name* community?
    b. How do you see your garden related to social movements such as climate justice, racial justice, or environmental justice or any others?
    c. Another concept I want to talk about is interdependence. Interdependence is the understanding that we are a part of a greater human and nature community and are reliant on these communities for survival. Mutual aid is an example of interdependence where care and support networks are seen as critical to community survival and to thrive.
        i. What do you intentionally do to foster a sense of interdependence in this garden?
4. *Consciousness-raising/reproductive knowledge*
    a. What kinds of knowledge do you hope to build and share (ie. knowledge around growing practices, food preparation, native plants, etc.)?

b. Do you talk about how this garden is connected to larger systems of power with other gardens or organizers, and if so what systems are you talking about?
    i. How do you specifically see those systems interacting with the garden?
c. What are your intentions behind knowledge sharing within this garden? Why do or don't you see knowledge sharing as an important part of this garden?

5. *Organizing Practices*
    a. What do decision-making processes look like for how this garden is run, what is planted, where the food goes, etc.)?
    b. What would your ideal decision making structure look like for this garden and how are you achieving this or not as an organizer?
    c. What are some of the intentional ways you organize and orient your volunteers and why?

Appendix B: Participant Observation Protocol

1. *Interactions w/ people:*
    a. How do garden organizers interact with garden volunteers?
    b. How do garden volunteers interact with the other garden volunteers?
2. *Interactions w/ natural world:*
    a. How do garden organizers and volunteers interact with the natural world?
3. *Garden Layout/Location:*
    a. What is the layout of the gardening space (what does the garden layout look like, are there community meeting spaces, what unique things are included in the garden, etc.)?
    b. How does the layout and/or location of the garden influence human interactions (ie. is this garden in a public space where the public naturally walks through it, is the garden located next to a school or community center that encourages interaction, etc.)
    c. What type plants are growing (ie. vegetables, fruits, perennials, flowers, native plants, medicinal plants, plants for weaving/dyes, etc.)
    d. Where do harvests from the garden go?
4. *Demeanor:*
    a. What is the general demeanor of the garden organizers and garden volunteers?
    b. Do garden volunteers appear confident in knowing what they are doing in the garden (could look like knowing where to go and/or what to do, demonstrate previous knowledge of tasks, etc.)?
    c. Does the demeanor of garden volunteers suggest that they feel like the garden is a space they are comfortable in and feel safe in (could look like them engaging in deep conversations, appearing to care for the garden as if it were their own, helping other volunteers, etc.)? Or do they appear more like visitors in a new space (could look like being timid, isolated from other groups, cautious in how to perform tasks, etc.)?
5. *Knowledge Sharing:*
    a. What does knowledge sharing look like in practice (ie. Informal conversations, structured learning, explanations before starting on a task)? How are garden volunteers told what to do and how much information about the tasks they are doing is shared?
    b. Does knowledge sharing come only from garden organizers or are volunteers bringing their own knowledge and sharing that as well?
6. *Organizing practices:*
    a. How do the garden organizers start the volunteer shift (ie. is there an overview of tasks, introduction of everyone participating, simply starting on tasks, etc.)
    b. How do the garden organziers set tasks, explain what volunteers will be doing, place volunteers?

    c. What other organizational practices are noticeable, intentional, or unique?
7. *Reciprocity, Interdependence, and the Commons*
    a. How are qualities of reciprocity, interdependence, and the commons visible or not (in physical space, interactions, organizing practices, etc.)?

Appendix C: Codes from Interview Analysis

Code	
○ ABUNDANCE	
○ ACCESSIBILITY	
○ AGENCY	
○ ALTERNATIVE SYSTEMS	
○ ANCESTRAL	
	○ ancestral healing
	○ ancestral knowledge
	○ culturally restorative/relevant
○ ART	
○ CARE WORK	
○ CLIMATE CRISIS	
○ COMMONS	
○ COMMUNITY RELATIONSHIPS	
	○ community building
	○ community collaborating
	○ community solidarity
	○ outreach
	○ partnerships with other organizations
○ COMPETITION	
○ CONFLICT/DIFFICULTY	
○ CONNECTING TO NATURE	
○ CURIOSITY	
○ DISCONNECTED FROM NATURE	
○ DIVERSITY	
○ DOMINATING SYSTEMS	
	○ capitalism
	○ colonization
	○ recognition of systems of power
○ EMPOWERMENT	
○ EQUITY	
○ EVENTS	
○ FAILURE/RISK TAKING	
○ FEM/QUEER	
○ FOOD INSECURITY	
○ FOOD SOVEREIGNTY	
○ FUTURE VISIONING	

○ GENEROSITY	
○ GRATITUDE	
○ HEALING	
○ HEALTH	
	○ human health
	○ nature health
○ herbal medicine and botanical healing	
○ HISTORY	
○ HOPE	
○ INDIGENOUS	
○ INDUSTRIAL AG	
○ INFORMED BY NATURE	
	○ learning from nature
	○ moon cycles
	○ nature as animated being
	○ nature-based design
	○ nature-based time
	○ waste repurposed
○ INTERDEPENDENCE	
○ INTERSECTIONALITY	
○ KNOWLEDGE SHARING	
○ LAND RELATIONS	
○ LEADERSHIP	
○ LOCAL FOOD SYSTEMS	
○ MAGIC	
○ MOBILE	
○ MUTUAL AID	
○ NATURE COMMUNITY	
○ NONPROFIT	
○ ORGANIZATIONAL STRUCTURE	
○ OWNERSHIP/PROPERTY	
○ RECIPROCITY	
○ RELATIONSHIP BUILDING	
	○ humans
	○ nature
○ RESILIENT	
○ RESPONSIBILITY	
○ REST	
○ RITUAL PRACTICES	
○ SAFE SPACE	
○ SHARING	

○ SOCIAL MOVEMENTS	
○ SOIL	
○ SPACES	
	○ coming together
	○ general
	○ healing space
	○ magic
○ STEWARDSHIP	
○ SUSTAINABILITY	
○ TRUST	