# Sowing Edmonton's Future:
# How Community Gardens Build Social Capital

by

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## Abstract

Community gardens cultivate vegetables and also rich social connections. This project explores how community gardening spaces in Edmonton, Alberta can build trust, reciprocity, and civic engagement — what scholars refer to as social capital (Weaver, 2018; Putnam, 2000). It considers how community gardens and the relationships they foster can build greater capacity for coordinated community action, create prefigurative change, develop resiliency, and support mutual aid in times of crisis. It draws on interviews with Edmonton gardeners and permaculturists conducted in the summer and fall of 2022.

This research demonstrates the potential of local gardening movements to strengthen community ties and challenge dominant systems, and so suggests the need for more urban growing spaces and further use of permaculture techniques.

## Preface

This thesis is an original work by Emily Williams. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, “Sowing Edmonton's Future: How Permaculture and Community Gardens in Edmonton Build Social Capital”, Pro00121950, July 19, 2022.

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# Introduction

The planet is facing an ecological crisis, and alongside the erosion of the environment is an erosion of social ties, trust, reciprocity, and civic engagement. The crisis we face demands coordinated action, but it often seems as if we are unable to face some of our largest challenges due to an inability to work together. How do we face this dilemma of restoring our planet before it is too late, while also restoring the ways that we relate to one another and cooperate to do that work effectively?

One way we can think about this question is on the hyperlocal scale by looking at collective activities like community gardening. Community gardening may seem insignificant in light of a crisis so great and so far-reaching. However, community gardens are one way we can build collective ties to help us meet some of our largest challenges, like the climate crisis.

As a young person who has always had a deep love for nature, I have often felt frustration and isolation over the inaction of global leaders and those around me in fighting climate change. Alongside that, I have taken note of the civic and social apathy of my peers. Gardening for me, felt like a way that I could make change in a small way with my own hands. As I dug up more and more of my parents' lawn for new growing spaces, I saw the return of pollinators to our backyard, I produced incredible fresh produce, and I noticed people stopping to admire what I had grown and chat with me as I worked. I also grew an appreciation for other gardens around me. The Strathcona Community Rail Garden blew me away with its lush and diverse array of plants. I started noticing the kindness and cooperation of gardeners in other ways. I found anonymous bags left on the sidewalk marked "FREE RHUBARB PLANT" and a neighbour gave me canes of her raspberry patch — a patch that she had started when my parents gave her canes 10 years earlier. There seemed to be a norm of reciprocity built into the activity. I took an interest in studying the community growing spaces in the city to explore the social connections that gardeners create.

I found that community gardens are not just practical ways that people who live in apartment buildings can grow plants and food — if cultivated properly, they can grow something even more valuable: social connection. These gardens also encourage community network building, cooperation, and socialization. You may water your neighbour's plot for them while they are on vacation in exchange for a couple of ripe tomatoes. Community gardens have important implications for our community ties at a collective level as well as for our personal social networks. In other words, they build the social capital which Robert Putnam described in *Bowling Alone* (2000). Community gardens are one of the many ways that we can build an individual and collective resource of social networks, which can be drawn upon during times of need.

This is particularly important now, when many feel isolated on a personal level, and community ties appear to be eroding as part of a long downward trend that began in the 1960s (Putnam, 2000). A strong supply of social capital is important for civic engagement and living a heathy and happy life. But it is also essential for change making, and social capital is going to become increasingly important as climate change creates more instances of disaster — more moments where we will be turning to neighbours and strangers for help and support. While many look at community gardens and see food production as the positive outcome, the real positive outcomes are the strong social networks formed under the surface. Going forward, these social ties are what we are really going to be wanting and needing, and their importance should be further highlighted to policy makers and community builders.

**Edmonton's Vacant Lots Program**

It can be useful to look back to the origins of community gardens to see how and why these spaces emerged. In Edmonton, community gardens started with the vacant lots program in the early twentieth century (Merrett, 2015). By looking at the vacant lots program as a historical case study, I hope to situate community gardens on a historical continuum. Looking

then at the more recent developments in Edmonton's gardening history, I go beyond local histories and literature and demonstrate how permaculture techniques have been embraced in many city gardening spaces. This historical timeline shows how urban community gardening movements serve as a space to grow food, but also to advance political and social causes. In fact, gardening movements need a strong motivating cause to fuel them. If we peel back some of the layers, we see that gardening is more political than meets the eye.

Merrett's *Why Grow Here: Essays on Edmonton's Gardening History* highlights the way Edmonton's community gardening movement stemmed from the city's vacant lots program which began during the First World War (2015). Edmontonians were looking for ways they could contribute to the war effort and supply locally grown food in an urban environment. For George Harcourt, a professor of horticulture at the University of Alberta and board director of the Vacant Lots Garden Club, the vacant lots program was a response to a political need for gardening and was an educational opportunity as the program had a "longer-term benefit" in "developing an enlightened citizenry" (p. 144).

The vacant lots program was successful throughout the war. As the war ended, major food shortages in Europe continued and Canada Food Board policy to "supply the maximum of exportable foodstuffs to our Empire and Allies" was extended (p. 148). Part of that was encouraging Canadians to continue growing food locally. Subsequently, the Great Depression hit, and the Edmonton Horticultural and Vacant Lots Garden Association saw empty lot gardens as a way to provide relief to the unemployed (p. 149). Those who could not pay to rent a vacant lot could receive a plot for free. There were 350 free lots given out in 1931, a number that climbed to over 1,000 by 1936.

However, the gardeners using these plots were expected to uphold particular standards: there were to be no noxious weeds on the lot (as the city, and Canada as a whole, were ramping up an aggressive weed-fighting campaign). That being said, the relief

gardeners often did not meet these standards and the Edmonton Horticultural society expressed continual disappointment with the gardens. In an annual competition for relief gardens, the Horticultural Society deemed some gardens "not worthy of scoring" (p. 152). It is worth noting that the Horticultural Society's gardening standards were likely built upon a Eurocentric, upper middle-class, colonial standard of gardening, which meant neat rows of vegetables, with no weeds or pests tolerated.

Before long, the Second World War began and vacant lot gardening shifted priorities again towards providing food to the war effort, in what were called "victory gardens". There was a political agenda in all Western governments to encourage as much food production as possible for the war effort (p. 140). This included the creation of a National Film Board work titled *He Plants for Victory* in Canada (p. 139).

After the war, those who had learned to garden during the Great Depression and the Second World War continued to do so, but for the following generations, public gardening began to fall out of favour. Merrett identified a number of practical reasons for this decline, one of them being that Edmontonians began to see a higher standard of living for themselves following the discovery of oil in Leduc in 1947. Edmonton also saw its first mall by 1955, marking a shift towards store-bought goods, where there was increasingly more produce variety available all year round. This left less reason to grow and preserve food at home — not to mention that women who did majority of this labour began to enter the workforce.

Beyond these logistical realities, Merrett raised that for the first time since its creation, there was no strong driving force for the program: "Lacking any political or moral content, the vacant lots program lost popular appeal" (p. 160). With a new generation of baby boomers who did not have the skills or desire to grow their own food, the program gradually came to a halt in 1989 with only ten lots left (p. 161). The end of this program after 73 years

was not just due to a changing marketplace and developing society: the program struggled to find a new moral cause and since there was no imminent crisis, people lost interest.

New York is often cited as a space where the concept of community gardens as we currently understand them began (Saldivar-Tanaka and Krasny, 2004; Hynes, 1996). The urban decay and white flight impacting New York in the 1960s and 70s led to many buildings in poorer neighbourhood being destroyed. Community members "reclaimed these rubble-filled lots by creating thriving gardens" (Chan et al., 2015). According to the New York City Department of Parks and Recreation, the lots were on public land, some of which were newly acquired due to foreclosure (n.d.).

In Edmonton, the vacant lots program was not the end of community gardening in "waste places." By the end of the 1990s, Edmonton saw the establishment of the Community Garden Network, and the first community garden on city-owned property (Merret, 2015, p. 162). The model for creating a garden on public land was established with the creation of the Mill Woods garden in 1998 (p. 162). It was John Helder, the city's principal of horticulture who discovered that the "Partners-in-Parks agreement" could be used to allow a community to create a garden on city land, so long as they agree to maintain it. This was put into place for the Mill Woods garden, which went on to serve as the model for the long list of community gardens in Edmonton that have been created on public land in the past two decades.

Edmonton's community gardens are based on different values than the vacant lots program, with a focus environmentalism and community building — and a lack of patriotism and moralism which characterized the war-time gardens. Edmontonians who started the community garden movement wanted social change by building a stronger connection with land and community:

> Community gardening is recognized by many as a way to create connectedness and a strong sense of community as an alternative to acceding to the disconnectedness,

> isolation, and sense of powerlessness that so frequently accompany urban living. Environmental awareness; reconnecting with nature and with the soil; protecting green spaces, thereby improving the atmosphere; contributing to city beautification; protecting local supplies of fresh food; socializing with neighbours; and putting homegrown produce on the dinner table play varying roles in motivating citizens to become community gardeners (Merrett, 2015, p. 163).

While motivations like community-building, environmentalism, and neighbourhood improvement may not be political in a way that is self-evident to gardeners, they have political utility and implications for the formal political realm.

**Permaculture comes to Edmonton**

A further development in Edmonton's gardening history is the emergence of permaculture, which has a set of environmental and social goals that are more explicit than mainstream gardening (Leahy, 2021). Permaculture began to take root in Edmonton in the early 2000s and continues to show itself in people's backyards, but also community gardening spaces around the city (Wurfel, 2013).

Permaculture presents an alternative way of living in harmony with the earth and other human beings. Permaculture is both a method of design and a way of thinking (Leahy, 2021). The Permaculture Research Institute defines it as a "multidisciplinary toolbox" that "integrates land, resources, people and the environment through mutually beneficial synergies – imitating the no waste, closed loop systems seen in diverse natural systems" (2023). For some, this may look like creating a rural ecovillage, that is a co-operative farming settlement; for others, it can be an urban community garden that embraces permaculture ecological design techniques. Permaculture in its various forms is making itself increasingly present within global gardening communities, and also within Edmonton community gardening networks (Wurfel, 2013).

For many in the city, the birth of the city's permaculture movement is synonymous with the name Ron Berezan. Berezan began hosting permaculture workshops starting in 2005

through creating a small business he called “The Urban Farmer”. At these events there was a desire to create a more formalized network, which led to the creation of the Edmonton Permaculture Guild in 2007. In 2010, the group hosted the Edmonton Permaculture Convergence which according to their website, had about one hundred participants “in a day of permaculture inspiration filled with talks on edible plants, inner city chickens, bees, education and community building” (Edmonton Permaculture Guild, 2022).

In an autoethnography co-authored by Berezan, Haluza-DeLay identifies Berezan as “a central node in the development of the permaculture network in Edmonton” (2010). The authors describe how as neighbours helped transform their own backyards and communities, their permaculture community ties grew stronger — changing the community in both a physical and a social sense (p. 141).

In fact, for the members of the Edmonton Permaculture Network (EPN), the organization has changed how they live and how they think about community:

> The development of the permaculture movement in Edmonton has unearthed the strong desire that many members of the EPN have for meaningful connections with others who share strong ecological values and whom are attempting to live more consciously sustainable lives. Many of my permaculture workshop students have identified a sense of isolation, a dissatisfaction with the anonymity they experience in their neighborhoods, and a strong desire to live a more vibrant, engaged and environmentally-sensitive community life (p. 138).

While the community does not fit the traditional mold of an eco-village — which often takes the form of a rural co-operative way of living based on owning a large swath of land — they consider themselves to be a “distributed ecovillage” across the city of Edmonton (p. 139). While many permaculturists may choose to garden at home and the movement is somewhat distinct from community gardening, the two communities overlap in Edmonton. Permaculture techniques have infiltrated community gardens across the city.

The Boyle Street Community Garden, which provides fresh food for Boyle Street Community Services, told me they are in the process of moving to a larger space, where they

hope to create a larger garden centred around permaculture techniques. In the Strathcona Rail Community Garden "show and tell" event I attended fall 2022, members shared how permaculture techniques can help build and sustain soil quality — while some were scolded for their lack of mulching (a key permaculture technique for maintaining soil quality and lessening the need for watering and weeding). And as Wurfel writes, the Parkallen Community Garden, created in 2011, started with permaculture techniques in mind, using the no-till method, intentional design techniques, and ultimately hiring a local permaculture design expert to help create an edible food forest in their central park area (2013).

This difference of technique marks a shift in thinking and motivation for gardening in Edmonton. Permaculture as a holistic approach tries to align itself with the web of life and establish a relationship of reciprocity and partnership with nature. This is in contrast to modern agriculture which is underpinned by settler colonial conceptions of growing food as an extractive activity (Leahy, 2021). This marks a distinction between conceptualizing nature as something to work in collaboration with, rather than something to be dominated. Techniques like composting, mulching, using the no-till method, abandoning the use of pesticides and herbicides, collecting rainwater, and companion planting, are all ways that we can garden more sustainably, in harmony with nature.

All of this is to say that gardening in Edmonton has always been political. The decline and ultimate end of the vacant lots gardening program demonstrates how without a cause or political motivation, public gardening movements cannot sustain themselves. People garden in public spaces for reasons beyond fun and for the sake of gardening itself. They garden to give back, learn from others, meet their neighbours, build something new, get back to nature, increase food security, fight dominant systems, eat more local produce, decrease their carbon footprint, beautify their neighbourhood, and more.

**Social Capital Theory**

As noted earlier, alongside the erosion of our environment we are experiencing an erosion of social ties. In order to take better care of the land we live on and our climate, we must reassess how we relate to one another and come together to enact coordinated change. Social capital theory can tell us about these declines, why they matter, and what we can do about it — which will serve as a useful theoretical framework for this project.

Popularized by Putnam's *Bowling Alone* (2000), social capital theory identifies a problem with America's civic community: nearly every major facet of civic community has been in a gradual state of decline since its peak in the 1960s. The United States was once a nation of "joiners": people who wrote letters to the editor, sat on the PTA, volunteered for their community league, went to church, read the news, put their kids in scouts, or joined bowling leagues rather than bowling by themselves. Participation in each of these activities has been on the decline, which Putnam argues is to our individual and collective disadvantage, as it leads to a loss of social capital. Social capital relies on not only civic engagement but also trust and reciprocity; these three variables interact to build social capital (Weaver, 2018).

The vacant lots program in Edmonton was declining in that same period. Looking at Edmonton's relevant local histories, however, shows us how community gardens have emerged with new social and environmental goals, and how urban community garden spaces are beginning to grow in number once again. In my research, I am looking at community gardening and permaculture communities as spaces that build social capital in Edmonton. As new community garden spaces pop up, it is important we look beyond food production and see how they can revitalize our communities. Gardens are by no means the only setting that develops social capital work, but they serve as an important piece of the puzzle. My first research question for this thesis is: *how do local community garden projects build up social*

*capital in Edmonton?* Throughout this thesis I will be thinking about this question through the lens of the climate crisis. Drawing on disaster theories and examples, I will demonstrate how gardens can serve as a key builder of social capital, which is important during a time of crisis, whether a natural disaster or the more existential crisis of climate change. My second research question is: *how can community gardens and the relationships they foster help in times of crisis?*

This research has policy implications for the City of Edmonton, particularly when our city council seems amenable to expanding public gardening spaces. In the summer of 2022 the city identified 739 potential urban community garden sites and 47 potential urban farm sites on public land (City of Edmonton, 2022b). Long waiting lists at various community gardens across the city point to a demand and growing interest for more of these spaces (Riebe, 2018). Additionally, community gardens can play a role in our fight against climate change. The green spaces of community gardens can help prevent urban heat islands (spaces that are warming disproportionately due to a lack of vegetation), particularly downtown and in industrial areas (Betkowski, 2022; Boothby, 2022). Urban gardening spaces can also play a role in addressing Edmonton's food deserts (Wang et al., 2014). As the effects of climate change continue to be felt, community gardens can play a role in climate adaptation.

Literature on how community gardening spaces can build collective resiliency in times of crisis reinforce the idea that gardens can play a role in climate adaptation. Community gardens have served as gathering spaces and spaces of mutual aid in the aftermath of a hurricane — due largely to their pre-existing community networks (Chan et al., 2015). While Edmonton has not been hit by major natural disasters since the 1987 tornado, that is likely to change. According to Edmonton's Climate Change Almanac (2020), the city can expect drier summers and wetter winters in the wake of climate change. There will be more heat waves, droughts, and more extreme rainfall events. Climate change may impact

Edmonton's long-term supply of drinking water and risk of flood is also likely to increase. Edmontonians are already seeing an increase of "wildfire smoke, hail, and tornado warnings, as well as higher than average lightning strikes." [citation] Extreme weather events are expected to increase in frequency and intensity. In light of these threats it is important to think about where networks of support and mutual aid can be found in the city, and how those can be expanded in preparation for disaster. Community gardens may be an important source of social networks, which create an infrastructure for improved climate adaptation and resilience. Additionally, understanding this role for community gardens may attune us to other activities that build adaptation and resilience.

Beyond adaptation in the wake of disaster, community gardening may serve as an important vehicle for change making. Claire Nettle (2014) uses social movement theory to discuss how community gardening can foster collective social action. She says that while community gardeners do not see gardening as a whole solution, "collaborative creation of new gardens, culture, values and community structures is a conscious strategy to achieve broader political aims" (p. 184). Community gardens she argues, create alternatives and "practical local responses to social and environmental issues" (p. 169). They directly implement the change they want to see, with a "politics of creation and collective imagination" — or prefigurative political logic. This can happen alongside the state and market, while still challenging their dominance.

These strong community ties can develop a more robust collective capacity and can create a groundwork for mutual aid (Solnit, 2009). In everyday life, these local networks and movements cannot necessarily replace institutional politics, but they do complement them. While some in these movements may be seeking to subvert politics or feel indifferent towards them, the movements have great potential to challenge our dominant systems and paint potential alternative paths forward — which has implications for the traditional political

realm. Additionally, in a time of crisis or when institutional politics fail to meet our needs, these social networks can serve as a meaningful supplement to the political system (Solnit, 2009). As my research demonstrates, community gardening networks in Edmonton are building social capital, which in turn creates a larger capacity for collective action and mutual aid, which can help in times of crisis.

**Methodology**

In addition to analytical work with relevant literatures, I conducted eight qualitative interviews with community members in Edmonton's permaculture and community gardening movements starting in July of 2022. This project was approved by the University of Alberta Research Ethics Board 1. Using an inductive and theory-building approach, I was able to draw narratives and themes using a semi-structured interview method, with elements of episodic interviewing methods. Episodic interviewing seeks to solicit short narratives embedded in other kinds of questions (Flick, 2000). For my method of analysis, I did a narrative analysis, with some open, selective, and axial coding using a grounded theory approach (Roulston, 2014). Through this analysis, I was able to identify why these individuals garden, chart their political pathways, and look at the ways these communities foster social networks or social capital. These interview narratives will be woven throughout the thesis, and a list of participants can be found below (Table 1.)[1]. All names have been changed to protect confidentiality of participants.

***Table 1.***

| Participant | Community Garden |
|---|---|
| Rosa | Prairie Urban Farm |
| Laura | Parkallen Community Garden |
| Anna | Boyle Street Community Garden |
| Jake | Edmonton Urban Farm |
| Hazel | X |
| Katie | Strathcona Community Rail Garden |

[1] In some cases, gardens have been omitted to protect participant confidentiality.

| Samantha | Alberta Ave Community Garden |
|---|---|
| Julia | X |

**Limitations of this research**

It is worth noting my positionality in this research. I have already established that I am a backyard gardener who has an interest in studying community gardening spaces. However, I am also a white woman who is studying land-use on colonized Indigenous lands and a limitation of this research is that it does not sufficiently address Indigenous ways of growing, living, and connecting.

Community gardens in Edmonton do seem to be spaces where white, retired people are overrepresented. That does not, however, mean that more diverse spaces don't exist. There are Indigenous-run gardens, like Wâposo-Wâti Park and Community Garden in Edmonton which opened spring 2022 (Lamb, 2022). This space is a collaboration between Native Counselling Services of Alberta, the City of Edmonton, and Alberta Retina Consultants. Participants in the garden include clients from local healing lodges and the Edmonton Aboriginal Seniors Centre. Additionally, the Boyle Street Community Services Community Garden has a focus on growing more native and medicinal plants — "It expands on the work of the late Mi'kmaq artist Mike MacDonald, who created a series of butterfly and medicine gardens beginning in the 1990s" (McKay, 2022). I spoke to one of the organizers at the Boyle Street garden and was told that it serves people who are unhoused and living rough. Should these populations be interviewed in future research, it would be important to provide an honorarium of some kind. This unfortunately fell outside of this project as approved by the university ethics board.

A challenge of this research was achieving diversity in my sample of interviewees with limited resources and time — the growing season in Edmonton lasts less than half the year. While I was able to include a gardener with a disability and a gardener from the Mennonite faith tradition, my sample overall was mostly white and mostly women. A

difficulty I encountered is that while there are gardens that predominantly serve immigrant communities in Edmonton, I was told by organizers that many of these participants work multiple jobs and may not have the time to be interviewed. Once again, this is a key area for future research in which providing an honorarium would be beneficial.

This research is a reflection of mainstream community gardens, which are unfortunately white-dominated, colonial spaces. Studying the ways that gardeners are able to benefit from these spaces tells us an important story about gardening, but an incomplete one. It is vital that future research looks at diverse and alternative gardening spaces, in a fair and ethical manner, to see if the social benefits of gardening are visible there as well. Additionally, perhaps there are gardens in other cities that can serve as a useful comparative study to demonstrate what Edmonton may be lacking. Future research needs to look at how the city can expand community growing spaces in a way that is not white-dominated, colonial, or inaccessible. Potential questions that could be explored include: are there financial or organizational obstacles, or particular aspects of community gardens that make people feel unwelcomed? Where are community gardens being created geographically in the city? What formats of community gardening are more popular and inclusive? Who has time to garden? Who has access to land, including public land? Who has the knowledge on how to garden and why?

As these growing projects are expanded, we must ensure that they are inclusive and accessible for everyone. This may look like the city providing tools for gardeners in communities that need them. It may involve hiring a paid garden coordinator so that the bureaucratic and organizational labour does not get placed, unpaid, onto people who already are just getting by. And it may look like offering free courses on how to get a community garden started. These are just a few initial ideas, on an area that requires far more additional study.

# Chapter 1: Growing Social Capital Through Gardening

In this chapter, I seek to answer a series of questions. First, how does community gardening build social capital? For many, gardening is a solitary leisure activity and the community-building aspect is not prominent. Through my interviews with Edmonton community gardeners, I will demonstrate how gardeners have been able to build a strong network of new social connections that they have been able to draw upon in times of need. Beyond individual benefit, these networks help the community at large as they can help people get involved in other civic activities, and the garden can become important community hub or "third space" — meaning a space outside of work or home that gives a sense of place or feeling of belonging — even for those who do not grow anything there (Oldenburg, 1989). Second, how can gardening serve a bridging function, taking people outside of their usual social networks? I will explain Putnam's (2000) distinction between bridging and bonding social capital and demonstrate how gardening is an example of both types of networks. Third, how can community gardens create a collective capacity for coordinated community action? Some of Putnam's socially desirable outcomes of strong social capital include its ability to help communities take action, stimulate their progress, and create feelings of reciprocity and trust (p. 288). Lastly, I will anticipate a number of critiques, including responding to the critique that social capital theory is prone to circular arguments.

**Collective benefits of a strong supply of social capital**

Putnam defines social capital as "features of social organizations, such as networks, norms and trust that facilitate action and cooperation for mutual benefit" (1995, p. 67. For this paper I will be using this definition, because of its emphasis on the positive social outcomes of social capital and its understanding of social capital as a resource in itself. This is in contrast to other definitions of the term from theorists such as Pierre Bourdieu (1985), who see "the resource in social capital as being the goods accessed through networks"

(Ramos Pinto, 2006). Putnam also falls into a group of scholars who see social capital as "...an institutional mechanism with the power to ensure compliance with the collectively desirable behaviour" (Putnam 2000: 288). This became the starting point for other scholars to explore change-making as an outcome of social capital (Krishna & Uphoff, 1999; Woolcock, 1998).

In the fourth section of his book, titled "So What?", Putnam argues that social networks have an inherent value for the collective. This is distinct from earlier social capital theorists such as Pierre Bourdieu or James Coleman who used the individual or small groups such as a family as their unit of analysis when looking at the benefits of social capital (Portes & Landolt, 2000, p. 531). The key contrast between Putnam and some other social capital scholars is his assertion that a strong supply of social capital can be held by the collective, for the collective benefit, which can foster collective action. Putnam says that through high levels of trust and citizen participation, five socially desirable outcomes are produced for a community.

First, social capital allows people to resolve collective problems more easily (p. 288). He describes the issues that societies have with coordination ("collective action problems") and says that the solution is an institutional mechanism that gets people to comply with "collectively desirable behaviour" (p. 288).

Second, social capital can help communities progress. In a society where people are both trusting and trustworthy, fewer resources are needed to ensure others hold up their end of the bargain or carry their weight. Economic transactions rely on trust, so social capital can translate into financial capital.

Third, social capital shows us how our "fates are linked," which helps develop socially desirable character traits: "Joiners become more tolerant, less cynical, and more empathetic to the misfortunes of others" (p. 288). People who lack social connections are less

likely to have these traits, and Putnam cites school shooters as an extreme example. In other words, strong social capital helps fight polarization and extremism.

Fourth, social capital helps us spread and receive information, and Putnam offers the example of how jobs are often found through network connections (p. 289). This is an individual example, but he also says this happens on the community level. Communities with low social connections are less capable at mobilizing to pursue opportunities or oppose threats.

Lastly, social capital is good for our health, Putnam argues. When we have rich social connections, our lives are better both physically and psychologically, and we are better able to ward off trauma or illness.

Putnam (2000) documents the rapid decline of social capital since the 1960s by looking at participation data over multiple decades — things like voter turnout, volunteerism, civic association memberships, religious participation, philanthropy, and more have been falling in numbers. He argues this undermines civic engagement, which is vital to our own happiness and our democracy. In summary, Putnam says "social capital makes us smarter, healthier, safer, richer, and better able to govern a just and stable democracy" (p. 290); it builds a strong society that is resilient and capable of change. In light of the climate crisis, strong communities are not only more efficient and pleasant to live in: they are necessary in order to survive. What we will really want going forward are community networks and relationships.

This project focuses on gardening not because it is the one solution, but because it is one of many ways that we can build greater density and strength of community networks. Understanding how gardening builds social capital may help us to see broader patterns to how we can build social capital and facilitate coordinated community action.

**So how does gardening build social capital?**

While many people look at a garden and see some flowers and vegetable-producing plants, I see an opportunity to connect with others based on the strong norms of reciprocity that are present in community gardens. The social benefits of community garden are not always self-evident, but when talking to gardeners or reading about community gardening spaces, themes of social connection quickly emerge. Social capital research and community gardening as a natural pair. While there is not a great deal of research about this in the Canadian context, around the world scholars are exploring the social benefits of community gardens.

Glover, Parry & Shinew write that leisure activities such as gardening are important in the production of social capital (2005, p. 452). Bourdieu, Coleman, and Putnam all see leisure networks as an important producer of social capital as well. Glover, Parry & Shinew argue that community gardens bring together members of a community not only to garden, but to address problems the community is facing. Their study focuses on community gardening as a response to urban decline and sustenance needs: participants were willing to pool resources, which was enhanced by social connections they formed through other activities such as fundraisers and community cook-outs. The authors say, “In this sense, community gardens are less about gardening than they are about community.”

Social capital builds trust, reciprocity, and engaged citizenship (Weaver, 2018). It builds and expands social networks. In community gardens, reciprocity is built by sharing information, swapping seeds, sharing your harvest with others. Community involvement tends to build participation in other areas. Glover, Parry & Shinew found that participants would often turn to the connections they made at the community garden when looking for resources for other projects they were involved in (p. 465). One participant described how the garden has a couple of what Putnam would call “joiners,” people involved in community

projects and civic activities, and others become more involved just by nature of knowing these community leaders: "Just knowing that person automatically involves you more in your neighborhood," the participant said (p. 466).

Glover, Parry & Shinew note that gardens can serve as "third-spaces", a sociological term referring to places where people spend time outside of work and home. These spaces are important community builders (Butler & Diaz, 2016). The authors call gardens "venues for active citizen participation" and say that oftentimes bonds made in the garden become year-round friendships. This was the case with one of the gardeners I spoke with from the Strathcona Community Rail Garden.

***Unlikely Friends: Joe and Katie***

At the Strathcona Community Rail Garden, I sat in the grass a safe distance from the streetcar tracks with Katie, who told me about a special connection she had made there. Katie grew up gardening with her parents and when she moved to the city in her thirties she put her name on the waitlist for the Strathcona Community Rail Garden. When she "finally" got a plot, it was there that she met Joe. Joe was 89. The two made quick friends and were friends outside of the garden as well. When I asked Katie what drew her in to Joe she said "he was always inquisitive, and I enjoyed that quality very much about him."

"He was like, why didn't my beans grow this year? Or like, maybe we should try this next year? He was a lifelong learner, and I'm drawn to people that want to try to figure things out, or how to make your garden better."

On January 17, 2015 Joe experienced a fall and had to go to the hospital, Katie told me. "Through all of that, it was the gardeners who went to visit him in the hospital." But the commitment went beyond just a visit to the hospital. It was Katie and another gardener friend who helped him move and took turns visiting him every day. Ultimately, Katie ended up

being the person making Joe's health care decisions. The gardening community rallied around him: "We were his lifeline, I guess you could say."

Joe died that year, and his plot is now gardened to produce food for the Youth Emergency Shelter Society (YESS). The plot is cared for by a committee headed by Katie and they take turns gardening, watering, and arranging drop-offs to YESS. When I asked Katie what she thought the benefits of these social connections were, she was quick to tell me "well, they're priceless."

"I guess for me personally, where would I have met someone who is 89 that I want to hang out with?"

For Katie, gardening has never been political and she is not a political person, she told me. Despite that, she was able to recognize the ways that gardens can be a vehicle for change and to challenge dominant systems.

She told me her primary reason for gardening is fresh food, but she also enjoys it for her mental wellbeing and the social aspect. "It is a little community," she said. "If someone needs their plot watered, you water while they're away, you know, you help them."

"I like that," she said. "You have each other's backs in the garden."

Katie thought that the city needs more community gardens and that it needs to incorporate them into city planning when building a new development. When planning for the community's wellness the city will build a skating rink or basketball court, but they should also be thinking about food and plan for gardens, "Because it is about health and wellness."

She said there are far too many resources going into maintaining grass and boulevards. "Why would we do that? Why would we hire someone to mow a grass when it could be a garden and gather people?"

She brought up a community garden that had sat across the street from YESS on Whyte Avenue. “They had a garden there for one year, I think. There was such a great little community there — it was vibrant. Then the city said, ‘okay, well now we're going to not have that and we're going to sell Christmas trees on that plot.’”[2]

“It was a real shame, I thought, because it showed there was a need for it, there was space, and then it only lasted one or two years.”

For Katie, the garden is a nonpolitical space where people could gather and connect. It is a special space that is unfortunately something most Edmontonians will not get to experience. The waitlist for the Strathcona Community Rail Garden is currently around two years, I was told by another gardener who had just scored a plot.

This relationship between Katie and Joe is a great example of how social connections made in the garden can be a form of capital. Joe had immigrated from England, had no children, and his wife had died by the time he met Katie. He relied on the gardening community as people he could turn to during a time of crisis during his life.

Glover, Parry & Shinew describe a concept they call leisure episodes, which “are the moments during which the participants open themselves up to the possibility of relationship building, thereby serving as the social lubricant (enabler) for social capital production.” (2005, p. 468). For Katie and Joe, these moments happened at the community garden, and they quickly built a strong bond that went beyond their shared interest in gardening.

**Can gardening serve as a bridging activity?**

When one imagines a community garden, it is often a particular demographic that comes to mind: older individuals, mostly women, likely overwhelmingly white. Indeed, gardening movements have identified diversity as an issue for some time (Billings, 2018;

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[2] That garden in question was about six blocks from where I live and was part of a pilot program done by the City of Edmonton called “Vacant Lots for Urban Agriculture” that turned empty lots into community gardens. The program ended in October of 2018 when the city chose not to renew it.

Hoover, 2013). And while gardening movements in some cities may have diversity, the gardens can be racially segregated, with the diversity of individual gardens being poor (Jettner, 2017, p. 11). But can gardens bring different social groups together? Or are they only serving to strengthen ties within existing groups?

Putnam (2000) makes a distinction between bridging and bonding social capital: "Some forms of social capital are, by choice or necessity, inward looking and tend to reinforce exclusive identities and homogenous groups" whereas "Other networks are outward looking and encompass people across diverse social cleavages" (p. 22). Bonding social capital is within an existing group, such as a church women's group. Bridging brings together people from many social groups, that may share a common interest — such as a soccer intramurals team.

Bonding is good for building solidarity and specific kinds of reciprocity; it builds narrow selves, Putnam argues. Bridging can help information diffusion and linkages to external assets; it creates broader identities. In other words, one is good for "getting by" the other is good for "getting ahead" (p. 22). In summary, "Bonding social capital constitutes a kind of sociological superglue, whereas bridging social capital provides a sociological WD-40" (p. 23). Putnam clarifies, however, that bridging and bonding do not have to be a black and white distinction, and that oftentimes they happen together, just to different degrees, and along different social factors.

So, is gardening an activity that takes people out of their typical social networks? Glover, Parry & Shinew found mixed results, and (like Putnam) saw both bridging and bonding happening at the same time, in different ways. They found that most participants found "friendship as a welcome by-product of participation and how it benefited them outside of the community garden context" (p. 464). Gardening did take people out of their normal social circles and created bridging social capital. However, the shared passion for gardening

"was clearly evident in the conversations that took place in the gardens", making bonding social capital within an existing gardening community, a function as well. We can understand gardeners as holding mutual passion, which can mean some level of shared identity, understanding, and group association.

Katie and Joe's story above demonstrates a degree of bridging social capital between the two of them, at least in terms of gender, age, and to some degree culture, as Joe was an immigrant from England. However, they were both white and shared a pre-existing passion for gardening. They could be understood as holding a shared identity as gardeners, and they were from the same social group in terms of race. Another example of someone I spoke to who ventured out of her typical social networks was Hazel.

***Hazel's "Gardening Apprentices"***

Hazel is a member of a community garden and a member of the Edmonton Permaculture Guild. For Hazel, gardening has connected her to several communities in the city and created a source of social capital. As a person who has a disability, Hazel described how she draws upon on the social connections she has formed to get help in the garden.

> I've used gardening as a way of — because I'm somewhat handicapped — I use it as a way of getting help. I have about three helpers this year, they came to the garden to help me…
>
> Well, the first one is a Spanish speaker who is looking for English conversation in exchange for Spanish conversation. And I said, 'I don't really want to learn Spanish, but I would love some gardening help.' He was out there asking for an exchange and so I got him to be my assistant gardener and he did a lot for me in the garden. And I've helped him out with his paperwork…
>
> Last year during COVID, I had what I called my gardening apprentice. She was 17 years old. And she would come over and help me process onions and do stuff like that, she was great help actually. And she'd come every Saturday for an hour or two until I ran out of steam, and then I'd send her off.

Hazel told me that gardening has taken her outside of her usual social circle, which she has enjoyed.

> Yeah, there's like two new circles of people that I interact with that my husband does not know, so my community gardening group and I'm on the permaculture board.
>
> And that's really been fun. Like, these are people that I would never get to talk with otherwise.

What Hazel described to me I would classify as bridging social capital. She identified that the people she met through gardening were outside of her usual social networks and made friendships with people who come from different social groups than her in terms of age group, first language, and ethnicity.

Hazel has a strong conception of reciprocity and takes the idea of giving back seriously. She does this in an individual sense, through advice. While she likely cannot physically help others out in the garden, she has a great deal of knowledge about soil health and permaculture techniques. As shown in the example of the Spanish speaker, she is also willing to help and give advice in contexts outside of the garden. Reciprocity is a value of permaculture, which is perhaps a reason the concept seems so entrenched in the relationships she described to me. In fostering a norm of reciprocity with her actions, Hazel is implicitly creating an expectation that when others give her help, they can expect to receive help in return — building social capital for the circles she is in (Glover et al., 2005). The help she gives on an individual level has community-wide implications.

But Hazel also thinks about how she can help Edmonton's gardening community in a collective sense. She describes how through social media, she felt she was making a difference in the community by encouraging alternatives to pesticides and herbicides.

> But also, I'll tell you, I'm on the Facebook. So I'm really involved in a lot of the gardening groups. And I think I've made a difference out there. You know when people say 'what should I do about mildew on my grass?' I say you know, 'sprinkle whey on it. It's gonna take care of your mildew.'
>
> And then they're asking each other 'what fungicide should I use on powdery mildew?' I just find just sometimes when people insist on going that fungicide herbicide way, sometimes I just mute them. Because honestly. I just give up on certain people. But I'll try and take them on every now and then.

Hazel told me that for her, the garden is “a mentoring place.” She has very explicit environmental goals in her gardening techniques and frequently thinks about how different techniques will impact carbon emissions, soil health, or the surrounding ecosystem. Mentorship for her means teaching the gardeners around her about how they can garden more harmoniously with nature. She described how one new gardener was having trouble with her cabbages:

> I've been mentoring her on all kinds of things. We're kind of Facebook friends, too. If she has a question, she will ask me. She asked me about what she should do about the cabbages because they were just eaten by bugs and slugs and whatnot last year. And I told her that a lot of people use netting to cover. That's the quick answer. But the other thing is to have better soil.

Hazel told me that she feels that she has made a lasting impact through social media, and directly at her community garden. “You can see that I've made a difference with the community garden like you saw how many people are mulching because of what I told them about last year.” She described several instances where mentorship turned into friendship at the garden. She described how one of those friendships has lasted for years, and despite the other person moving away, they meet up at least once a year for tea when her friend comes back to town.

Hazel also seems to have a conception of a community garden as a public space, and described how when she is in the garden, she interacts with the people walking by, calling it her “public relations”:

> I used to hang out at the garden, and I would offer peas to passersby sometimes. I still offer the rhubarb from the community garden. I call it my PR. I offered them to, you know, take some rhubarb because we have so much rhubarb in that community garden.

Hazel had a strong conception that these social networks formed through gardening had an inherent value. Not only did it allow her to get help in the garden, but also to create bonds and friendships. She described how the 17-year-old helper she had last year was able to

garden with Hazel "when she had no friends to hang out with." Her mother was looking for a way to get her daughter outside and suggested the arrangement to Hazel, who agreed.

> To be honest, I'll just tell you, she wasn't the world's best helper. She was slow. She was as slow as I am — and I'm a crippled old lady. But she was a strong body and I got her doing stuff even as slowly as she did it. She wasn't worth paying for. We had fun together anyway and I was always nice to her, and I never told her she was incredibly slow.

Hazel saw that this relationship was mutually beneficial, in that she got help in the garden while the teenager got a social outlet, and a chance to get outside and exercise. "My currency was not money," she told me. "I worked in a different currency: friendship and social approval."

This thesis is interested in exploring how community gardens are building social capital in Edmonton. Part of that exploration is considering which type of social capital is being formed and under what circumstances. While it can be difficult to differentiate the two, it appears that bridging and bonding are both taking place on some level with the people I spoke to. In the limitations section of this thesis I explained that my research was unfortunately unable to encapsulate particular social groups, especially in terms of gender and race, however, I still was able to find interesting examples of bridging happening. This tells me that while community gardens in Edmonton continue to be places that are dominated by certain identities, there are still meaningful connections being formed between different social groups.

**Can gardening create a capacity for coordinated community action?**

Many scholars of social capital have highlighted that social capital creates the capacity for collective action (Weaver, 2018; Ramos-Pinto, 2012; Krishna & Uphoff, 1999; Portes 1998). Ramos-Pinto highlights how this can help address questions about how social capital can have both positive and negative outcomes — "it is a resource that can be put to many uses, good, bad or indifferent, even by the same group of people" (2012). Naturally,

creating a capacity for collective action has implications for combating the impacts of climate change. The climate crisis reflects our inability to work together towards a common cause: strong networks of social capital create a capacity for collective action, which may be used to mitigate and adapt to the effects of climate change.

Krishna & Uphoff found that villages in Rajasthan, India with high levels of mutually beneficial collective action were better able to conserve local watersheds (1999). The authors explain that this task of "Protecting and improving soil, water and plant resources in a catchment area is something that can be done, at best, only incompletely by individual activities and investments" — it requires collective action. Additionally, villages with high rates of mutually beneficial collective action performed better in many other tasks that require collective action beyond watershed conservation. The authors say that the "leading candidate" to explain the higher rates of mutually beneficial collective action in particular villages, was social capital.

These increased capacities can create a strong infrastructure for mutual aid and build resiliency, which will be increasingly vital as we face more disasters in our changing climate. This idea of developing a collective resiliency through gardening will be further explored in the third chapter of this thesis.

**Critiques of Social Capital Theory**

Social capital theory exploded in popularity among scholars in the 90s and early 2000s. Based on a 1995 essay, Robert Putnam's *Bowling Alone* (2000) popularized the term and has been heavily praised and criticized since. In fact, the term itself and its utility have been extensively questioned. In a paper exploring his own frustration with this complex and "ill-defined" term, Claridge said that "Social capital is far from a unified theory; there is little agreement about definition, dimensions, measurement, or building" (2018). Claridge

summarizes the critiques of the theory as social capital not being social, not being capital, and not being a theory.

Other scholars have how the definition of social capital has shifted from it being an individual resource to a collective one. Portes & Landolt say that "This conceptual stretch, led by political scientist Robert Putnam, made it possible to speak of the 'stock' of social capital possessed by communities, and even nations, and the consequent structural effects on their development" (2000, p. 535). The risk with this redefinition, they say, is that social capital is "becoming synonymous with each and all things that are positive or desirable in social life". They identify three issues with this definition as presented in Putnam's earlier work. First, the tension and confusion between collective and individual benefit. Second, the risk of circular thinking where there is no distinction between the causes and effects of collective social capital. Lastly, the concern that this definition of social capital does not leave room for other explanations of community health and that correlation may get conflated with causation (p. 536). While the authors use social capital in their analysis of Latin American urbanization and migration, Portes & Landolt want to identify limitations of the framework: "The key point is that one must be cautious in assessing the role of social capital as an independent causal factor in development or in generalising from successful examples" (p. 536). They highlight that social capital cannot provide a basis for "social engineering" and there is no formula for how community ties lead to successful projects (p. 546). Rather, initiatives require some existing grassroots networks and investment of resources — existence of strong social capital may help "multiply the collective return" on those investments (p. 547).

A further critique of the literature on social capital is that there is not enough scholarly work on the negative consequences of social capital (Claridge, 2018). In *Bowling Alone* (2000), Putnam starts to address some of these critiques. Social capital has the potential

to create tightly knit groups that may be exclusionary or oppressive to those who fall outside of them. These groups may be inherently harmful, as with white supremacist groups. Or they may simply be hard for outsiders to penetrate, as with rural farm communities in Alberta (Fletcher et al., 2020). While I do not have space in my thesis to adequately address these concerns, they undoubtedly apply to gardening circles as well, which can be tightly knit groups that exclude others.

Another critique is that social capital is not a substitute for material resources (Portes & Landolt, 2000). Lack of material resources — and lack of free time — are significant barriers to joining leisure groups that can be a source of social capital. In order to have a community garden, you need access to land. In Edmonton, these gardens tend to be on public land. Many community gardeners pay a small annual fee to rent their plot, typically less than $50. The fee is the least challenging part of getting involved, however, as many stay on waiting lists for a couple years before they secure a spot in a community garden. The need for material resources is most visible when thinking about how community gardens start. It is easy to see how a lack of resources may quickly disillusion someone who does not have the time or knowledge to navigate the City of Edmonton's bureaucratic process. In fact, the administrative labour of community gardens could be said to be the most difficult part, and scholars have raised how the burden of this work can cause significant burnout in gardening communities (Wurfel, 2013). While there is no explicit cost requirement to getting a garden started, you need time and organization. It helps to be a particular kind of person to get a community garden off the ground: being retired or working part time, being extroverted, or someone who has experience applying for grants.

However, once a community garden is off the ground and running in a neighbourhood, there is often a strong culture of reciprocity and sharing. The gardeners I spoke with all spoke of sharing tools, swapping or giving away seeds or seedlings, watering

for one another when someone is on vacation or ill, and sharing information and tips. It is true that material resources are needed to start a community garden, but once you're off the waiting list and have paid the small fee for your plot, it is remarkable how few resources you must put in — particularly when you consider the material output of fresh food that you get back. This is somewhat distinct from backyard gardening where most people would have to own land and a house, buy their own tools, learn gardening techniques on their own, and do all of their own watering.

A quick look at the waitlists of community gardens in our city shows that there is a strong demand for these gardening spaces. But the demands of getting one started helps explain why there is limited supply. In order to help offset some of these material constrains that prevent more community gardening spaces from appearing, municipal governments can give more financial and educational resources. While some say you need material resources to access social capital (Portes & Landolt, 2000), in community gardening spaces this mostly applies to areas where these gardening spaces do not yet exist. As I have argued, a thriving community garden requires very few material resources for its members, and this is because participants have norms of reciprocity and sharing that they can draw upon: in other words, social capital.[3] Once a community garden is in place the social capital that emerges can "help multiply the collective return on resources invested for this purpose" (Portes & Landolt, 2000).

But what about concerns about social capital being prone to circularity? This critique is a common one, particularly in reference to Putnam's definition (Weaver, 2018; Portes & Landolt, 2000; Claridge, 2018). However, this concern is more relevant for those who are doing quantitative research that is looking to establish causation, such as Putnam's classic

[3] A cash investment in community gardening is low, typically around $50 for the year. However, this could still be a barrier for some. As discussed in the limitations section at the start of this thesis there may be other barriers to involvement that tie into social marginalization. This could include seeing gardens as white or privileged spaces, language barriers, not feeling welcomed, and more.

analysis of survey data on the decline of membership in civic associations. My project is not engaged in finding an effect and providing quantitative evidence of causality; rather, I seek to show that social capital is present in community garden spaces and can be useful in times of crisis. The concept is useful for this purpose even if it has limits in establishing causation: as Claridge notes, when it comes to social capital, "qualitative approaches tend to achieve the best results" (2018).

While I do not have the space to explore every critique, social capital is a useful framework for my project. Conceptualizing the positive social outcomes of gardening as social capital allows me to observe norms and networks of trust, reciprocity, and engaged citizenship, and helps me to tell stories of the relationships fostered in community gardens and how those relationships can be put to use. I also would argue that the concept of social capital is accessible and has strong currency outside the academy: it is a popular framework for community-builders (Weaver, 2018). While academics may be moving away from the term, "countless community practitioners are doubling down on their attention *to social capital*" (Weaver, 2018, p. 17). This thesis is written with a general audience in mind, and aims to be accessible, including by using narrative and story-telling. From my perspective, using the language of social capital helps with this accessibility.

In the next chapter I will look more closely at how gardeners interpret their own motivations: while some may identify social networks and community-building as explicit goals, others say they are gardening simply for gardening's sake. However, that does not mean that social connections are not being formed, or that gardeners are indifferent to the positive social outcomes of the community garden.

# Chapter 2: What motivates community gardeners?

In this chapter I seek to explore what motivates community gardeners. I ask: *Why do community gardeners get involved? Why do they stay involved?* Initially, I asked these questions in interviews as a way to find out more about participants as gardeners and as people. It was also a way of finding out if gardeners were seeing the positive social outcomes that I was seeing, without leading them to that conclusion. Gardener motivations are also a way to chart individual political pathways. The gardening community is diverse and encompasses people from all walks of life and political backgrounds. I discussed in the last chapter how gardening can take people out of their usual social networks and this can include political diversity. In the gardens I visited I could see politics in the different reasons people came out to garden, and I could see that underneath conversations about gardening techniques and theories were differences in values.

I identify four reasons the gardeners I spoke with got involved or stayed involved: gardening itself, environmentalism, community building, and community improvement. However, the intentions of gardeners are only one piece of this puzzle. While some may be involved in gardening only for gardening itself, that does not mean that the consequences of their actions are limited to this. Someone may want to just grow food, but that doesn't mean that they aren't implicitly cultivating other things in the background. Perhaps there is something distinct about the act of gardening on public land, with some degree of communal spirit, that cultivates not only social capital but a broader alternative vision for society — or in other words, a type of prefigurative politics. Scholars have explored the ways that community gardeners embrace "a politics of creation and collective imagination" (Nettle, 2014) that is distinct from traditional ideas of prefigurative politics that are "predicated on strategic intention" (Guerlain & Campbell, 2016). The second question I ask in this chapter, is: *In what ways can gardening serve as a form of prefigurative politics?*

What would gardeners say in response to the notion that gardening can be political? In my interviews, I asked participants if gardening for them was political, and why or why not? Through an analysis of their answers, the final question I hope to answer in this chapter is: *What are the political pathways of gardeners in Edmonton?* This includes looking at how gardeners would describe their own politics, how they conceptualize their own participation in the community gardens, and by looking at community gardening feuds, disagreements, and tensions over what "the right way" to garden, I will make a case for how politics can be seen in the act of gardening itself.

Social capital is not an explicit motivating outcome of gardening for most people. For some people building community and relationships is a strong factor for getting started in a community garden. But for others, it is kind of an accidental positive outcome. Perhaps it wasn't a reason they got involved, but it is a reason they are staying involved and enjoy gardening as a leisure activity. For others, maybe neither of these are true, and the social impacts of gardening do not shape their motivations at all. However, that does not necessarily mean they aren't building relationships that could be drawn upon in times of need. These things aren't always sought out. In my example in the previous chapter, Joe does not ask his gardening friends to come visit him in the hospital, it's something they just do because they have gotten to know and care about him at the garden. In order to get the positive outcomes of social capital, you do not have to have community building as an explicit goal.

**Why do community gardeners get involved? Why do they stay involved?**

Asking about the motivations of individual gardeners is a useful exercise to get interview participants to start reflecting on their involvement in the garden and beyond. For this project, it was an accessible way to start the interviews off with an open-ended question. It also immediately informed me of what type of gardener I was speaking with, which could help inform me on what to probe them on. If a gardener said that they garden to relax and

grow fresh food — as opposed to resisting dominant food systems and thinking about urban land use — I knew I might have to follow up the question about if gardening was political from a different angle. I might ask instead: has gardening taught them anything new about fairness? I did not want to assume that everyone I spoke to was an activist or politically engaged.

Beyond that, it is interesting to hear why people get involved because it tells you about who they are. Each gardener made an active decision to apply for a plot, some had to join a very long waitlist, and then they actively started gardening. None of this is passive, and I wanted to get at people's goals and motivations.

***Gardening Itself***

The first reason that folks may choose to join a community garden is gardening itself. Many think of the immediate material outputs gardening produces: the food. Indeed, this is a big draw for many participants — particularly during a time of high inflation that has especially hit food prices (Bundale, 2023). When asked what her objective in community gardening was, Katie said: "Fresh food. I guess this is the first thing…to buy that fresh produce in the farmer's market would be thousands of dollars and yet for $40 a year I can grow my own food."

There is also the belief that the quality of produce grown in the garden is higher than what can be bought in the store. One of the gardeners I spoke to, Joy, said that a draw of gardening is the quality of the organic product and enjoying the fruit of her labour.

> I know it's going to be organic, it's gonna be delicious, you know it's just a pleasure to just eat something that I have put so much love and time to make it grow and then prepare it and eat it.

For many, the material output has a social justice element as well. In my conversation with Anna from the Boyle Street garden, she told me that while the garden does not produce a great deal of food, what it does grow gets put into the kitchen to feed the community. For her,

the garden and its outputs symbolize an ideology, despite the small size. “Food sovereignty is definitely part of it. Although our garden space is definitely not big enough to feed our community in a substantial way, we do like to utilize it to kind of foster the ideology of food sovereignty. And, you know, growing your own.”

The heading of ‘gardening itself’ as a motivator includes material outputs, like Katie and Joy describe. However, as demonstrated by Anna, ‘gardening itself’ can include its disruptive effects, for example as a part of food sovereignty. A third facet of the motivation of ‘gardening itself’ can be its spiritual or therapeutic effects. Gardening and having hands in the soil have been shown to be good for mental health (Gurlain & Campbell, 2016). Anna explained that while the garden is a calming space for community members, it is also used by the staff.

> There's the therapeutic aspect of it as well. It’s another thing that we really lean into pretty strongly and not just for the community. I have found in my time running the garden that staff benefit from having it just as much as the community does. People frequently will take their breaks out there or you know, if they're the frontline staff, is having a really difficult day we've kind of made it known that they're always welcome to go out and water or weed or you know?

***Environmentalism***

When asked about how she got started gardening, Hazel spoke about how she grew up gardening with her parents, but how learning about composting later in life is what solidified her interest in community gardening and permaculture.

> I'm just in an environmentalist period. I started out in master composting because I was in Toronto, and they had a big waste problem. They didn't know what to do with their waste, so ultimately, waste brought me here. Waste and gardening brought me to where I am today. And I'm here because of the environment. And because I want to eat good food.

As mentioned in the previous chapter, for Hazel a big part of gardening is learning how to replenish the soil and avoid pesticides and herbicides. This is out of desire for organic food and also an awareness of the effects of commercial food growing practices on the ecosystem and environment.

These permaculture values also showed up in Laura's reflections on issues she had with a community garden she was previously involved with.

> It does not function as a permaculture garden. And that's a problem for me, right? So I've tried to talk to them about 'I know that there's some cleanup you guys need to do, but you keep exposing the soil and you shouldn't be doing that'… Of course you're going to focus on the plants, but you really are nurturing is soil. That's the thing you're replenishing. And so you're always thinking about 'what are the ways in which I can improve this soil? How can I make it so that it not just feeds plants, but it feeds critters, it holds water, it all these things.'

Another participant spoke about how gardening can resist larger dominant systems: "there's a need for the consumers of food to become more aware and politically active in support of sustainable forms of agriculture."

Environmentalism can take on many different meanings for gardeners. Overall, however, people with this motivation are thinking about how their gardening fits into the larger ecosystem around them. They ask questions like: is my garden encouraging plant and insect diversity? Am I replenishing the nutrients in the soil? Am I using water efficiently? Do I need to have grass there or can I grow something else? And how is this different from large scale agriculture? Many of those who are asking these questions would call themselves permaculturists, and (as demonstrated by Hazel in the last chapter and Laura above), this environmental commitment can include using the space of the community garden to try to increase the environmental awareness of those around them. While Hazel had some success taking on this educator role in her garden, Laura expressed frustration at the lack of adoption of certain sustainable garden practices.

***Community Building***

For some, a motivation for community gardening connecting with and building community. They might walk around their neighborhood and happen upon a vibrant community garden that seems like a great way to get involved, meet some of their neighbors, and create social connections or friendships. In less established communities, perhaps there is

no community garden and someone takes it upon themselves to start one, for those very same reasons.

Social capital provides a useful lens for breaking down these community building dimensions of gardening. Three elements that make up social capital are civic engagement, trust, and reciprocity (Weaver, 2018). One participant, Rosa, spoke about how for her the garden goes beyond the material outputs for her, and is also about relationships and beyond that, civic engagement.

> Creating a community garden space can contribute to community sustainability in a lot of different ways. Both by actually growing food, by building skills, but also by building those community level relationships. And for me, it was just a personal outlet as well. It was my politics, you know? It was my kind of citizenship.

Katie spoke about how she valued the norms of reciprocity established in the garden, describing how they would water one another's plots when someone is away, and that if someone's plot is "raided" they would give them some food to make up for it, "I like that. You have each other's backs."

Some participants discussed how community gardening builds relationships that increase community capacity to address social issues. Samantha spoke about how community gardens support collective work on food security and how that work builds trust and breaks down walls within the community.

> I also work on food security issues, so for me it's been always kind of our priority to build that community capacity, but also be part of a community and grow my own food. And then it's also kind of learning after sharing, you know, through a collective kitchen or cooking together processing that food. And the food is kind of like that centerpiece that brings people together breaks so many barriers.

A similar sentiment was expressed by Anna who worked at the community service hub's garden. She explained that the garden is a way to build "a sense of community and having folks be able to kind of contribute in a way that gives back to the broader community," particularly when they might not have the capacity to do so in other ways.

> Most of most of the folks don't have the ability to do that financially, emotionally, and in any way really, so being able to kind of just help out in the garden and know that whatever the garden produces gets cycled back into our kitchen program. I think a lot of people get fulfillment from that.

For these two, the garden represents a tangible way people can contribute to their community. This creates a sense of connection and bond with community members, even if you do not necessarily get the chance to develop a personal relationship. Knowing that your food is going to community members in need creates a sense of collective cooperation and care. The knowledge that a community will try to take care of its own reinforces a norm of reciprocity and trust for those involved.

***Community Improvement***

While the motivation of community building is about relationships (civic engagement, trust, and reciprocity), a further motivation can be to materially improve one's community. One participant identified a community garden as a way to change and improve her community; "We just really try to collaborate to build that community safety as well and beautification of our neighborhood."

A community garden can serve as a community meeting place, providing a public space where people can gather. There is the social capital value of the space which takes the form of networks as described in the previous section, but beyond that there is a value to the physical element of the garden as well. Scholars have identified community gardens as a "third space", a gathering place apart from home or work (Dolley, 2020; Oldenburg, 1989). Third spaces have value because they are dedicated primarily to socialization and leisure. Oldenburg (1989) argues third spaces have immense social value and that it is imperative we build these spaces to address the deterioration of American community. This physical element ties into social capital in that the garden serves as a space where connections can be made. The land facilitates connection.

One participant spoke about the "general lack of public spaces in cities" these days.

> Every kind of 'public space' is a place for consumption. You know you can go to the mall, or you can you know walk down Whyte Ave, but we don't have spaces where people in the community can basically gather and meet each other anymore.

Participants spoke about how their community gardens are enjoyed by those who do not garden there. When Hazel said she would stop passersby and give them rhubarb as her "PR", she was creating a welcoming environment, opening up neighbors to enjoy the garden as they strolled by.

**Gardening as Prefiguration**

Julia said that "The biggest changes that happen in the world is just groups of citizens that that that work together for change, right?" She was pointing to the importance of creating change by building the kind of community you want, here and now. This could take the form of marginalized communities creating community gardens to build something new. Hynes (1996) describes the rise of community gardens in low-income urban areas in American cities as an "innovative kind of urban renewal, one undertaken with the cheapest of resources: seeds, soil, and the sweat equity of inner-city people" (p. viii).

What Hynes is describing here is prefigurative politics. Leach (2013) defines prefigurative politics as "a political orientation based on the premise that the ends a social movement achieves are fundamentally shaped by the means it employs, and that movements should therefore do their best to choose means that embody or "prefigure" the kind of society they want to bring about." Leach highlights how this approach looks to rebuild society "in the shell of the old" by directly creating alternative systems. Prefigurative politics is citizens building the world that they want to see with their own hands.

Hynes (1996) says that the transformation of empty lots revitalized American neighbourhoods and this fact was often underestimated by the dominant class of urban planners; what was taking place was no less than an "Urban renaissance". "This low cost, low-tech urban renewal relies on intangibles like beauty and a sense of place, as well as

tangibles like food and neighbourhood security." Since the 19th century, many city planners have looked to parks as an "antidote" to industrial city life (p. xv). But these spaces haven't served as a proper antidote, as a park will typically decline alongside the neighbourhood that surrounds it. Hynes references Jane Jacobs' commentary that "parks need people no less than people need parks" (p. xv) — Hynes asserts that cities may need community gardens more than they need parks. She explains that a kind of relationship of care for the land is built into a community garden, as "the give-and-take of working in gardens attaches their gardeners to a particular place through physical and social engagement". Furthermore, "an ethic of urban environmentalism" is fostered by community gardens, which are accessible to working people, close to where they live, and intimate.

Claire Nettle (2014) studied community garden activists in Australia and argues they demonstrated prefigurative politics or "a politics of creation and collective imagination". She argues this involves changing cultural practices, challenging reliance on dominant systems, and seeking to create alternative ones. On a micro-level, gardeners also demonstrate a prefigurative trait of articulating what they are for rather than what they are against. Nettle finds diversity in the Australian community gardening movement and does not necessarily find any single clearly articulated philosophy, rather an "increasing coherence in the use of a small constellation of strategies" (p. 170).

In contrast, Guerlain & Campbell (2016) found that motivations were less explicit in the garden they studied in East London. "Participation was not based on a common political intention or self-conscious motive to prefigure a new society, but rather on the shared practice of gardening". Nevertheless, they found a sense of solidarity and positive change. The authors argue that political intention is not required for prefigurative social change.

> If participation in community gardens gives people a taste of the types of social relationships and lives they would hope for, by creating an alternative social space that is unique to them in East London, then the need for a pre-determined collective intention for this outcome becomes redundant.

This demonstrates the need to open up definitions of what counts as prefigurative change. This is particularly the case in environmental and food-oriented movements, which have become dominated by activist groups that lack the diversity present in low-income urban gardens. The authors argue this raises important questions about whose change and what types of change count as significant. They conclude that "political intention is not necessarily a pre-requisite for prefigurative social change."

Traditional ways of thinking about prefigurative politics are rooted in political struggle, and a desire to build a better alternative. While many associate prefiguration with anarchist circles, the idea of prefiguring the society you want to see has made its way into many Western social movements (Haiven & Khasnabish, 2014): the prefigurative turn "owes much more to feminist, radical pacifist, anti-racist, queer and environmental activism, and is in fact a political thread that can be traced back centuries" (p. 246). Murray (2013) explained that during the Occupy Wall Street movement "the underlying goal was to actualize the ideal of self-organizing communities" that operated on a basis of equality, more rigorous democratic participation, and increased citizen power over institutions in society. This implies a strategic intention, and while these communities were never fully actualized, the movement positioned itself as a symbolic opposition to dominant systems (Murray, 2013). In most community gardens, you will not find anything quite this explicit. However, that does not mean no prefiguration is not happening.

Guerlain & Campbell (2016) find that regardless of intention, in community gardens "the result of participation is constructive, albeit very small-scale, social change". This sentiment that gardening is always producing some kind of change was also present for Nettle (2014). She, however, describes two levels of change, one that is unselfconscious, and another that has more conscious and explicit prefigurative goals. "Community gardens are – in all cases — hands-on environmental projects, in which people with shared interests in

gardening and community come together to achieve practical goals" (p. 184). This first group uses gardening as a recreational activity, and also as something which enacts their "environmental and social values". The second group, gardening "is a conscious strategy to achieve broader political aims".

This conscious level of prefiguration is pronounced in permaculture groups and literature. The founders of the movement, David Holmgren and Bill Mollison, hope to transition from "industrialisation to an information rich but local and autonomous land-based post-industrial culture' (as cited in Leahy, 2021, p. 129). They see energy descent — the idea that society will reduce overall energy use — as inevitable and strive to create an alternative society based on permaculture ethics: "care for the planet and people, along with redistribution of the surplus". They say we must bypass institutions and dominant systems, opting instead to "devise ways to help ourselves". Leahy (2021) describes various projects around the world that are starting to do this work. In Edmonton, we are not quite there yet. Prefiguration is happening on a micro-level, but that does not mean that change is not happening. Additionally, as previously stated the ideas and methods behind permaculture have begun to make their way into community garden spaces in the city.

While oftentimes conceptualizations of change produced from gardens focus on the material outputs, as discussed earlier, for many people, gardening fosters close personal relationships and community ties. This too is a type of prefiguration. This seems to be understood on some level across gardening movements. Part of permaculture ethics is care for not just the planet but also people. These ideas about how to grow-your-own and live in ways that are more communal intersect in co-operative gardening movements like transition towns or eco-villages (Schiller-Merkens, 2022). On the smaller and more local scale, Nettle (2014) found that community gardening efforts for social action are based on "shared enthusiasms" — "community garden activists see the creation of mutually supportive

relationships as central to their work" (p. 176). It is clear that a part of imagining a better world, is reimagining the way we connect with one another and form relationships. Haiven & Khasnabish said that participants in their study on prefiguration saw "the importance of developing revolutionary forms of relating to one another" (2014, p. 248). Indeed, a great deal of people in today's world are increasingly dissatisfied with our "social infrastructure" as rates of loneliness grow to "alarming numbers" (Weissbourd et al., 2021). Theorists like Putnam would contribute this problem in part to the decline in social capital. So, part of the reimagining of a better world has to be how we build societies with a strong supply of social capital. A community garden can help people make that cognitive leap in imagining new ways we can connect with one another and build community.

In a study on a community garden in Vancouver, Baratoya (2016) found that the garden was a social space, not only for the gardeners, but passersby as well. The participants described how they felt they were showcasing a "sustainability and greening of the city" by connecting with others. "In this sense, the garden is not about its final outcome, which is food production, but about creating a certain space with which non-gardeners can interact as much as gardeners." A community garden is good for a community as a whole. It symbolizes an alternative way of moving through the world, with social, environmental, and political values prefigured on a small scale.

**Charting the Political Pathways of Gardeners in Edmonton**

While many gardeners do not have explicit political intentions in their gardening practices, some do. One of the questions asked to participants was: is gardening for you political and if so in what ways? Gardeners told me about the ways they conceptualize their garden to have a disruptive effect on food systems, that it said something about how they view the world, or that their garden was a public space that asserts particular social and environmental values.

Similar to some of the scholars above, one of the participants Rosa asserted that intentions are not the be-all and end-all — gardening has political implications whether you know it or not.

> Anything that we as individuals do to directly interact in our agriculture and food commodity chains has a disruptive effect — whether [or not] we are engaging in that in an explicitly political manner. From where I'm sitting, that doesn't matter.

She emphasized how growing your own has become outside of the norm in modern life, and that it empowers individuals both in a material sense with quality fresh food, and in an immaterial sense, as they gain the education and knowledge to produce food. While the participants may not know it, this has a disruptive effect.

> We have a lot of people who come out here at garden just to get out of the house, just to make friends, just because maybe they need food, and they don't view what they do as a political act. But I think there are political consequences to their act because we're creating awareness or creating empowerment. We're getting people out of grocery stores, particularly out of the processed food aisles. All of those actions, those forms of action, have high political consequences.

She explained how while the initial political intention may not have been there, many of these individuals come away from the garden thinking in a different way that could lead to a more explicitly progressive politics about food production.

> And a lot of people do come away with you know, a better sensitivity, to let's say the plight of farmers. A better understanding of just the effort that goes into producing food. A better understanding of the ecological and environmental costs of agriculture. And, you know, they may find themselves putting food and agriculture on their political agenda.

Rosa tells us that motivations and intention are not actually relevant to whether or not gardening is producing change.

Gardening has political implications and creates change through "micro-resistances" to dominant systems (Nettle, 2014). Nettle in fact asserts that this is the prefigurative conceptualization of how change occurs, "through millions of ripples or 'cracks' created by micro-resistances which displace the concept of 'one clearly defined huge push'" (p. 178).

By nature of this prefigurative micro-resistance strategy, and the diversity within community gardening movements, there is no single approach to change-making in these communities. The "constellation of strategies" for change-making that Nettle found in her study, however, where not the result of strategic or self-conscious choices. Rather, she found that gardeners are making "conscious choices about the ways they work, their techniques and tactics, their forms of engagement, their critiques" (p. 172). These choices are circumstantial and the result of looking at conditions and working in different ways to make improvements. While gardeners may just be thinking about the act of gardening, the result of their actions can serve as micro-resistances, challenging dominant systems and making prefigurative change.

For many of the participants in my study, asking about the ways in which gardening is political connected to debates and tensions about the 'right ways' to garden. Depression-era relief gardeners where chastised by the Edmonton Horticultural Society for their unkempt gardens, and there are similar tensions in the city today about what a garden should look like and where it should be. In fact, one participant, Jake, talked about arguments on the Edmonton Horticultural Society Facebook page that are usually about pesticides or public land use. He commented on how people who don't see gardening as political are missing the larger implications of these small decisions.

> People lose their minds when all of a sudden the park sprouts some dandelions and somebody always comments like, 'why are we fighting? This isn't political.' But we're having like a really big conversation about what our relationship to nature is.

For Jake, gardening can't not be political because it raises big questions about how we connect to the land.

> Who has the right to access public space? What is public space for? Even something like digging up your front yard and planting potatoes like, you know, some people look at that they'll say 'that's amazing' and other people will call bylaw on you. And so like, what is your front yard for? I don't think that you can remove politics from that.

He explained that the way we tend spaces — particularly with monocultures of Kentucky bluegrass — often is “imposing a value set” on that space, and those values often have colonial underpinnings. Even what we consider to be tidiness in our growing spaces is rooted in colonial and Eurocentric ideas about what a garden should look like.

> I walk around a neighborhood, and you'll see a perfectly manicured lawn with some like pretty little flowers and it has a like a Communities in Bloom 2022 nomination, and you walk across to a couple houses down and they'll be a yard that like, you know they're getting bylaw called on them because it's totally full of weeds. But like there's actually a lot more biodiversity and interesting things happening in the super weedy garden than there is in the other one. And there's, you know, the fact that we literally give awards to one and bylaw tickets to another like — that's political.

One of the participants I spoke to, Hazel, actually did tell me that she had bylaw called on her for gardening her boulevard, the strip of lawn between the road and the sidewalk. This was before a recent bylaw change in Edmonton which now permits boulevard gardening. For Hazel, “Gardening is political. Because how you garden says a lot about how you think”. She said that when gardeners don’t care about their soil, that tells her that they don’t care about the environment. During our interview she reflected on how herbicides were used as chemical warfare in the Second World War. “Do you think the solution to every problem is to kill? That is a bad precedent to set. That's where fascism gets started.”

Hazel also saw lawns as political. She described how in the community garden she is a part of, “The conservative types in the garden, that's the guy who keeps the grass.” While she described most community gardens as “a leftie thing” there was a member of her garden who held views different than her own. “And so there are a lot of things about that participant that we don't like but we like that he mows the grass for us.” She described an instance where some gardeners planned to make a plot of native grasses, but that was taken out by this participant because it didn’t work with his plan for the lawn. “It seemed like a good idea to some people, but it wasn't, you know, unanimous,” she told me.

Another participant, Julia, is part of the Mennonite faith tradition. She said that what that meant for her was "creating social movements that call into question the assumptions of mainstream." When asked if gardening was political for her, she described how part of the Mennonite tradition is creating alternative systems or prefigurative change.

> My tradition often doesn't work with the structures, it tries to create change in alternative kinds of ways and partner with people that are interested in changing in those ways… the biggest changes that happen in the world is just groups of citizens that that that work together for change, right? So that's the big picture, I would say.

When thinking about change, she remembered that her husband was part of a movement that tried to prevent development of the Horse Hill Area. This land was prime growing space, Julia said. The group lost that battle and the land was subsequently developed. The development plans from the city say they recognize the "value of its agricultural characteristics, including micro climate, soil capabilities and moisture content, to contribute to sustainable food and agriculture systems for Edmonton" (City of Edmonton, 2018). To Julia, this was a loss of a food hub for the city.

Community gardening, she said, is a way of creating environmental change through eating locally grown food: it cuts down on transportation and provides security in light of food chain disruptions, it's food that is largely organic, and it represents a different way of life. "We were encouraging community garden as a way for people just to live in general in Edmonton or anywhere else — which is the way forward."

So, we have explored the ways that a community garden can build social capital, and how it can be used in small ways to prefigure the kind of society and connections we want. These are both incredibly useful for our own lives and more importantly for building strong, healthy, and effective communities. I have said that social movements or leisure organizations like gardening can help with change-making and building community, which can supplement and exist alongside institutions and mainstream politics. Next, we will turn to how these positive traits may play out in moments where perhaps some of those systems we

rely on are stripped away. Disaster contexts can show us how in times of crisis, the positive outcomes I have been discussing can have incredible utility and provide mutual aid in light of the temporary vacuum of social supports and services that can develop.

# Chapter 3: Growing collective resiliency and disaster response

In *Bowling Alone* (2000) Putnam explains that:

> Creating (or re-creating) social capital is no simple task. It would be eased by a palpable national crisis, like war or depression or natural disaster, but for better *and* worse, America at the dawn of the new century faces no such galvanizing crisis (p. 402).

Putnam recognizes that it is easier to bring people together during a time of need: we can see this in the high levels of civic engagement in wartime or the Great Depression. As discussed in the introduction of this thesis, gardening movements, too, experienced a period of decline when they didn't tap into a shared cause or movement; but this has begun to change as particular gardening movements in recent decades have had more explicit environmental and social goals, like permaculture. The last chapter discussed how political aims, while they may not be explicit, are permeating community gardens: social and environmental outcomes, and prefigurative action, do not have to be explicit to matter.

However, what if a disaster were to occur in Edmonton? Have gardening communities built social networks that would hold up during an economic crisis, war, or natural disaster? What about a crisis that is more existential in nature: the climate crisis?

A global crisis on the scale of climate change requires co-operation at every level, from global climate conferences to local community leagues. While gardening is not going to tackle the climate crisis alone, it can be a way that citizens strengthen their social capital and create small-scale change, helping individuals and communities to adapt and survive in this changing world. Having a strong supply of social capital and feeling that our garden is a representation of our social and environmental values allow us to work together to and engage in mutual aid during times of need. Putnam (2000) and Solnit (2009) both argue that crisis can help bring people together, which I will explore through some case studies of natural disaster. However, I am also interested in exploring how prior social capital can better

equip us for crises. It is important that we consider how to bring our communities together before disaster strikes. Looking at the literature of community gardens in the wake of a hurricane or a tornado, can show us how having a pre-existing network of support and supply of social capital can help give us strong mutual aid networks.

Disasters can be moments that bring citizens together and create new worlds where people become altruistic, resourceful, and brave (Solnit, 2009). But do we need a local natural disaster or crisis in order to see these qualities? Or is resiliency already being built by local communities, that can be drawn upon in times of need — including for the climate crisis? These questions can be explored side by side. While citizens are known to come together in moments of disaster, having a pre-existing supply of social capital can help multiply these positive outcomes.

In this chapter I hope to explore these questions in two parts, by first looking at how gardening can build a type of collective resiliency that goes beyond the individual, and second, by looking at the ways in which gardening can help in times of crisis.

**Collective Resiliency**

For many, creating resiliency is a motivation to get involved with gardening. A quick Google search of terms like "eco-village" or "off-grid homestead" turns up examples of people trying to create a new way of living that is not only more environmentally sustainable but self-sustainable, meaning not relying on aspects of society — whether that be mainstream agriculture or the electrical grid. These efforts aim to create individual resiliency. Folks are interested in learning gardening to build up their individual food security so that they do not need to rely on society's food systems. While this individual conceptualization of resiliency is seen most often in rural contexts, it also exists in cities and motivates some gardeners. Particularly during the early days of the pandemic, gardening grew in popularity as people

were bored and stuck at home — but also fearful of food shortages. During a time of uncertainty, it felt like a way for many to create a level security for themselves.

However, resiliency can also be built beyond the individual. A community's resiliency can be built through community gardens that enhance food security. The gardens can serve as an alternative source of fresh food during part of the year for areas that may otherwise be considered food deserts (Wang et al., 2014). Or community gardening spaces can help fight urban heat island affects while also producing urban food forests (Rendell-Watson, 2022).

I went to an "urban nursery" in the Northside of Edmonton which exists on what used to be a storage lot for Northlands Edmonton — the area is now called the Edmonton Urban Farm, managed by Explore Edmonton. I spoke with Jake, who founded this nursery.

Jake told me the nursery started as a for-profit organization where he realized he could densely plant food-producing trees and resell them to interested parties in the city. However, the project evolved over time into an organization that is more focused on community improvement and working towards Jake's dream of a "nature loving city." It does this by identifying neighborhoods in the city that are being hit hardest by climate change — urban heat islands — and bringing trees to these communities that need them most.

For Jake, individual resiliency is unattainable in an urban context. He doesn't know many gardeners who produce all their food — whether that's in their community garden plot, backyard, or even acreage. Jake says that what community gardening spaces like the Edmonton Urban Farm are producing is better than individual resiliency.

> I've sat on the Food Council for the last nine years and we often talk about community gardens and food security and I think growing food, gardening … I think that can have an impact, but probably the biggest thing that a community garden produces is community.

Community gardening in urban community contexts doesn't produce much individual resiliency Jake said, "what it does produce is relationships … And those relationships are probably building more resilience than the garden itself."

Jake spoke of the permaculture community being susceptible to falling for the initial appeal of self-sufficiency.

> We talk a lot about self-sufficiency. And I think even in the gardening community and probably especially in the permaculture community, if we're not careful, there's a little bit of that like, 'I'm going to disconnect from society and like move out into the forest and be self-sufficient.' And that works maybe great while you're like young and healthy. Until you like, break your ankle, or just get old — and then you're hooped.

Jake said that these attempts to become self-sufficient are misguided and even "ironic" — because they miss out on the lesson that nature is trying to teach us. "I think one of the lessons from ecology is that communities are more resilient than individuals," he said. "While a garden for some represents self-sufficiency, I think that there's the potential for it to build like a social sufficiency."

Many community gardens have an element of fighting food insecurity, as with a plot dedicated to food bank donation or to a homeless shelter. While this can be seen as providing food security or greater self-sufficiency to a handful of individuals, it is also a mechanism of community engagement. Organizing donation drop-offs, or teaching gardening skills to those from marginalized groups, are ways that the gardening community is widening its scope — or creating *bridging* social capital. While some look to nature and see "survival of the fittest" Jake sees something different.

> I actually think that the bigger story in ecology is how much cooperation there is. You have mycelium underneath the forest floor that's shuttling nutrients between different trees and, and the trees are feeding that mycelial network sugars and the and the mycelial network is bringing water and nutrients to those trees … the system as a whole is very cooperative … To go back to what I said earlier, social sufficiency is always going to beat self-sufficiency.

For him, working together as a community is the best path forward to his vision of creating a nature-loving city. “A community working on that is going to be able to get there much faster than one guy and 1,500 square feet of land at the Edmonton Urban Farm.”

Urban community gardens can help build resiliency in a material sense through food production. However, Jake raises a good point: this is limited by the nature of urban environments. Gardeners will never be able to produce enough food to feed their community entirely (Lupalupa, 2014). What he describes as “social sufficiency” seems to hint at the idea that we are in fact more resilient when we build strong social capital.

His descriptions of lessons from ecology and a “nature-loving city” also imply fostering a stronger relationship with nature. Jake described how as a child he was fascinated by how ancient cities were overtaken by nature. He was left wondering if there was a way that we could build a city that doesn’t fight back against the natural world but partners with it. This resonates with literatures that describe how gardening can build collective resiliency through civic ecology practices (Krasny & Tidball, 2012; Chan, DuBois & Tidball, 2015). Krasny & Tidball define civic ecology practices as “self-organized stewardship initiatives, often taking place in cities” that recognize humans are part of an ecosystem, and “stewards of the environment” (2012). These values, when implemented in a growing space, can allow it to have less of an impact on the land, be longer lasting, and take less labour.

While these conceptualizations of gardens building collective resiliency can seem somewhat abstract, applying them to disaster contexts highlights how immaterial aspects of a community garden serve a community during a time of need. In the following section I look at how community gardens have helped in the aftermath of hurricanes or earthquakes. I then look back on how citizens came together during Edmonton’s greatest disaster: the Black Friday tornado of 1987.

**Gardens in times of crisis**

This thesis has touched on the fact that at various times, community gardens have served as a supplement for institutions during a time of need, whether by providing food security for the unemployed during the Great Depression in Canada, or revitalizing communities in American cities in the aftermath of white flight and urban decay (Merrett, 2015; Hynes, 1996). There is a small literature that explores how community gardens can help in times of natural disaster. Ilieva et al. (2022) point out a pattern of studies which say that community gardens, "through the social networks and relationships of trust they nurture, can help their participants and surrounding communities to better cope with the stress and disruptions caused by such catastrophic events".

In disaster, gardens can help beyond just food production. In fact, Ilieva et al. (2022) say that an overemphasis on food production can limit our understanding of the benefits of community gardens. This can be harmful, in that for policy makers and the public it "shifts research attention from other important yet less easily monetizable outcomes like social cohesion or quality of life" (Ilieva et al., 2022).

First, in disaster settings, gardens can be community gathering places. One participant in my research noted the lack of public spaces in Edmonton that are not spaces of consumption, like a mall or an arena. There has been a loss of public space in North American cities in the last century, as neoliberal ideas dealt a blow to public accessibility (Sewel, 2018). Chan, DuBois & Tidball (2015) found that in the aftermath of Hurricane Sandy in New York, community gardens were used as public gathering places that served as a "restorative commons," both functionally and emotionally. These spaces had an existing network of community, giving them more value as a public gathering space and more support than a parking lot. One community gardener who participated in this study spoke about how

50 people gathered to have a fire and cook chili in the two days after the hurricane hit. This was before the National Guard was able to come in to help.

> That is the best defense we have against fear. The best defense we have against looting, rioting, or any other kind of insecurity... And that is a direct result of the community garden. You know being a hub for safety, security. A blanket of support between neighbors (as cited in Chan, DuBois & Tidball, 2015).

Shimpoa, Wesenerb & McWilliamb (2019) found that following the 2010-2011 Canterbury Earthquakes in New Zealand, a local community garden "served as an important place to de-stress, share experiences, and gain community support" (p. 124). The garden had elements that "encourage social interaction and bonding such as central meeting and lunch places and communal working areas" (p. 124). They noted that in an earthquake, outdoor green spaces are less likely to be damaged than buildings, allowing these spaces to be viable gathering places that reduce disaster risks. The authors argue that these spaces should be considered long-term assets by urban planners.

A second immaterial way that community gardens can provide support in a disaster is through social networks. In disaster we rely on those around us and our neighbours for help. These moments of solidarity create strong networks of connection, mutual aid, and emotional support. With an existing social network, this is particularly true for a community garden. Chan, DuBois & Tidball (2015) found that the garden they studied following Hurricane Sandy, gave "positive stimuli to counteract the overwhelmingly negative and stressful experiences immediately following acute disasters". The network of the garden also provided communication and support to those in need. This included aid for "those stranded without electricity, food or water" and support for the vulnerable like an elderly neighbour. This community continued to support one another, work toward restoring the damage done to the garden, and protecting their garden from development in the two years that followed.

Lastly, these communities that form in disaster can create tangible prefigurative change — particularly in a temporary space where the state cannot assert full control over a

city in crisis. Chan, DuBois & Tidball (2015) argue that community gardens are an example of civic ecology, which often arises out of stress. These gardens empower citizens to “set the terms and conditions of material local/global practices” which is especially relevant in disasters as they require immediate adaptive strategies. Disasters are moments which open the status quo up to changes. Often it is citizens themselves and their organizations that are the first responders to a crisis, establishing networks of mutual aid in the first few days. This puts power back into the hands of citizens and enables prefigurative change-making. Kato et al. (2013) describe how in the aftermath of Hurricane Katrina, community gardens were able to serve as immediate “catalyst or symbolic solutions to urban issues” (p. 1834). The authors discuss how the political nature of these gardens shifted over time as the situation in New Orleans changed. This perhaps aligns with literature that suggests it is not uncommon for movements to lose their prefigurative nature over time (Leach, 2013).

These descriptions of community gardens a resonate with Solnit’s (2009) conceptualization of disasters as “temporary utopias” and how these moments are fleeting as the state regains control over the situation. The temporary nature does not, however, mean that long-term beneficial change cannot emerge. In fact, Solnit describes how people made deep, meaningful, life-long connections and were able to come together as a community like never before. She describes how some people found joy in these moments of anarchy — “solidarity with others caused by the rupture in everyday life, an emotion graver than happiness but deeply positive” (Solnit, 2016). While we should not welcome disaster, Solnit argues these moments have implications for everyday life. “The point is that disasters provide an extraordinary window into social desire and possibility, and what is seen there matters elsewhere, in ordinary times, and in other extraordinary times” (2016).

Prefigurative change that emerges in disaster can challenge the powers that be — which is why false narratives of “the angry mob” or looters are attractive to those in power

during these periods (Solnit, 2009). Regardless of these narratives, citizen response is often vital, effective, and powerful. Edmontonians are no different, and while disaster on the scale of those described above doesn't strike this prairie region often, we are by no means immune to the forces of nature.

***Citizens Respond: Black Friday (1987)***

While Edmonton has not faced many notable natural disasters when compared to hurricanes and devastating earthquakes, there are lessons that can be drawn from the fallout of Black Friday in 1987, when a tornado struck parts of Edmonton. The Tornado killed 27 and left 600 injured and 1,700 homeless (Skapski, 1995, p. 55). Black Friday continues to be considered one of the deadliest natural disasters in Canada's recent history (cite).

According to Skapski (1995), the emergency response in Edmonton was characterized by a lack of preparedness. While it is common in natural disasters for communities to rely on non-profits and foreign aid while state institutions are in crisis, in Edmonton's case the Red Cross was unprepared. The former president of the Edmonton Red Cross described how no one knew their role, leaving the branch only marginally equipped, but recurrently asked to fill gaps for city-wide emergency response.

> If the question is purely: was the Red Cross adequately prepared to facilitate us in the role, the answer is no. Material wise, people wise, plan wise, no wise, okay? We had never even considered what we would do if a tornado happened to trash part of Edmonton. We knew how to package toothbrushes for fires. (as cited in Skapski, 1995, p. 57)

There was no network of disaster response organizations and no institutional memory, as there had never been a tornado of that level of intensity in the province's recorded history — and there hasn't been one since ("List of tornadoes," 2023). Despite this, the author argues that the Red Cross response was impressive. She describes how they relied on citizen volunteerism as well: when phone lines were backed up with calls, people came providing

extra phone lines, and people lined up for hours in the rain at night to register to volunteer (p. 61).

In emergencies it's common for citizens themselves to do much of the important work. Scanlon & Groenendaal (2013) argued that state institutions need to have a more proactive understanding that in disaster, citizens will often be the first to respond: state agencies need to learn to collaborate and communicate with citizens directly. The example they use is that during Black Friday, Evergreen Mobile Home Park in northeast Edmonton was hit hard by the tornado, and 15 of the deaths from that day occurred at the trailer park. Those on the scene started to rescue and help the wounded, driving the injured to a nearby hospital. By the time the authorities arrived, there was no one around to explain what had happened, but there were still people who needed rescuing. The authors argue this confusion could have been avoided "but it requires two things: an understanding of the role ordinary people play in emergency response and co-operation between the medical community and emergency responders such as police and firefighters."

When imagining future disasters in Edmonton, it's illuminating to look at the roles ordinary citizens played during Black Friday: lining up in the rain to volunteer and doing preliminary search and rescue at the deadliest disaster site. What this tells us is that when disaster strikes again — at higher rates than before given 1.5 degrees or more of warming — citizens are going to be a vital part of the process. We'll need to rely on our pre-existing networks of support. When your material resources are destroyed, you must turn to the immaterial: social capital.

There is some literature on other natural disasters in Alberta and how social capital impacted the community response. Fletcher et al. (2020) studied attitudes about community and climate change adaptation in four rural communities in Alberta and Saskatchewan: Pincher Creek, Taber, Rush Lake, and Shaunavon. Through interviews with community

members, the researchers analyzed how different forms of social capital helped some community members adapt to climate risks like floods, droughts, and fires. Reimer et al. (2013) did a similar study in the aftermath of the 2003 Crowsnest Pass fire and found that the response was effective because of local community efforts. The authors list how local efforts to create gathering spaces, distribute information and food, and educate officials about the geography of the area helped disaster response. Haney (2018) did a study in a more urban context, looking at the 2015 Calgary Flood — one of the largest urban evacuations in Canadian history. The author found that besides previous neighbourhood engagement, the only factors that determined whether someone would build social capital during this period were experiencing home flooding, being asked to evacuate, and the duration of evacuation. Social capital was built by those who needed it most, indicating that "it is not simply the social capital that residents bring with them into the disaster that matters. Rather, disasters are events that have potential to bring people together who otherwise may not interact" (p. 113).

The author suggests that it is important for these social networks to persist after the disaster. Communities must move beyond the catalyst of the disaster so that we can learn how to reinvigorate participation during the everyday. "Understanding how social networks are forged, reinvigorated, and reconstituted in the aftermath of disaster will help us draw disaster-affected communities together for instrumental, resilience-building purposes" (p. 113). Strong local community organizations that bring neighbours together are a key component of this.

While crisis forges and strengthens new connections, communities can and are doing that work outside of disaster contexts. Community gardens are a good example of this. If a disaster were to strike, those with pre-existing involvement in their community will already have networks of support upon which to draw. By thinking about the climate crisis and how

disasters will become more frequent and intense, it is clear that we need to find catalysts for scaling up these social capital-building communities — before disaster strikes.

There are many ways we can build up social capital. Some of what I have described is generalizable. Being more involved in your community by nature gives you more resources in a time of crisis. However, there are distinct dimensions and benefits of the relationships that community gardens foster. These relationships are rooted in an outdoor green space centred around growing food, and this gives them dimensions that a PTA or community league may not foster. The physical location of a garden gives people a sense of place and rootedness, something that can be of great value, especially physical infrastructure has been destroyed. Gardens being outdoor green spaces means that they are physically resilient: a flooded garden or a fallen tree in the garden is easier to restore than a destroyed house.

At the level of motivation, community building and creating social networks as goals of community gardening are often accompanied by goals of environmental or social justice. This is relevant to thinking about the effects of climate change and disasters. People involved in community gardens are perhaps more equipped respond because they have already been doing the work of thinking about how to live in harmony with nature and take care of a community's social and material needs themselves, without relying on the state or other formal institutions. Mutual aid may come more naturally when you have created a culture of sharing vegetables, watering one another's plots, and exchanging gardening skills and tools and advice.

While issues around diversity in community gardens were discussed in an earlier chapter, a community garden can be a space for everyone if set up right. There is not a high initial financial cost, as might be required by other clubs or associations or collective pastimes. Gardening can be done by people of all ages and backgrounds, as opposed to something like a PTA that would consist primarily of parents. Community gardening is also

highly visible: if there’s a community garden in your neighbourhood, you likely know about it even if you’re not involved, and participants in this and similar studies talk about how their garden is also enjoyed by and shared with passersby. That does not, however, negate the fact that more needs to be done to ensure inclusivity and accessibility in gardening spaces. A garden should meet the needs of people and be accessible regardless of culture, language, disability, or Indigeneity. There should certainly be universally accessible gardening spaces, however, spaces for particular marginalized groups also play an important role. Spaces like the immigrant community gardens or Indigenous-led gardens discussed in the introduction need to be supported and expanded.

These issues of inclusion are all the more pressing when we see gardening as not just as good in itself, but as a key component in engaging with disasters at the grassroots level. That being said, climate change is not just about the big disasters. There are ever-present disasters in society because of the way it is currently structured. Community gardens not only help in a time of natural disaster, but in meeting everyday needs and problems. Both of these will have importance as we move forward in a climate changed world.

# Conclusion

This thesis has explored how community gardens in Edmonton can build social capital, and how the relationships that are fostered at community gardens can help in times of crisis. If we look at the origins of gardening on public land in Edmonton, from the vacant lots program in the twentieth century to the community gardening and permaculture communities in the city today, we can see that there are grassroots political and social causes that underlie gardening movements through time. I used social capital theory as defined by Putnam (2000) as a theoretical framework through which to look at my interviews with Edmonton community gardeners.

I then demonstrated, through stories like Hazel's as well as Katie and Joe's, that gardening can take us outside of our usual social networks and create connections between different social groups. In this way, it can serve as bridging social capital. Gardening, however, can also form bonds within one social group, such as seniors or immigrant communities: this is known as bonding social capital. These connections, which form alongside one another, not only serve to strengthen a community but can be used to help a coordinate collective action.

I then wrote about how gardeners conceptualize their reasons for gardening and the potential positive social outcomes. I identified four motivations: gardening itself, environmentalism, community building, and community improvement. These chart what motivates gardeners now, and can tell the broader story of what political and social currents fuel the gardening movement today. As demand for community gardens remains high and the city looks to expansion, these motivations are important to measure. However, motivations don't tell us the whole story. While many gardeners may not have explicit environmental or social goals in their gardening that does not mean there are no environmental or social outcomes. Next, I spoke about how gardening can be conceptualized as prefiguration —

citizens building the world they want to see with their own hands. I argue that while prefigurative politics has typically been understood in terms of explicit political intentions, this needs to be opened up to recognize the micro-level and implicit prefigurative change happening in a typical community garden. Beyond building social capital, gardens can prefigure social bonds by giving people a taste of the types of social connections and community that they crave.

While some of my participants did not explicitly discuss gardening as political, two of my participants asserted that gardening can't **not** be political, regardless of intention. Some of my other participants saw politics in the way people approached gardening, with Hazel asserting that while gardening is generally "a leftie thing", you can find the conservative types in gardening by seeing who maintains the lawn. Whether it's through permaculture gardening techniques, environmental goals, community improvement goals, or prefiguring the kinds of social connections we want to see in society, gardening is a space that has political implications and outcomes.

In my last chapter I explored the idea of gardens building collective resilience. I used my conversation with Jake to discuss how while many in gardening circles think of individual resiliency as a positive outcome of gardening, what has more value is collective resiliency. Ecology tells us that communities are more resilient than individuals. This, however, should not be thought of strictly in a material sense, especially in an urban context where it is not possible to grow enough food to sustain the community. Collective resiliency has more to do with strong networks of support that develop in a community that is rich in social capital.

By applying these concepts of collective resiliency to disaster contexts, we saw more clearly how community gardens are useful during a time of need. In my first chapter, we saw in Joe and Katie's story a personal crisis: suffering an injury and needing to go to hospital. Gardening also builds resilience and beneficial social capital on a larger scale. I used Rebecca

Solnit's (2009) ideas about disaster utopias to explore how disaster spur cooperation and coming together. Beyond creating connection with strangers during times of disaster, I argue that we can build up community connections now to better prepare us for when disaster strikes. Through literature on community gardens during a hurricane or earthquake we can see how they can create important community gathering spaces and present pre-existing mutual aid networks.

While Edmonton has not experienced a large-scale disaster since the 1987 Black Friday tornado, the climate crisis will lead to more frequent and intense extreme weather events. I look back on what happened on Black Friday and demonstrate how it was citizens who were the first responders and who volunteered for the unprepared Red Cross. This helps us imagine our city in crisis, and how in these moments we turn to those around us. Having a pre-existing supply of social capital through a community garden could prove to be an invaluable resource.

This summary of the trajectory of the thesis allows us to think about community gardens and their positive outcomes in a different light and to explore how we can maximize and expand these positive social effects. First, this research can help us lay out more clearly what a community garden is for. Second, it helps us think about how we can make gardens more accessible and inclusive. Third, it allows grassroots community organizers and those involved in gardens to think about how they self-organize and what sorts of activities they offer. And lastly, it has policy implications for the City of Edmonton as they expand urban growing initiatives. I will explore each of these implications and how they interact.

***What are community gardens for?***

This research about community gardens raises important points about what policymakers and the public should perceive as outputs and benefits of these spaces. Food security is often the focus for policymakers, publics, and gardeners themselves; and while

fresh, affordable, and local food is undoubtably a key output of gardening, the benefits don't stop there. In fact, there very well may be an overemphasis on food, particularly since urban growing communities will never be able to produce enough to sustain their communities (Lupalupa, 2014). As Ilieva et al. (2022) pointed out, thinking too much about the material outputs of a garden may reduce analysis to a business case, neglecting outcomes that are not easily monetizable, as is the case with social capital. Producing food and learning the skills that are associated with gardening are great, but the potential connections and networks formed in these spaces may prove even more useful. As one of my participants said, "the biggest thing a community garden produces is community". Future research could further record these immaterial positive social outcomes of gardening in Edmonton.

***Implications of how community gardens self-organize and what activities they offer***

There is no agreement about how a community garden should be run or what purposes it should have within gardening movements, organizations, or the City. It is likely that different styles of gardens better fit different community needs — there is no one-size-fits-all model. That being said, many gardeners would agree that there are varying levels of community building and social capital at community gardens. What are some of the successful gardens doing that others are not? What strategies or models could other gardens adopt? In order to ensure that gardeners are able to acquire the positive social outcomes of gardening, we should look at the different dynamics and models at play in gardens and associated benefits and disadvantages.

Future research could compare the social outcomes of gardens that are tended to collectively versus the traditional individual plot model. There are also gardens that have community-building ingrained into the structure, with a community kitchen or monthly social events. In other gardens, social connections are left to be formed organically. By looking at the different ways that social capital can be formed in the garden, perhaps important lessons

can be drawn about how to do this most effectively. This may be an important missing piece of information as the number of community garden spaces in Edmonton continue to grow.

***Questions around access and how to improve access***

I wanted to do this project to learn more about a movement that I was curious about. I learned that the community gardening movement in Edmonton is bigger than I thought, and more interconnected. But at the same time, it is in many ways inaccessible: long waiting lists and bureaucratic processes needed to get started, and skewed demographics of those who do get involved that point to more complex forms of exclusion (Jettner, 2017 ;Wurfel, 2013). This is a limitation of the positive outcomes of gardening that I discussed under the heading of social capital. In order to ensure that gardening projects are being expanded in a way that benefits all, we need to analyze questions of access and tangible ways to improve access.

Future research could involve talking to people who are working to start a garden or who have recently started one. This would give insights into what this process is currently like in Edmonton. This would be valuable for those curious about starting a garden and also policy makers interested in streamlining the process for getting these projects off the ground. Researchers could also ask questions about how to improve accessibility and what tools could be given to help do this work, with a focus on gardens with membership from marginalized groups.

***Implications for City of Edmonton policy making***

Alongside this work, there are many moving parts to city conversations around both gardens and climate change. If we look at what has been done in the last year in Edmonton around community gardening, we can see that there is an open dialogue about how we can expand urban growing initiatives, what that should look like, and what we get out of it. This is happening alongside discussions about how we can work towards our climate goals at the city level, and community gardens are implicated in that. While it's exciting to see the city

opening new growing opportunities, it’s important to consider gardens beyond just carbon emissions or a business case. As demonstrated by this thesis, community gardens can serve as a builder of social capital, which can strengthen our communities and serve us during times of need. This connects with emissions targets, city maintenance, and beautification. But the community and social elements need to be part of the discussion. A quick look at the recent changes that have taken place in Edmonton can help us understand where we are and where we are headed.

First, the city changed the boulevard bylaw that streamlined process of starting gardens there (Chacon, 2022). A permit is required, however, and there are guidelines about what gardening methods you can use and a maximum height for plants. This change, however, is an expansion of what type of gardening is permitted on public land.

Second, during city budget deliberations this year the city manager was caught saying that he didn’t think enough Edmontonians cared about climate change to direct major new funding to it in this budget cycle. He said that at public hearings people came to speak about climate, but that “they were clearly climate people, climate action folks, advocacy folks and activists… what I think we need to do is hear like, a million Edmontonians talk about climate change and we’re just not there yet” (Swensrude & Reid, 2022).

Both city council and the public pushed back against this and following deliberations the budget was changed to include funding for a city-wide bike plan, energy retrofits, and emission-neutral city vehicles. The comments from the city manager, however, highlight the importance of seeing and understanding the different ways that people can show care toward the environment and the climate crisis: beyond oppositional climate activist circles, there are other groups that are working toward goals that are more subtly connected. While data easily proves the statements of the city manager wrong, we also need to look beyond data.

Community gardens are a physical manifestation of caring for nature and the environment — they are expressions of prioritization and values.

This city budget also included $1,352,000 over four years allocated towards the Urban Farming and Community Gardening Program (City of Edmonton, 2022a). As cited in the introduction of this thesis the city did work in August 2022 to identify 739 potential sites for community gardens. This land is all city-owned turf and converting that to growing space is one way the city is looking for ways to be “more operationally efficient and reduce costs”. A garden that is maintained by community members serves the interests of the city as they no longer have to pay to maintain lawn in that area. Gardens also align with Edmonton’s climate goals and the 2023-2026 Climate Budget states that “Urban agriculture and community gardens provide opportunities for local food production. Local food production can enable reductions of emissions associated with importing food” (City of Edmonton, 2022a).

The city is interested in and amenable to urban growing initiatives. But an element missing from these city council discussions is the immaterial benefits of gardens. This thesis has explored how community gardening builds social capital which helps foster coordinated community action, networks of support, and mutual aid — particularly during times of need. A next step for the city planners is to recognize these positive social outcomes and look for ways that they can be scaled up. As the city looks to create new urban growing spaces, what needs to be done to maximize the social benefits?

We are seeing more dialogue about how land is used in general in this city. This can be seen, for example, in discussions about repurposing the land where Old Strathcona Farmer’s Market parking lot sits and in protests against making Edmonton a 15-minute city (Swensrude, 2023; Anderssen, 2023). Everyone has opinions about how land is used in this city, even those who don’t have an interest in institutional politics. Land use is everyday politics.

I carried out this research as vibrant municipal discussions are taking place and it feels like there is a window of opportunity for doing things differently. Policy makers and the public are open to talking about how we can create more urban green spaces and more public space. Community gardens need to be part of that plan for all the reasons I have laid out in this thesis. Beyond just food production, they have the potential to be key builders of social capital which strengthens our communities, our own lives, and our democracy.

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