



Universiteit Utrecht

**Urban community gardens
and their ability to promote
social cohesion amidst
gentrification**



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Thesis

Urban community gardens and their ability to promote social cohesion amidst gentrification

Master Thesis- Spatial Planning
Utrecht University, Faculty of Geosciences
Final Version: August 4th, 2022

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Abstract

As cities continue to integrate urban renewal strategies that result in gentrification, neighborhood social cohesion stands to decrease. Social cohesion is important for neighborhoods as this creates more connected communities through social interaction and adds to resident's quality of life. Gentrification has been shown to negatively impact social cohesion through decreased neighborhood attachment and social interaction between incumbent and new residents. Therefore, tools that increase social cohesion would be beneficial to cities that have policies which result in gentrification. Urban community gardens have previously been used as a strategy to encourage social cohesion through their ability to increase social connections, and create positive atmospheres. However, these studies were not placed in the context of a gentrifying neighborhood. This led to the development of the research question, *How can urban community gardens promote social cohesion amidst gentrification?* Based on this, a novel conceptual framework was formulated combining previous literature similar to this topic. This framework includes four causal mechanisms of Mood-boosting, Neighborhood Attachment, Expanded Social Networks, and Empowering Participation, which were posited to result in social cohesion. An urban community garden, Vredestuin Noord was selected as the subject of this case study as it is located in a gentrifying neighborhood of Liskwartier in Rotterdam, Netherlands. Interviews based on the conceptual framework took place with both staff and volunteers of the community garden. Results from this research suggest that an urban community garden that boosts volunteers' mood, increases neighborhood attachment, expands social networks and empowers its participants has the ability to promote social cohesion amidst gentrification. This has implications for cities who have urban renewal strategies that result in gentrification, but still desire to maintain or improve the social cohesion of their city.

Key Words: Social Cohesion, Gentrification, Urban community gardens, Mood-boosting, Neighborhood Attachment, Social Networks, Empowerment, Participation.

Acknowledgements

I would first like to thank my supervisor, Dr. Hongmei Lu, who encouraged me to always be thinking of ways to further improve this thesis. I appreciate her feedback and insight she lent to me for this research.

Next, the employees and volunteers of the GroenGoed Foundation and Vredestuin Noord. I was met with kindness and an eagerness to help with my thesis and the interviews. I had a wonderful experience at the garden each week and cannot thank those I interviewed enough for taking the time to speak with me.

Lastly, my friends and family who supported me each step of the way and believed in my ability to finish this thesis. I could not have gotten through either my classes or this thesis without their help and encouragement. I thank you all so much.

Peyton James

August 4th, 2022

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1. Introduction

1.1 Background

“My friendly good neighbors have all left” (Respondent E, personal communication, April 20th, 2022).

Gentrification and the negative effects it has on residents’ perceived social cohesion of their neighborhood, as shown in the above quote is becoming a well-documented area of research. This is because cities around the world are increasingly adopting urban renewal policies that bring high to middle income housing into historically low-income neighborhoods (Teernstra, 2015). This results in what is known as gentrification where the socioeconomic status of a neighborhood increases at a rate higher than the rest of the city. Property values and housing costs rise which makes it harder for low-income people to stay in their neighborhood, and thus typically ends in their displacement (Steinmetz-Wood, et al., 2017; Shaw & Hagemans, 2015) which impairs the neighborhood’s social cohesion (Cheshire, et al., 2019). Social cohesion is often understood as “interpersonal dynamics and/or collective efforts that may be used to assess quality of life...[and] involve(s) feelings of trust, belonging, acceptance, and connectedness which often relate to positive social interactions.” (Jennings & Bamkole, 2019, p. 1). Unlike cities in the United States, which use gentrification as a way to bring in middle-class residents to increase their tax base, Dutch cities instead have resources provided to them through the state and have therefore attempted to use gentrification to ameliorate social cohesion in neighborhoods they feel lack order (Uitermark, et al., 2007; van Eck, et al., 2020; Teernstra, 2015). However, this topic is highly contested as researchers have not found this to be the case (Uitermark et al., 2007; Pinkster, 2014; Weltevrede, et al., 2018; Bosch & Ouwehand, 2019).

In the Netherlands, gentrification is more regulated than the United States through the use of market interventions like rent regulation that have historically been able to curb negative outcomes such as displacement. This has allowed the Dutch to attempt social mixing of different incomes in one neighborhood. These plans for social mixing were intended to bring more social cohesion to a neighborhood and have them be less economically ‘one-sided’ so that overall socio-economic upgrading can occur (van Eck, et al., 2020; Teernstra, 2015; Uitermark, et al., 2007). The Netherlands ultimately saw this as a positive way to reduce tensions and issues with authority in disadvantaged neighborhoods (Uitermark, et al., 2007). Nevertheless, these strategies have been seen as superficial at best, yielding few meaningful interactions and sometimes even leading to aggressive situations between residents (Doucet & Koenders, 2018;

Weltevrede, et al., 2018; Uitermark, et al., 2007). Despite this, the Dutch aim to continue their efforts in gentrification, with plans outlined in Rotterdam's *Woonvisie 2030*, the municipality's housing vision (Municipality of Rotterdam, 2016a). Here it is discussed how they plan to build more housing for middle to high-income residents on both transformed and newly constructed sites in order to increase interactions between different demographics and create more social cohesion. Though residents of Rotterdam already see issues with this *Woonvisie 2030* and do not believe it will lead to more social cohesion due to social networks being disrupted as low-income people are forced to move from neighborhoods to make way for high income residents (Klaverdijk, 2016). This aligns with previous research on gentrification, which has been found to historically decrease social cohesion due to lack of social interactions between new and incumbent residents, and lessened neighborhood attachment caused by alienation from changing businesses and neighbors (Butler, 2003; Gibbons, et al., 2020).

Subsequently, what are ways for social cohesion to be created amidst gentrification? In the past, urban community gardens have been used as a way for citizens to have a form of control over their neighborhoods and build positive relationships with each other so that social cohesion can arise and beneficially impact neighborhoods (Soga, et. al., 2017; Veen, et al., 2016). Urban community gardens have created better social inclusion (Whatley, et al., 2015), can reduce volunteer's stress (Ven den Berg, et al., 2010), build social capital and beautify urban spaces (Malberg, et al., 2020). However, a research gap has been formed since urban gardens and their ability to create social cohesion have not been thoroughly studied in the context of a gentrifying neighborhood. When searching for this literature, I found a lack of articles that focused on this intersection. Research done by Veen et al., (2016) conducted a case study of seven community gardens in the Netherlands and their resulting social cohesion, but this did not include the underlying effects of gentrification. Previous studies have shown that in the case of restructured neighborhoods throughout the Netherlands, contact between different income groups is superficial, and disaffiliation can occur between middle income residents and their neighborhoods (Uitermark et al., 2007; Pinkster, 2014; Weltevrede, et al., 2018; Bosch & Ouwehand, 2019), which highlights the need for tools that create more social cohesion. Along with this, Versey (2018) found that most research on gentrification focuses on those who gentrify and not the gentrified. Conclusively, the above studies do not combine the same three aspects of urban gardens, social cohesion and gentrification with the point of view from both those who gentrify and the gentrified. These are the research gaps that my thesis aims to fill in order to address the research problem.

1.2 Research Purpose & Question

As cities implement more urban regeneration strategies that result in gentrification (Teernstra, 2015), it is important that the social cohesion of the neighborhoods remain still or is improved. This is because the strength of a neighborhood's social cohesion is an indicator of its collective problem-solving capabilities in times of conflict and disaster, and shared values, well-being, neighborhood attachment and quality social interactions result in more just communities (Schiefer & Van der Noll, 2017). The aim of this research is to demonstrate a way for cities to foster social cohesion through urban community gardens as they implement policies that may result in gentrification.

The scope of this research is focused on a qualitative case study on the Vredestuin Noord garden located in Liskwarter, a neighborhood in Rotterdam Noord. This location was chosen because the neighborhood is currently undergoing gentrification due to Rotterdam's "Promising Neighborhoods" policy and *Woonvisie 2030*. This has been illustrated through indicators like the outmigration of minorities as the native Dutch migration increases along with the swiftly rising property values (Allcharts, 2022). Also in this neighborhood is The Vredestuin Noordgarden. This is an urban community garden that is managed by the organization GroenGoed, who promote community engagement and healthy living (Groengood Rotterdam, n.d.a). How the community is engaged, whether neighborhood participants are involved in the decision making of the garden, if it boosts participants moods, expands social networks and adds to neighborhood attachment are indicators of a garden that can promote social cohesion (Ghaffari, et al., 2018; Rostami, et al., 2014; Schiefer & Van der Noll, 2017). The presence of both this community garden and the indicators listed above are what makes this area relevant to research. Based on this objective, I have formulated the following research questions.

How can urban community gardens promote social cohesion amidst gentrification?

- How is the garden foundation organized and does this result in empowered participation?
- How does the urban community garden boost volunteers' mood?
- In what ways does the urban community garden expand social networks?
- How does the urban community garden impact neighborhood attachment?

1.3 Scientific and Societal Relevance

Whether an urban garden promotes social cohesion depends on if it creates a positive and empowering atmosphere for participants, expands social networks and increases neighborhood attachment, (Egerer & Fairbairn, 2018; Ghaffari, et al., 2018; Schiefer & Van der noll, 2017) compared to one that promotes individualism and uses top-down planning that alienates residents and results in further gentrification (Egerer & Fairbairn, 2018). Studying an urban community

garden and how it engages with residents would add to the literature on the empowerment capacity of these green spaces in neighborhoods and the effect they could have on a neighborhood's social cohesion amidst gentrification pressures. This would also help fill practical knowledge gaps that have formed specifically around understanding the link between social cohesion and green spaces (Jennings, V., & Bamkole, O., 2019).

Due to capitalism and a global economy, researchers and policy makers feel that there has been a decline in social cohesion in the last century. Reasons for this include growing inequality, a decrease in perceived shared moral values and social fragmentation (Forrest & Kearns, 2001). Gentrification, which is a now commonly used urban regeneration strategy to revitalize post-industrial cities (Nethercote, 2017), has shown to decrease social cohesion and add to the social fragmentation and polarization of neighborhoods (Butler, 2003). The decrease in social cohesion can therefore be seen as a pressing symptom of gentrification that makes cities more vulnerable to social disorder (Brown et al., 2003). As cities move forward with policies that result in gentrification, like Rotterdam's *Woonvisie 2030*, it is important that more literature is created on how to strengthen social cohesion amidst gentrification to help find solutions.

1.4 Thesis Outline

This research first introduced the background, research purpose and question, and scientific and societal relevance. Next, the theoretical framework will be discussed, which delves into the background of social cohesion, how it has been affected by gentrification and how urban gardens may play a role in mitigating these effects. After this the conceptual framework is introduced, and its causal mechanisms are explained. The methods chapter follows, which elaborates on the case study, the methods used for data collection and analysis, and the ethical considerations of this research. The fourth chapter reveals the results of this research and elucidates how the research question and sub questions are answered. Next, the discussion chapter places the results in the broader context of research, the implications this has on cities and policies, and the limitations that were found. Finally, this research concludes with a summary of what was learned from this thesis and next steps further research can take.

2. Theoretical Framework

In this chapter social cohesion and the role it can play in adding to the quality of life in cities will be concurrently discussed with how cities are promoting policies that result in gentrification, and the subsequent effects this can have on social cohesion. This leads in to how urban community gardens have been used as a tool to promote social cohesion and the lack of research that has been done within the context of gentrification. Finally, the conceptual framework is introduced, and each of the causal mechanisms found in the framework are elaborated on to explain their purpose and the ability they each have in promoting social cohesion.

2.1 Social Cohesion and Gentrification

Social cohesion can be seen as a byproduct of a group, oftentimes a neighborhood, who choose to act in solidarity, share loyalty to one another, cooperate well, and have mutual values. Social cohesion also consists of shared moralities, common goals, neighborhood attachment and increased quality social networks (Schiefer & Van der Noll, 2017). The above aspects of social cohesion typically result in more social order which lessens the threat of conflict caused by social inequality, differing moral values, and lower levels of sense of place (Forrest & Kearns, 2001). Therefore, social cohesion in both policy and theory makes for stronger and more just communities (Dempsey, et al., 2011), and is often desired by city planners. Cities like Rotterdam have created policies, such as the *Woonvisie 2030* under the premise that their regeneration strategies will bring about social cohesion (Municipality Rotterdam, 2016). However other cities around the world have used strategies similar to these that ultimately result in gentrification (Teernstra, 2015). Gentrification is often understood as “a rapid change in the social status and economic characteristics of a neighborhood as compared to the rest of the city” (Steinmetz-Wood, et al., 2017, p. 2). This is commonly caused by middle-class residents moving into lower-income neighborhoods, which leads to investments in the built environment that ultimately raise housing costs (Steinmetz- Wood, et al., 2017). This form of gentrification has been shown to decrease social cohesion (Butler, 2003; Versey, 2018; Gibbons, et al., 2020).

Typically, the negative effects gentrification has on social cohesion is the disruption of social relations and neighborhood attachment. It has been found that new middle-class residents and incumbent working-class residents do not interact with one other, which leads to a “polarized social structure” (Butler, 2003, p. 2469). This can make it difficult for social cohesion to occur. In another study, a lack of intergenerational social cohesion had been found in gentrifying neighborhoods, wherein older residents feel disconnected and isolated from the new, younger

adults (Versey, 2018). Along the same lines, incumbent residents have reported feeling alienated from their neighborhood due to loss of fellow longtime residents and changes to the businesses, while the new residents feel like strangers because they are not acquainted with incumbent residents and businesses (Gibbons, et al., 2020).

Research has shown, however, that there is some nuance in what determines whether or not social cohesion exists in gentrified neighborhoods. Jackson & Butler (2015) found that incumbent residents who had a strong desire to keep their sense of place in their neighborhood had high levels of interaction with new middleclass neighbors. Also, Steinmetz-Wood et al., (2017) found that the high income gentrifiers perceived greater social cohesion than the incumbent, gentrified residents. The city of Rotterdam is aiming for these perceived positive effects with their *Woonvisie 2030*. In this, they introduced their plans to build more owner-occupied housing in low-income neighborhoods in order to increase the number of affluent residents. Though they recognize that this will result in gentrification, they believe it will increase social cohesion by stabilizing socioeconomics in disadvantaged neighborhoods, creating more demographically mixed neighborhoods, and increasing investments in infrastructure (Uitermark, 2003; Municipality Rotterdam, 2016a).

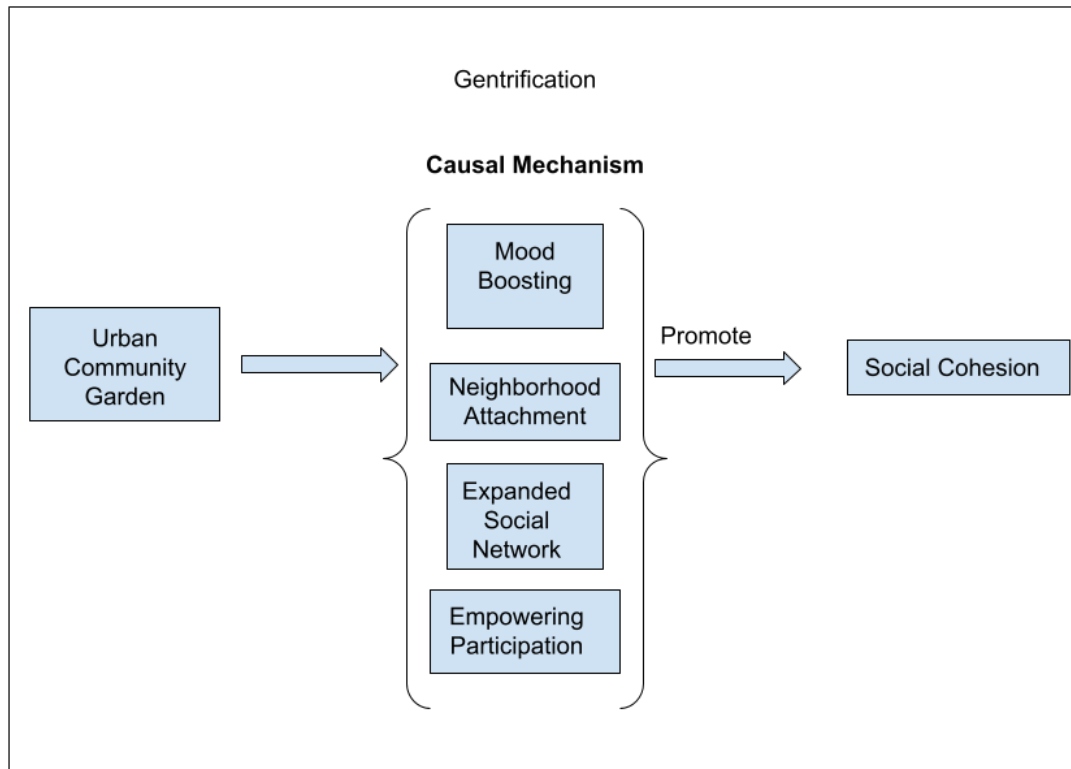
However, because social cohesion is built on cooperation, tolerance, trust, and connection, especially between those that do not already have emotional ties (Jennings & Bamkole, 2019; Mulvaney-Day, et al., 2007; Uitermark, 2003) introducing residents of varying income levels does not necessarily stand to add more social cohesion to a neighborhood. A neighborhood needs to not only be a high-quality living environment, which Rotterdam is attempting through upgrades in housing and infrastructure (Municipality Rotterdam, 2016a) but also needs space for recreation, leisure, and positive social activity (Dempsey, et. al., 2011; Forrest & Kearns, 2001). In the past, residential programs and creating a ‘third space’ in the public realm to increase social connections has helped promote social cohesion. Community gardens, which can operate as both a residential program and a ‘third space’ have also been known to create social cohesion (Soga, et. al., 2017; Veen, et al., 2016). Yet, due to the negative effects of gentrification on social cohesion, can urban community gardens still foster this despite these pressures?

Urban gardens help shape spaces for residents to not only inhabit but also build social capacity, creativity and imagination (Marche, 2015). Since gardens can alter space that is usually only shaped by those in power, they have also been used as forms of resistance against capitalism and the unequal rights to the city (Baudry, 2012; Egerer & Fairbairn, 2018). This is often seen in times of crisis for those less fortunate as they try to provide for themselves what the government

could not- fresh produce, green spaces, and community (Baudry, 2012). However, urban gardens and green spaces have not always exclusively benefitted communities. Though some do empower communities through active engagement, provision of healthy foods and access to nature, they have also been known to aid in the displacement of residents from neighborhoods through green gentrification and can inhibit others from enacting their own rights to the city (Marche, 2015; Rigolon & Németh, 2020; Rigolon, et al., 2020; Egerer & Fairbairn, 2018). Additionally, urban stressors like gentrification can affect the way members experience their gardens. Tensions from outside the garden like inequality and privatization of space can seep inside the gardens and create conflicts between members (Egerer & Fairbairn, 2018). Gardens that start as neighborhood initiatives and continue bottom- up practices have the highest chance of creating an empowering environment for their community. This is contingent on if they cultivate their own rules, if their operations remain mostly autonomous from government intervention, and if they work towards building local social networks (Bródy & de Wilde, 2020). However, it is yet to be studied if social cohesion specifically can still be created from an urban community garden in a gentrifying neighborhood.

This leads to the research question- *How can urban community gardens promote social cohesion amidst gentrification?* The conceptual framework introduces four causal mechanisms found throughout literature- Mood-Boosting, Neighborhood Attachment, Expanded Social Networks, and Empowering Participation. This framework is a combination of findings from social cohesion literature focused on neighborhoods and urban community gardens and is novel in the sense that these causal mechanisms are newly combined to fit this case.

2.2 Conceptual Framework



Mood-Boosting

To start, how green spaces make us feel is an important factor in why they have social and community benefits. Urban gardens especially have become a valuable way to relieve the stress that goes along with city living because green spaces have the ability to both geographically and mentally distance oneself from urban pressures (Rostami, et al., 2014). Geographically, gardens offer a respite from the built environment that can be hard to come by. It also provides a different atmosphere than the ones people spend most of their day in at their jobs or homes (Rostami, et al., 2014). Psychologically, nature has a ‘restorative quality’ that can reduce stress and mental fatigue from interacting with it. This is due to a process called Soft Fascination, wherein “executive systems that regulate directed attention get to rest, pessimistic thoughts are blocked, and negative emotions are replaced by positive ones” (Van den Berg, et al., 2010, p. 1204). This allows a person to readily respond positively to their green spaces. These calming outdoor atmospheres often leave people feeling happier, safer and more comfortable. Hence, why

community gardens can be a meaningful stress reliever. This increase in well-being and quality of life is an important aspect of social cohesion (Schiefer & Van der Noll, 2017). Once stress levels are reduced and psychological needs are met, garden members can begin to relax and feel joy in their surroundings and increase their self-worth and ownership to the community as they complete tasks to improve the garden (Rostami, et al., 2014; Malberg, et al., 2020).

Neighborhood Attachment

All of the above lends itself to building a sense of belonging and attachment to one's neighborhood. In addition to the positive effects on mood and well-being that green spaces bring, gardens that include cultural activities and encourage ample time for social interaction can lead to increased levels of neighborhood attachment (Comstock, et al., 2010). This is because shared values and socialization can create an emotional connection to a place (Schiefer & Van der Noll, 2017). When residents feel an emotional connection to the place they live, they are more likely to be invested and involved in the activities and maintenance of their neighborhood. Gardens provide a way for residents to contribute to their neighborhoods and beautify their green spaces together, which can increase their pride and satisfaction with their neighborhood based on the work they've done. It can also act as a force that drives further community engagement (Comstock, et al., 2010). By making these public spaces more inviting, other people will be drawn to use them. Those residents who simply use the space and were not involved in the maintenance of the garden will still increase their attachment to their neighborhood due to its beautification. Residents are able to see more value in their community, especially as they get to know their neighborhood better by interacting with these spaces and events (Brown, et al., 2003; Veen, et al., 2016). With garden participants especially, this attachment can be amplified when they are given more opportunities to interact with their neighbors and enhance their social networks between incumbent and new residents (Comstock, et al., 2010; Soga, et al., 2017). This rise in neighborhood attachment leads to increased levels of social cohesion (Schiefer & Van der Noll, 2017).

Expanded Social Networks

Quality interactions and bonds people create with friends, family and the larger community are important dimensions of social cohesion (Schiefer & Van der Noll, 2017). Gardens act as a 'third space' and create possibilities for social interaction (Veen, et al., 2016). This casual contact outside of mainstream exchanges can improve community relationships more broadly and increase neighborhood pride as participants work together to maintain a garden and create shared values beyond simply being neighbors (Comstock, et al., 2010; Whatley, et al., 2015). Gardens that are organized by those that live outside of the neighborhood, can be categorized as 'interest-

based' gardening (Veen, et al., 2016). Often, these interests are producing food and creating a space for people from different cultures to interact. This is in contrast to 'place-based' gardening which is only open to those that reside in the immediate neighborhood. Interest based gardens help create social cohesion as people form bonds from varied cultures and communities. When a garden makes time to not only grow the food but also eat it together, it provides opportunity for more diverse interactions as people from different cultures bring their meals for everyone to enjoy (Veen, et al., 2016). Garden members giving back in this way can also foster reciprocity and mutual trust among participants, which helps further community building and civic engagement overall (Malberg, et al., 2020; Rostami, et al., 2014). Engaging with the broader public and expanding social networks increases the functionality of a community and its social cohesion (Schiefer & Van der Noll, 2017). Even residents who are not involved in the maintenance of the garden and only visit the space increase the community's social cohesion by simply interacting with their neighbors. Additionally, those that continue to visit the garden create a bond over time (Veen, et al., 2016). These positive social benefits that residents derive from their gardens add to the surrounding society's health and well-being status, which is a valuable resource for municipalities (Rostami, et al., 2014). However, the way a garden's leadership and participation are organized has a sizeable effect on how residents feel when they participate, and whether they feel supported by this new network. A community garden must empower its participants and actively involve them in choices and tasks in the garden in order to promote more social cohesion.

Empowering Participation

Participation in the community can create solidarity and the ability to cooperate together to fulfil common goals, which is associated with increased social cohesion (Schiefer & Van der Noll, 2017). However, it is important for residents to understand how their garden is organized and whether it empowers citizens to claim their neighborhood territory despite gentrification, or if it is an individualistic, top-down garden that does not properly support the community. When determining the community-building and empowerment capacity of an urban community garden, the contributing factors are often found in the decision-making process and the level of engagement with the neighborhood (Marche, 2015; Egerer & Fairbairn, 2018). Community organizations like urban gardens can help spur incumbent residents to advocate for their interests and build solidarity within neighborhoods. Important here is that these organizations should have bottom-up planning, which is a key component of neighborhood satisfaction (Ghaffari, et al., 2018; Rigolon & Németh, 2020). Gardens should encourage participants to engage in multiple roles and projects, and have certain responsibilities. Those in leadership positions should also 'guide' and 'coach' instead of simply directing because this can foster more social inclusion

(Whatley, et al., 2015). Participants will also build a sense of trust in each other during their collective decision-making (Malberg, et al., 2020). This sort of planning allows residents to feel ownership of their garden and see their influence in practice and helps create a local culture based on working together in a variety of roles. A garden that includes tactics for supporting a flexible environment for learning and participation has benefits for creating a socially inclusive community overall (Whatley, et al., 2015). When residents feel empowered this also often translates to more involvement in other civil activities (Jennings & Bamkole, 2019) which is important when a neighborhood is faced with gentrification. Gardens where volunteers can not only form bonds between members but also with the community increase social cohesion in the neighborhood (Schiefer & Van der Noll, 2017).

3. Methodology

This chapter focuses on the methods used in order to answer the research question and sub questions. First, a description of the site study, and an explanation of the type of case study and its validity and reliability. Next, methods for data collections are discussed- document analysis, interviews, ethnography and the tools used for data analysis. Finally, this chapter ends with the ethical considerations that correspond with this research.

3.1 Research Design

Study site: Rotterdam North

Indicators of gentrification, social cohesion goals of the *Woonvisie 2030* and public concern over the effects of this policy is what led to the choice of Rotterdam North as the case study neighborhood. Several indicators can be found in Rotterdam North that reveal the occurring gentrification (Doff & van der Sluis, 2017; Weltevrede, et al., 2018; Bastinck, 2019; Rijnmond, 2020; BIJ1, n.d; M. Weeman, personal communication, March 18, 2022). These indicators include population, property values, income and diversity. The primary residents of Rotterdam North are creatives, single families, working-class, students and elderly people (Allcharts, 2022). The overall population of the borough is just above 52,000 residents, the majority of which are single persons between the ages of 24 and 45 (AllCharts, 2022). The borough has a mix of housing types, ranging from historical pre-war single-family homes to social housing complexes. Most of the homes are multi-family rentals provided by corporations, investors, or others, and were built prior to 2000 (AllCharts, 2022). Since 2015, average house values have risen more than €100,000, from 130,000 to 240,000 (AllCharts, 2022). This is now higher than even the average for the whole of Rotterdam. The average income for this borough has also increased from €26,000 per inhabitant in 2018 to €28,200 in 2021 (CBS, 2022; AllCharts, 2022). The migration background of the borough has also shifted. The number of Dutch natives has increased, while the population of the other most common ethnicities including Surinamese, Moroccan, Antillean, and Turkish have each decreased since 2015 (AllCharts, 2022). This change in demographic and income could be the effect of the ‘exclusionary displacement’ by the ‘Promising Neighborhoods’ policy as discussed by Doff & van der Sluis (2017) and the *Woonvisie 2030* (Municipality Rotterdam, 2016a). A main goal of the *Woonvisie 2030* is to increase the number of ‘promising families’ by 10% before 2030. Promising families can be understood as higher income, highly educated families, young professionals, students and the elderly. The municipality plans to attract this demographic by upgrading public infrastructure, green space and housing. Therefore, a corresponding goal was created to meet the needs of this

new demographic. Rotterdam would like to balance the purported excess of social housing with the lack of homes for the middle to high income range (Municipality Rotterdam 2019; 2020). The city believes that creating more of a mix in neighborhood demographics will lead to increased social cohesion. In order to reach this goal, the original *Woonvisie 2030* stated the need to demolish 15,000 homes in the social housing sector, and potentially only build back 5,000 of these, which they feel will balance the housing stock. (Municipality Rotterdam, 2016).

However, the residents of Rotterdam saw an issue with this as they felt that this did not match the real needs of citizens and their ability to afford a home. Typically, a mortgage one receives is for 4.5x their annual salary. For a home that is €169,500, an income of €37,666 would be required. And to rent a building like this at €869 per month, an income of €44,300 is needed. In 2016, 53% of Rotterdam had an income up to €25,200. This meant that the majority of residents could not afford to buy, let alone rent a home on the private market (Klaverdijk, 2016). Regardless, residents felt that the four-year waitlist for social housing should have been indicative enough that there was still a need for low-cost options. Rotterdammers let their opinion be known on the lack of social housing in the *Woonvisie 2030* in their vote in a referendum for the vision in November 2016 (Klaverdijk, 2016; NOS, 216). The results of this vote required the municipality to make an addendum to *Woonvisie 2030*, particularly on the amount of social housing that would be demolished. This addendum was adopted in May 2019 and the new goal is to demolish 12,000 homes in the social sector and build back 10,500. The addendum also called for 18,000 homes to be built by 2030 following the ratio of 20% cheap, 30% medium, 30% higher segment and 20% top segment (Municipality Rotterdam, 2019; 2020). However, citizens still saw an issue with this, and they feel that this does not meet the needs of lower income residents (50Plus Rotterdam, 2019; Partij voor de Dieren Rotterdam, 2020). Additionally, an article on the *Woonvisie 2030* discussed the sought-after social cohesion, which they felt was actually being diminished by the demolition of social housing as this leads to people moving away from their established social networks (Klaverdijk, 2016). This concern over the policy along with the indicators of gentrification is what led to Rotterdam North being the case study neighborhood.

Vredestuin Noord community garden

This case study is centered on the Vredestuin Noord garden, located in Rotterdam North. The garden is organized by the Groengoe Foundation. GroenGoed is an organization that aims to reduce citizens' carbon footprint, fight poverty, live self-sufficiently, and develop inclusive land ownership (GroenGoed, n.d.b). The foundation was formed in 2009 with the intention of building social cohesion in neighborhoods by introducing residents to one another, learning

about different cultural backgrounds, and working together to sustain a healthy garden. It also encourages participants to feel at home in nature within their neighborhood and decrease loneliness by engaging with neighbors (GroenGoed, n.d.c). The social gardeners, which include the founding members, are the ones who supervise tasks and the volunteers at each site. To participate in the garden, one can be involved in a few ways at two different levels depending on desired commitment. The first is weekly, bi-weekly or monthly visits to the garden to share in tasks of that day, and the second is taking on more of an autonomous role in deciding responsibilities and what tasks need to be completed. Participants are welcome to decide what works best for them after meeting with employees and working through a few trial moments so that one can understand what is actually involved (GroenGoed, n.d.d). This garden was specifically chosen due to its large size, 1000 m², the number of volunteers, and its location in Liskwartier. This location allowed for social cohesion within the context of a gentrifying neighborhood to be researched, since Liskwartier was listed as a “Promising Neighborhood” in one of Rotterdam’s housing policies that focuses on gentrification. As Liskwartier is located within Rotterdam North, gentrification indicators were based on the entire borough.

Validity & Reliability of Case Study

This research involves a single case study, which is beneficial for this topic because it involves inductive research in order to understand how urban community gardens can promote social cohesion in gentrified neighborhoods. This case study is a type 2 embedded (Yin, 2003) because there are multiple factors to analyze in this research, such as the leadership structure of the garden and the demographics of the volunteers. Additionally, a single case study gives concrete evidence of an applicable situation currently happening and allows for opportunities to interview people involved in the specific case. Aside from the foundation’s employee’s, the case study’s population belonged to two subgroups: residents that both lived in Rotterdam and also actively participated in the GroenGoed Vredestuin Noord garden. As Yin (2003) discusses, because single case studies look at one sample, this cannot be generalized to other populations, but can however be generalized to further theories. In conjunction, this case study has ecological validity as the findings are concerned with the natural social setting of neighborhoods and urban community gardens. The conceptual framework, which forms the basis of the research questions, is consistent with previous literature on urban gardens, gentrification, and social cohesion. This gives the research reliability as these measures can be replicated by future researchers (Bryman, 2016).

3.2 Methods for Data Collection

Document Analysis

Since the case study was located in Rotterdam North, I analyzed the current housing vision of Rotterdam, *Woonvisie 2030* (Municipality Rotterdam, 2016a) in order to better understand how these policies could result in gentrification. This document detailed present housing situations as well as future goals for the city's stock, infrastructure, how they plan to entice certain demographics to relocate to Rotterdam, and balancing the housing type to meet the needs of new residents. Along with the *Woonvisie 2030*, the 2019 amendment to this document *Concept Thuis in Rotterdam; addendum Woonvisie 2030* (Municipality Rotterdam, 2019) was also analyzed as it made changes to the number and type of housing stock Rotterdam aims to build. This amendment was created based on feedback from residents on the original document. As well as the policy documents, I also included a report, *The Influence of Strong Shoulders* (Doff & van der Sluis, 2017) which discussed the exclusionary displacement resulting from Rotterdam's housing policies, and *Nieuwe Buren. An investigation into the changing social composition of three Rotterdam neighborhood* which details the changing social demographic of Rotterdam Neighborhoods (Weltevrede, et al., 2018). These documents provided insight as to how the resulting gentrification could impact social cohesion in Rotterdam Noord.

Interviews

Interviews were chosen as a method as they allow for both formal and informal discussions of human experiences (Alharahsheh, H. H., & Pius, A, 2020). Since this case study is location based, I conducted all but one interview in person within Rotterdam North. The first interview consisted of a walk around the borough with a local tourguide which allowed me to see the area for the first time. The interviews with the foundation and their garden members were conducted at two of their gardens, both of which are located in Rotterdam North. The first, Bloklandtuin in Oude-Noorden, and Vredestuin Noord, in the Liskwartier which is where the majority of the interviews took place. These 15 key informant interviews and nine site visits occurred between March 18th - June 9th, 2022. This was in order to gather as much information from the garden as possible between both site visits and interacting with social gardeners and volunteer participants. While conducting interviews, I also participated in the daily tasks of the garden. This was in order to limit the disruption that could occur from pulling volunteers away from their tasks and to also get a sense of what working in this garden for the foundation is like. Along with the 15 in person interviews, I also had one additional phone interview with a garden member on July 14th, 2022 as we were not able to meet in the garden.

The 16 interviews were either exploratory or semi-structured depending on the context. To initiate the interviews, I first reached out over email to a resident of Rotterdam who provides

tours of the neighborhoods. This was in order to gain insight into the actual goings-on of Rotterdam North before moving forward with my research and data collection. This explorative interview allowed me to get a sense of the neighborhood and how residents may be feeling about the gentrification that was occurring. I then contacted employees from the foundation via email to arrange a site visit to their Bloklandtuin garden in the Oude-Noorden. Here I conducted the first interviews which were explorative and semi-structured in order to acquire first-hand information to guide the rest of my research (Bogner & Menz, 2009). I was able to interview one of the founders of GroenGoed and an ex-board member who still occasionally volunteers. These questions focused on the history of the foundation, the rules and regulations, and what they hope to continue for their gardens in the future.

I then developed interview guides for Social Gardeners, who are employees of the foundation, and for volunteer participants. These guides left room for interviews to operate in a semi-structured way because each person interviewed had different experiences and not every question was applicable. The questions centered around answering the four sub-questions so that I could determine what is contributing to the social cohesion that may be occurring at the garden. This included how long participants volunteered at the garden, if they lived in the neighborhood, if they interacted with other volunteers outside of the garden, how they felt about the foundation and also how the garden made them feel overall. These revealed whether social cohesion was actually being promoted within the garden location and beyond to the surrounding neighborhoods. Interviews were either conducted over the phone or in person at the garden in Liskwartier, a neighborhood in Rotterdam North, where I was able to interview one social gardener and twelve garden volunteers. I spoke with every person that was present at the garden each time. Three of the volunteers I spoke with on their first day at the garden, but by my last visit I had seen one of these three volunteers' multiple times, and had a chance to interview them again about their experience. The other nine volunteered regularly, so aside from occasional follow up questions, new information could not be obtained from our conversations after the first interviews. The volunteers' demographics were a mix of different ethnicities, ages, occupations, length of involvement in the garden and residency in Rotterdam North. While organizing these interviews, in order for participants to remain anonymous, each interviewee was given a letter. This was in order to better organize the data for analysis by knowing what demographic gave each answer.

Ethnography

While conducting this research, the method of focused ethnography was also utilized. This is a type of ethnography that is concerned with "a small group that focuses on a distinct problem

within a specific context” (Wolf, Z. R., 2012, p. 291). Ethnographers include onsite fieldwork, engagement, and interviews in their methods, all of which I was able to conduct while visiting the garden. The interviews most often took place while both the respondent and I were completing some of the daily tasks of the garden. This was in order to limit the disruption that could occur from pulling volunteers away from their tasks and to also get a sense of what working in this garden for the foundation is like. Field research during site visits allowed for more extensive observations of the participants which in turn revealed different layers of the volunteer experience at the garden (Boeije, 2009).



Garden bed at Vredestuin Noord



Garden entrance at Vredestuin Noord

Data Analysis

To analyze information gathered from the interviews and site visits, I used dictation software, open, categorical, and analytical coding, and Thematic Content Analysis. I first used a dictation app, Otter, to record and transcribe the interviews in order to save time during this process. From these transcriptions I edited the text to account for spelling and grammatical errors from the automatic transcription. As I gathered interviews, I formatted them all in a cohesive way to make analyzing the data easier later on. This included synthesizing the transcriptions into one file and organizing the responses by order of questions asked. After this I began coding once I had clear

organization of my data. Coding for qualitative data can be understood as “a way of indexing or categorizing the text in order to establish a framework of thematic ideas about it” (Gibbs, 2018, p. 39). Even with an interview guide and semi-structured interviews, I first used open coding concepts in order to read the text without many preconceived notions (Gibbs, 2018). This allowed me to see the data for what it was before trying to categorize it into themes.

Thematic Content Analysis was also utilized as this qualitative research relies on themes corresponding to causal mechanisms that promote social cohesion. This is in order to find commonality between correspondents that can represent the overall research (Anderson, 2007) and further theories on these topics (Yin, 2003). I then used knowledge from my theoretical framework to begin the process of categorizing. These categories were Mood-Boosting, Neighborhood Attachment, Expanded Social Networks, and Empowering Participation. I gave each category a color and went through the combined transcription file color coding for these themes. This gave a clearer idea on how much data I had for each topic, and helped locate information when I needed it. Once categories were coded for, I then moved on to Analytic coding within these themes. This allowed me to further interpret the data and decipher what was actually occurring within each response (Gibbs, 2018). Through this analysis I was able to interpret the results and formulate a conclusion based on the findings.

3.3 Ethical Considerations

The ethical considerations for this research fall with protecting the identity of those I interview, and acquiring informed consent of using data and observations (Bryman, 2016). In order to gain clear consent for participation, recording, and transcribing, I followed the guidelines of informed consent, which is integral to handling interview’s ethically (Mason, 2018). To do this, I had to inform the respondents of my role and the intentions of my research, allow them to remain anonymous during the interview process, brief them on the details of my study, and decide whether they were comfortable with a recorded interview. I also had to gain informed consent for the ethnography observations during the site visits. This is to ensure that the observations were not made covertly and people had a choice as to whether they would participate (Bryman, 2016). Therefore, garden members were informed of my role in the garden, and observations were made in a way that did not hinder their tasks in the garden. To ensure the protection of respondent identity, I had to preserve the confidentiality of the resulting interviews and transcript.

4. **Results**

The results of this research suggest that the Vredestuin Noord garden was still able to create social cohesion despite pressures from gentrification, though volunteers did discuss other negative effects that gentrification has had on their social relations. This social cohesion was achieved through the garden's organizational ability to empower its participants, to create happier moods, expand social networks and increase neighborhood attachment. Subsequently this has empowered volunteers to create the capacity to further social cohesion in their neighborhood. The following sections provide details of these results according to the sub questions, and their corresponding causal mechanisms for promoting social cohesion.

4.1 How is the garden foundation organized and does this result in empowered participation?

The organization of Vredestuin Noord garden from the Groengoe Foundation allowed for volunteers to have influence over the garden, work in multiple roles, be coached rather than directed and take part in collective decision making which results in empowered participation. Empowered participation is important for residents when living in a gentrifying area as this can lead to more confidence in being involved in local civic activities. Creating solidarity over common goals, shared values and giving back to the community increases a neighborhoods social cohesion.

It is important for a garden in a gentrifying neighborhood to empower their volunteers so that they can feel a sense of ownership and pride about their work and have positive relationships with one another. This has a lot to do with the garden's leadership and how it is organized (Marche, 2015; Egerer & Fairbairn, 2018). The GroenGoed foundation that manages the garden, at its core, uses elements of bottom-up planning. At its start in 2009, it was a neighborhood initiative of two friends who enjoyed gardening in their neighborhood and used vacant lots to green up their space and connect with their neighbors. Now the foundation has grown to have two other employees, called social gardeners, and includes nine more garden locations throughout Rotterdam. As a result, they have more to manage and take a structured approach to their original organization. Along with gardening, volunteers are welcome to lend their services in other ways, such as administrative work for the foundation. People can also volunteer at the gardens by working through an outside organization that puts them in contact with the foundation. Each garden has specific working moments when members can volunteer, and for

Vredestuin Noord the working moments are twice a week on Wednesdays from 14:00-17:00 and Thursday mornings from 9:30-12:00.

Participation is a facet of social cohesion that is observable through voluntary work (Schiefer & Van der Noll, 2017). Observations of participation from site visits include volunteers choosing their tasks, receiving guidance from the social gardener, and collective decision making. These processes all go towards making a more socially inclusive community (Whatley, et al., 2015). During each working moment, the social gardener has a list of daily tasks that need to be accomplished. Tasks are offered based on priority and amount of people necessary for each project, but if volunteers have their own project, such as sowing a certain plant, they are welcome to work on that instead. Once volunteers pick their task, the social gardener gives instruction and will oftentimes demonstrate the task, especially when there are newcomers. After volunteers are familiar with the goal, the social gardener either works with them or starts on their own separate tasks. If a volunteer has a question, they are welcome to ask it. However, when a problem or question arises and the social gardener is not in the vicinity, volunteers will discuss the issue between themselves and try to problem solve on their own. They engage in collective decision making on how to best complete the task, and oftentimes if there is a volunteer that has more experience, they will lend their advice based on previous knowledge. In other situations, the social gardener will discuss issues with the volunteers, and they will brainstorm together on what possible solutions could be. This allows trust to be built amongst participants as they decide the best course of action for the tasks. Participation in public life through membership of organizations like these demonstrate a sense of solidarity and readiness to cooperate together over common goals, which are important aspects of social cohesion (Schiefer & Van der Noll, 2017).

“Yeah, it's really nice to get outside every week and sometimes it's like raining, I don't want to go or it's kind of cold, but then you get out and you're working. So it's really nice. We always share the harvest and then meeting the other people is really nice. Yeah, I think I pretty much only have good things to say” (Respondent C).

“I am aware of how important it is to be in contact with the earth, how much that has an effect of your overall health. And also by working outside and working along with other people in the social connection” (Respondent B).

Volunteers have a better chance of feeling empowered if they feel they have an influence over the how the garden looks and operates (Whatley, et al., 2015). The moment when volunteers

have the most influence over the garden is during the *Winterborrelconference*. This meeting happens once a year in the winter, and both employees and volunteers have an opportunity to come together and speak about how the gardens are going, what they may want to change, and so on. Six volunteers who had been there the longest were asked if they feel they have influence over how the garden looks and operates. Four discussed how they like to be actively involved in the discussions during the meeting and appreciated being able to make decisions about the garden. They feel that volunteers do have influence over aspects like what gets to be planted. Two other respondents regularly attend the meeting but do not participate as much because they trust that the organizers know how to best run the garden and that the process is democratic. Although respondents mentioned that volunteers do not have control over everything, they see that it is important for the employees to use their expertise and give structure to the organization. Even for volunteers that choose not to be involved and don't go to meetings, they still see that others are able to have an influence over the garden. Though it was mentioned that planning participation seems to be limited to the meetings, smaller issues like interactions between volunteers in the gardens are sorted out in the moment throughout the year.

(On Winterborrelconference) *"Just coming together eat something together and then discussing or evaluating the growth season and discussing what went well what went wrong what we can do better next year"* (Respondent N).

"It's not like some institutions have like, we're going to fund the garden. And it's going to be this way. And we're going to do...it's really from the bottom up. So definitely you still need that knowledge and expertise. But if you have an idea, and if it's within reason, they're open for that which is really nice" (Respondent C).

"I think it's limited to this moment of the year and when it comes to what are we going to plant next year or to do really practical gardening stuff, but when it's more about the social stuff? Like if there's, you know, not that it happens very often, but sometimes if there's little friction or a small conflict, or something, I think there's a lot of possibility to mention it and to be able to talk with the people that run the garden" (Respondent J).

The interview with the social gardener revealed how the foundation tries to balance volunteer involvement and influence while also trying to support the broader community. Though volunteers do have influence over aspects like what they'd like to plant, the social gardener discussed how they would like to see volunteers become more independent. They see this as an opportunity for themselves to let go a bit more, set the daily tasks and then take on more of an

advice-giving role. A garden that allows volunteers to take on various roles and see the influence of their work helps to construct a local culture built on working together (Whatley, et al., 2015), though the intensity of the roles volunteers can take is limited due to obligations the foundation has to the greater community. Because the foundation has a commitment to a nonprofit organization they donate food to, total independence of volunteers in the garden would affect their capacity to give back. If volunteers were given more freedom, then there's a chance less food will grow which could prevent them from fulfilling prior obligations to the outside organizations. This shows that the foundation tries to balance engaging with the broader community through other local foundations while also trying to empower its own volunteers through involving them in the decision-making process (Marche, 2015; Egerer & Fairbairn, 2018). The quality of bonds with both volunteers and the community are key components of social cohesion (Schiefer & Van der Noll, 2017).

“I believe that if we coordinated more strictly let's say then we produce more food and more surplus for people who don't have money. Yeah. And if we say more like oh, just do how you feel like then we will have less food probably. It's another choice” (Respondent G).

Social cohesion consists of feelings of belonging, shared values, and positive relationships (Hartig, et al., 2014). Gardens that promote social learning, and connection through participation lead to members feeling a sense of belonging (Korn, et al., 2018). This sense of belonging can be illustrated through the frequency and rate of return of volunteers. The majority of respondents volunteer each week and specified in interviews that they would continue to return. Aside from joining for mental health or connection with nature, which will be discussed in the next section, respondents also mentioned other reasons for joining such as practicing Dutch, meeting new people, and learning about sustainable food production. During the interviews, these respondents stated that these were experiences they were getting from the garden. These respondents attained their motivations through interacting with others, which reveals that the majority of the garden also has these shared values. As for satisfaction and positive relationships, the six longtime volunteers that were interviewed were overall pleased with the garden and how its organized. The only changes two volunteers suggested were to increase the amount working moments available, and to get the nearby schools involved. The others stated that they liked how things were and did not feel the need for change. The sense of belonging is evident through continued participation and frequency of involvement. Along with this, volunteer's attainment of their initial motivations for joining through shared values and the positive relationships with employees show that the garden helps build these aspects of social cohesion.

“And we've been here for almost two years in the garden, it's still like we have a lot to learn. But, and of course, we learn things every week from like the people that organize the garden.” (Respondent D).

“I like the variety... I think it's quite balanced. For me the concept is good, it's working” (Respondent L).

“I like the people I feel like they're all very passionate about the... You know, like I can see that they genuinely care about the garden, yeah, I mean, I came once but I plan to come more often because I had a very good first impression. I'm learning a lot already” (Respondent I).

4.2 How does the urban community garden boost volunteers' mood?

The Vredestuin Noord Garden is able to boost volunteers' mood through both the physical work in the garden and also providing a space to relax in nature. The most common response for how the garden made volunteers feel was destressed. This relates to increased well-being and quality of life which adds to a neighborhood's overall well-being.

Urban gardens are a way for people to destress from their everyday working and living routines. Especially for those that reside in cities and are surrounded by more of the built environment compared to those that live in countryside's (Rostami, et al., 2014). Those that do seek out community gardens have varying and overlapping motives for volunteering. When asked why they wanted to join the garden, five volunteers specifically mentioned the act of gardening and wanting to learn more about it and further hone their skills. These respondents spoke about their previous experience with gardening, and decided to join this one based on either missing the activity and/ or wanting more space to grow plants. Five of the volunteers discussed connecting with nature and spending time outdoors as their motivation for joining. Although most did not specify nature as a reason, this could be that respondents see gardening as synonymous with spending time outdoors and connecting with nature. Or, it could imply that though gardening is inherently involved with nature, being outside and the benefits this brings is not the first thing on their mind. People may be thinking of simply the act of gardening and producing fruit and vegetables. This might be because gardening can be done indoors or in less natural environments like balconies or greenhouses.

“I have been interested in gardening for a while. We had grown some things on our balcony. But it's not that much that you can do like, yeah, a lettuce plant or a tomato or something like that. So yeah, but it's like really nice, because they have all the tools here. They have space. Everything that you need here” (Respondent C).

Due to soft fascination, where time spent in nature can block pessimistic thoughts and replace negative emotions with positive ones (Van den Berg, et. al., 2010), people are likely to experience a better mood after a day in the garden. Even though only three volunteers specified mental health as one of their reasons for joining, eight respondents mentioned experiencing a happier mood due to the garden. Relaxed, and destressed were the most common responses, but respondents also noted that it can be a lot of hard work. So even though they appreciate the work they are doing, this can leave them feeling tired after their visit. Especially if they are biking or walking to the garden, which is the most common way respondents commute there and this takes extra effort before and after their gardening. The physical work in the garden, appreciating nature and connecting with the outdoors are the main reasons volunteers continue to come back to the garden each week. This boost in mood from destressing and connecting with nature is due in part to the soft fascination they experience. Which can also increase their self-worth and contributes to an overall mindset boost (Malberg, et al., 2020). Their mood in the garden is also likely to contribute to the amount of time they spend volunteering.

“When I have a mood that I think like life sucks. Then I go here and then it's really uplifting. Loose, looser. Better. I don't know why I just accepted. I come home and I think oh, that's so nice... I have a good feeling about what I did that day” (Respondent F).

“Coming to the garden makes me feel relaxed, sometimes a bit tired too, cause it depends on the work we are doing. But it feels relaxed. And it's a bit far away from my house. It's like 20 to 25 minutes by biking, so its an effort for me. So sometimes it's difficult to get up and come but when I come, it's nice. I like it” (Respondent H).

Viewing nature, not just partaking in physical labor like gardening, has positive effects on mental health and consciousness (Paddle & Gilliland, 2016). Each of the eight respondents that were asked about their favorite part of the garden mentioned working outside and being with nature and plants. This included certain fruits that they enjoyed harvesting, and the work involved like planting and sowing. However, the feature most frequently mentioned was simply viewing the garden and seeing how verdant the area is. The green aspect of the space specifically is more inviting for leisurely time (Veen, et al., 2016) as merely looking at nature is restorative (Van den

Berg, et al., 2010). Respondents discussed things like sitting down to look at the beauty of the garden, seeing their favorite plants in bloom, and noticing how wild the space seems while still technically in the city. Having a space like a garden that provides physiological needs and makes it easier to cope with urban stressors adds to the quality of life for volunteers (Rostami, et al., 2014). Quality of life from increased well-being is another beneficial tenet of social cohesion (Schiefer & Van der Noll, 2017).

“There's always this moment each year when it just really like turns and everything is green. Everything is grown. And like especially there's like, we grow green beans. And they're like up on like these polls. And they're really tall. And they just like fill in these wheels...super green and leafy” (Respondent D).

“I honestly say this bench because... it's just a nice place to take in the sights around you. gets a good amount of sun. It's a little bit sentimental attachments” (Respondent K).

“Favorite part is it's close by, it's in the center of the city and that we are able to grow very nice things in the city landscape” (Respondent B).

4.3 In what ways does the urban community garden expand social networks?

Research revealed that some volunteers are not close with their neighbors, and feel they cannot relate to them because of varying differences. At the garden, they are able to meet people of different background in the community and bond over shared interests, garden together, share meals, and attend celebrations that are open to the public. These social interactions with both garden volunteers and wider community expands their social networks with people in the neighborhood they may not have had the chance to meet before.

Vredestuin Noord was shown to connect residents from throughout the city based on shared values. This particular garden is categorized as an ‘interest-based’ garden, which means that the organizers live outside of the neighborhood where the garden is located, and their interests include growing food and connecting communities. Therefore, even though some volunteers live outside of Rotterdam North, social cohesion can still occur as people from a diverse range of communities create bonds tied to a mutual interest (Veen, et al., 2016). For this reason, we can look at a neighborhood not as an entity bounded by territory but as overlapping social networks (Forrest & Kearns, 2001), with the garden acting as an impetus for new social contacts. The

garden allows volunteers the chance to make friends nearby based on commonalities, which is something half of the respondents mentioned they were lacking in their neighborhoods. They discussed that they are not close or as close with their neighbors as they'd like to be. The reasons mentioned are due to only having superficial contact, no shared interest, and neighbors moving away more frequently and at higher rates. This illustrates the common negative effects gentrification can have on social connects in neighborhoods, as residents feel disconnected from those of different demographics, loss of longtime neighbors, and feeling like strangers in their new neighborhood (Versey, 2018; Gibbons, et al., 2020).

“The speed of refreshing, very high here in this area. I've noticed that it's going faster and faster that people are moving. My friendly good neighbors have all left” (Respondent E).

“I'm a bit less interested in getting to know them. I'm a student, I don't know. I feel like they're mostly families” (Respondent I).

“Yeah, I really, we don't talk to any of our neighbors. We come here to the garden and we talk to so many people and I know like other people that work here live nearby, but like, but they don't live like right around us when we talk to them when we come here. And sometimes we meet up with people outside of the garden” (Respondent D).

The garden helps bring together people with shared values in gardening who also live near enough that they can continue to interact outside of the garden and further their bonds. Though increased social contacts were not a common motive for joining the garden, volunteers discussed that they ended up appreciating that the garden allows them to meet new people and have quality social interactions. At this garden, four of the volunteers who were over the age of 50 indicated feeling happier being a part of something, and making connections with other volunteers. This is important to note since elderly residents in neighborhoods experiencing gentrification often end up feeling more isolated (Versey, 2018). Overall, about a third of the volunteers get together with friends they've made from the garden and even borrow things from one another; however, others simply enjoy the conversations they have while volunteering. Some volunteers also bring friends to the garden to show them their work and the pride they have in the garden. This also adds to the neighborhoods social cohesion through added interaction and increased contacts made in the garden. Volunteers of the garden also invite each other to events they are hosting or find interesting, which further expands their network outside of the garden. In this way the garden acts as a conduit for people to come together over shared interests and create a bond that goes beyond just being neighbors in the city (Comstock, et al., 2010; Whatley, et al., 2015). The

quality of social interactions and the connections people make with their community through their social networks are integral to the social cohesion of a neighborhood (Schiefer & Van der Noll, 2017) and can promote the social mixing that is lacking.

“We've made some friends and some of them are like other immigrants here. And some of them are like, also people who are local here. So that's really nice, because we can come and practice our Dutch and also make friends with people” (Respondent C).

“So gardens is like a chance because I'm not working now I'm at home trying to learn the language. It's a chance to socialize...I think its fine spending time only here. It's also nice. Yeah, cause you're just like having talks (Respondent H).

A garden that allows time for social processes, especially those including diverse backgrounds to interact and discuss their cultures and the work they've done together helps to create and strengthen shared values (Hartig, et al., 2014). In a typical day at the garden, volunteers engage in social interaction before, during and after the daily tasks are finished. Before work begins, volunteers have the chance to talk over coffee and tea as people arrive. These conversations included travel plans, plants they had seen around their neighborhood, and what's growing in the garden. While working, volunteers are often teamed up in groups of two or three, and they chat about work, school, new songs or shows, and the task at hand. After the projects are completed, the volunteers gather to share the day's harvest. People will usually discuss the food they'd make with the produce, if they've tried a certain plant before, whether they enjoy eating them, how different cultures use the plants, and what the name of the plants are in their language. These informal interactions reinforce positive social bonds and solidarity among participants (Comstock, et al., 2010). These shared values and positive interactions are more examples of the social cohesion being created through this garden (Hartig, et al., 2014).

“And for me, it's really nice to be able to meet other people and just go somewhere and have purpose (Respondent J).

“I enjoy it actually. I meet new people. I do something different. I every time I do something different” (Respondent H).

“Of course, we learn things every week from like the people that organize the garden. Yeah, it's not just that I like coming every week, but I also feel like a bit responsible for the garden” (Respondent D).

As for the supplemental social events like meetings, potlucks, and harvest festivals, these give volunteers a chance to have further interactions outside of just working in the garden which includes eating and celebrating together. The potlucks are more spontaneous, and typically include members of that garden, and friends that want to stop by. This allows for more diverse interactions to occur as people from different cultures come together and set aside time to enjoy the produce they've grown (Veen, et al., 2016). The Harvest Festival, which occurs twice a year is open to all volunteers and also to the public. This allows people from different gardens to meet, and also for non-volunteers to get to know the organization and what they do and share the produce that was grown from the season. Gardens that give back promote reciprocity and increase mutual trust among the volunteers which furthers their willingness to civically engage with the broader community (Malberg, et al., 2020; Rostami, et al., 2014). Participation in public life and the subsequent social networks made from this increases the functionality of a community and its social cohesion (Schiefer & Van der Noll, 2017).

(On potlucks) *Yeah, it's really intended to get people eating together, celebrating together, making music together. So doing meeting each other in another way then working working working* (Respondent N).

"So every year we have twice a year we have a harvest festival and a lot of PR, it's celebrations" (Respondent N).

(On Harvest Festival) *"It's great for people living in the in the neighborhood who could see you know, this is something that's possible in Rotterdam... we get many very good comments from the neighborhood, from people who are interested in joining, gardening, or also yeah, just to see from us, see what's all also possible to grow"* (Respondent B).

4.4 How does the urban community garden impact neighborhood attachment?

It was found that most volunteers who lived in Rotterdam North are already attached to their neighborhood thanks to its quietness but proximity to the center, the nature and the feeling of safety. However, some volunteers indicated that the garden increased their neighborhood attachment. Volunteers who did not live in Rotterdam North also aid in increasing volunteers' neighborhood attachment as they work to beautify the neighborhood together.

A garden that includes time for these cultural activities and frequent social interaction can help people create an emotional connection to a place, which increases neighborhood attachment. When residents feel attached to their community, through participation in neighborhood programs, social interaction in public areas, and beautified green spaces, there is an increase in social cohesion (Brown, et al., 2003; Veen, et al., 2016). The majority of volunteers signified that they were already attached to Rotterdam North because they liked the surrounding nature, the fact that it is close to the center but quiet, and the neighbors that they have been able to connect with. This shows that for the most part, volunteers are already attached to their community. However, about half of the volunteers also discussed that the garden increased their attachment to the neighborhood. Their reasons included the garden itself, the friends they have made, and generally being involved in the organization. This shows that the garden, through its organization, the access to green space and new social connections between incumbent and new residents has the capacity to increase levels of neighborhood attachment for volunteers.

“Now I found this it's better to live here. You live here... because of this garden there's more chance I stay longer here. it makes a good feel, much more content about living in a city like Rotterdam working with gardens, Yeah a lot of people have this vervreemden what is vervreemden?... Alienation the alienated feeling of living in a city it really disappears when you work in this garden” (Respondent L).

“I feel connected to the other people coming here especially to see (Name redacted), which is a very connecting, caring person” (Respondent J).

When residents feel attached to their neighborhood, they are more likely to invest in it and beautify their spaces which can result in further engagement with the community (Comstock, et al., 2010). Commitment to the community like this is a key factor in a neighborhood's social cohesion (Schiefer & Van der Noll, 2017). Half of the volunteers discussed that they feel a commitment and responsibility to the maintenance of the garden. Reasons for commitment to the garden include feeling proud of the way it looks, seeing the progress of the work they completed and making it look nice. This pride in the garden and how it looks because of their hard work relates back to overall neighborhood satisfaction (Comstock, et al., 2010). This neighborhood satisfaction was evident in that, when asked if they planned on staying in the neighborhood, all seven of the respondents said yes, with two specifically contributing the garden to their reason for staying. The social gardener, who recently had to move from Rotterdam North had a hard time leaving the neighborhood because of the connection they had to the garden here. Even for residents who do not contribute to the work in the garden and just attend the events like potlucks

and Harvest Festivals are able to see the efforts made by their neighbors to beautify their environment. This allows them to see more value in their community which furthers the social cohesion of the neighborhood (Brown et al., 2003; Veen et al., 2016; Schiefer & Van der Noll, 2017)

“I loved it. I was really searching also to find a place in the Rotterdam north...And then unfortunately, I had to move to another neighborhood. And I really missed the North. This is really special kind of, like neighborhoods. Yeah, I got to know many, many people, I felt very at home” (Respondent G).

“Yeah. Yeah, that's actually our plan. It's like actually a big factor in our future plans, or like near future plans. Because we really feel attached to this garden. But our plan is to like we're specifically looking for a new apartment in the north. Like, very close to the north to stay close to here” (Respondent D).

5. Discussion

Strategies that increase social cohesion should be considered in cities like Rotterdam that have implemented housing policies such as *Woonvisie 2030*, where findings suggest that gentrification can negatively affect a neighborhood's social cohesion. Programs like urban community gardens have been used as a tool in the past to create social cohesion, and the results of this research support the concept of urban community gardens as an effective tool to build social cohesion even in a gentrifying neighborhood. This chapter will discuss the key findings of how these fit within current research and the implications these results have for further studies and society.

To begin, evidence of empowering participation was found within the GroenGoed foundation at Vredestuin Noord. This foundation started as a bottom-up initiative, and continues to hold characteristics of this as it grows. Due to the foundation's structure, volunteers feel empowered as a direct result of their participation in the decision-making process and the encouragement of participants to act in a variety of roles in the garden. Next, the garden was shown to have the capacity to boost volunteers' mood through providing a place for residents to interact with nature and destress from their everyday life in the city. People were able to experience an increase in mood not only through working in the garden, but also sitting back and taking in the view. Third, this garden expands participants social networks through their interactions with varying demographics throughout the city that they may not have had the chance to interact with before. Volunteers were able to bond over shared interests and their common goal of producing food. Finally, the garden works to increase neighborhood attachment through beautifying the community, being involved in the organization and the people they've been able to meet.

5.1 Successful empowerment- collective decision making, trust, coaching and role choice.

A garden can promote empowering participation by including volunteers in its decision-making process and through allowing participants to have multiple roles and tasks. Marche (2015) indicates that more participants will feel empowered and unified through their neighborhood's gentrification when there is more bottom-up planning. However, a garden can still have an authoritative structure and empower its participants at the same time. Gardens may have constraints that hinder their ability to be fully organized as bottom-up. This includes outside obligations through partnerships with other organizations, adhering to city policy, or budgetary issues. This would require gardens to have a more authoritative role. Marche (2015) found that in one case this hindered volunteer participation when a single leader dictated too much of the roles. Nevertheless, if a garden can balance obligations while still allowing some freedom and

input in the decision-making process, participants will still feel empowered to involve themselves and have influence over how they wish to plan the garden.

A garden can make time for this collective decision-making process that empowers participants by holding regular meetings for volunteers to join. The garden from this research created a time that works for them in between seasons, the *Winterborrelconference*. Meetings like this allow volunteers to discuss what they would like to have in the garden and take part in next year's plans. My research also aligned with that of Malberg et al., (2020) in that trust can be created between participants when they engage in collective decision making on how to complete a task. This trust was observed during the ethnography when volunteers, who were faced with a question or dilemma, relied on one another to make a decision they felt was best for the garden. Along with the importance of collective decision making, this research found that coaching rather than directing was also beneficial to participants empowerment. The importance of coaching was previously discussed by Whatley, et al., (2015) where a garden was able to foster a learning environment through coaching rather than directing to create more social inclusion. My research supports this since volunteers discussed their appreciation for the knowledge employees share with them. Whatley, et al., (2015) also considered the importance of role choice, and I found this was present at the garden, which allows volunteers to decide the way they participate in the garden tasks and shape their own experience. The trust, role variety and coaching could be an explanation for why participants are still able to feel empowered despite an organization having some authority.

These findings contribute to this field of research because it reveals how organizations can balance having some authority while maintaining aspects of bottom-up planning in order to empower its participants through their influence over the gardens, trust building and positive collaboration. This empowering participation that leads to social cohesion is important to consider for gentrifying neighborhoods because it was found by Jennings & Bamkole (2019) that social cohesion built off connection and trust can lead to more engagement in civil action, which further strengthens a community. These results can also be considered for neighborhoods that are looking to boost collective efficacy and prevent residents from feeling alienated from others and instead work on building social cohesion. An organization that wants to create an urban community garden has a better chance of empowering its participants if it gives volunteers a time to have influence over plans, coaches rather than directs, allows for a variety of tasks and roles, and creates space for collective decision making that builds trust amongst each other.

5.2 Garden's mood boosting ability

An urban community garden is able to boost volunteer's moods through not only physically working in the garden, but also through observing the nature within it. My results align with research completed by Van den Berg et al., (2010) in that spending time in nature can replace negative emotions with positive ones. Volunteers come to gardens to destress and increase their mood, and often find themselves happier leaving the garden than when they arrived. Though the physical work in a garden can be tiring for volunteers, they can ultimately still end up destressed and relaxed. This research also supports the theory introduced by Paddle & Gilliland (2016) in that simply viewing nature can positively impact one's mood. Garden participants can appreciate the beauty of a garden just as much as working in it. Taking time to sit and appreciate nature and see plants bloom can add to the destressing ability of a garden as well.

The implications for my research are that despite the hard work that occurs in gardens, volunteers are still able to increase their mood and well-being from destressing. Furthermore, gardens that allow for space and time to rest and enjoy the beauty lead to more positive and relaxed feelings in the garden. In the future, if urban community gardens want to boost their volunteer's mood, they should not only allow volunteers to work in the garden, but also provide time and a comfortable area for participants to appreciate the beauty of their work and see the fruits of their labor, which contributes to their positive outlook of the garden and their wellbeing. This could also increase the number of volunteers as it is more inclusive to those that are not able to participate in sustained labor. More people involved in activities such as gardening that increase well-being and add to quality of life, leads to a further increase in the social cohesion of a neighborhood, as discussed by Schiefer & Van der Noll (2017). This is especially important to consider as the population of cities continue to increase (Soga, et al., 2017), and maintaining and improving citizens wellbeing will be imperative to the overall health of a city.

5.3 Expanding Social Networks through shared values and quality time in public space

Vredestuin Noord revealed that gardens are able to increase social networks as many volunteers stated that they were previously not as connected with their neighborhood as they wanted to be, but they were able to find these connections through the garden. My results agree with the work of Uitermark et al., (2007), Weltevrede et al., (2018), Gibbons, et al., (2020) in that due to gentrification, there can be low rates of interactions between incumbent and new neighbors, and that these interactions tend to be superficial. Both mine and Gibbons, et al., (2020) research found that incumbent residents missed the connections they once had with neighbors that have moved away. In conjunction, new residents do not easily connect with their neighbors. Residents

commonly do not feel close to their neighbors due to high rates of turnover, different interests and various life stages. This is in line with an article written by Klaverdijk (2016) on Rotterdam's *Woonvisie 2030*, which discussed their concern on decreased social cohesion due to social housing being demolished which could result in disrupting peoples established social networks as residents are forced to move away. However, my research diverges from those previously listed as it includes a conduit for these connections between residents and their groups. A garden has the capability to bridge the gap between incumbent and new residents, who can come together over shared values, working outside, and meeting new people. Once these common interests are established, volunteers have the chance to get to know one another in a relaxing environment which increases their mood and sense of ownership to their community. This demonstrates that an urban community garden can meaningfully diminish a divide based on perceived differences, which as discussed by Gibbons, et al., (2020) is an issue found between residents of gentrifying neighborhoods.

Results from my research also show how elderly adults are able to find connections, and even volunteers that do not live in the neighborhood are able to increase social cohesion. My findings align with those of Versey (2018) in that elderly residents did not feel connected to their neighborhood due to gentrification. Older volunteers that lack connections can find this sense of community at a garden and through their interactions with other participants. My research also supports that of Veen et al., (2016) in how volunteers who lived outside of the neighborhood are still able to create social cohesion as they bond with others through their shared interest. This can be through events like potlucks or festivals that are open to the public and can share experiences with one another. Connections can be reinforced if participants of gardens also occasionally see each other outside of volunteering due to their friendship made over mutual interests, despite not living near one another. This indicates that gardens have the capability to expand social networks of all ages, and create social cohesion based on shared interests of gardening and not just living near one another.

These results contribute to the field of research in how urban community gardens can create social cohesion despite the pressures gentrification places on social interactions between incumbent and new residents and their perceived differences. Gardens like Vredestuin Noord that are interest based create the public space where residents can bond over mutual interests and expand their social network within their neighborhood. Which holds true even when volunteers live outside the neighborhood since the bond is interest based and not place based. This has wider implications for cities as it shows that urban community gardens have the capacity to increase social cohesion overall through creating spaces where citizens can bond over mutual

interests and expand their social network to meet people from other neighborhoods when they otherwise might not have the chance to. This can be used as a neighborhood intervention in areas where municipalities feel connections between residents of different groups are lacking, and are looking for tools to encourage more social cohesion.

5.4 Impacts on Neighborhood Attachment

This research provides new insight into the relationship between neighborhood attachment and gentrification. Though some volunteers indicated that they are not close with their neighbors, the majority of volunteers do feel attached to their neighborhood in some way, whether this is through proximity to city center, surrounding nature, or people they've been able to meet. This aligns with the work of Comstock et al., (2010) in how people are more likely to invest and beautify their neighborhood when they feel attached to it. Additionally, volunteers can also experience an increase in attachment to their neighborhood because of gardens, which can spread to further investment in the community. This research also aligns with that of Schiefer & Van der Noll (2017) in that social connections through shared values can help create an emotional connection to place. Moreover, volunteers can feel a commitment to the maintenance of a garden, take pride in the way it looks and the hard work they put in. Comstock et al., (2010) indicates that this relates back to neighborhood satisfaction, and my results also support this as volunteers indicated they plan to stay in Rotterdam North. Residents that are satisfied with their community through neighborhood participation and the beautified green spaces add to its social cohesion (Brown, et al., 2003; Veen, et al., 2016).

The contributions my results have to this field of research are based on how urban community gardens can increase social cohesion through neighborhood attachment and emotional connection to place even if a neighborhood is experiencing gentrification. Vredestuin Noord increased neighborhood attachment through the way it is organized, how it allows for social connections to occur and access to quality green space. These results should be taken into account when city planners are envisioning the trajectory of a neighborhood. If municipalities want resident's neighborhood attachment to remain while undergoing gentrification, implementing gardens that have characteristics of Vredestuin Noord can act as a tool for this.

5.5 Policy Recommendations

The first policy recommendation that can be derived from this research is for cities to establish urban community gardens within gentrifying neighborhoods in order to increase social cohesion.

My results not only revealed the possible ways in which social cohesion can be promoted through urban community gardens, but also how this can impact residential turnover rates. Throughout the interviews, volunteers discussed how they felt about the gentrification happening in their neighborhood, which can lend insight towards how Rotterdam can retain residents in gentrifying communities and increase social cohesion. Due to Rotterdam North having neighborhoods such as Liskwartier designated as ‘Promising Neighborhoods’, changes to housing stock and increase in costs have occurred in order to entice ‘Promising Families’ to the area. This has made it more difficult for lower income groups to find homes and be able to stay in the neighborhood for longer periods of time. And as Brown, et al., (2003) discussed, high rates of resident turnover can be an indication of low social cohesion in a neighborhood. In interviews, volunteers discussed observing high rates of turnover among residents, especially in the last few years. However, garden volunteers that are lower income who have been able to find affordable housing and remain in the neighborhood do appreciate the upgrades to the neighborhood, and value the space the garden provides to make connections with their neighbors. These volunteers signified this would make them more likely to stay in the neighborhood if they are able to, showing that there is a desire to remain in the neighborhood which would allow stronger bonds to take place between incumbent and new, and low- and high-income residents as the turnover rate decreases. Therefore, upgrades to infrastructure such as urban community gardens organized like Vredestuin Noord should be added in order to decrease the turnover rate. This, along with the empowering participation, boost in mood, expanded social networks and neighborhood attachment would help add to the desired social cohesion outlined in their *Woonvisie 2030*. (Municipality Rotterdam, 2016a).

A second recommendation is to include urban community gardens in other projects within cities. In the case of Rotterdam, this can be through overlapping the social cohesion goals of the *Woonvisie 2030* with those of the *Rotterdam Resilience Strategy* (Municipality Rotterdam, 2016b). It is discussed in the *Resilience Strategy* that current community initiated green spaces are adding to the city’s overall resilience, through their green infrastructure capabilities as well as their social capacity. The strategy also has the goal of covering 1,000,000m² in green roofs across the city. This is in order to increase the water resilience of the city through storage and also make space for sports facilities, and urban farms. In relation to the urban farms, community gardens similar to those of Vredestuin Noord could be added to these roofs. If the municipality implements these and allows for bottom-up organization to take place, they could double as both the upgrades to infrastructure that the *Woonvisie 2030* calls for, as well as add to the resiliency and social capacity of Rotterdam through increased social cohesion (Municipality Rotterdam, 2016a; Municipality Rotterdam, 2016b).

5.6 Limitations

Limitations of this research are based on its generalizability for other cities, and constraints found in the methodology. As for generalizability, the conceptual framework established in this research has the best chance of success in a city that is encouraging of an urban community garden. There would have to be supportive measures in place in order to help create and foster a garden that is empowering for participants and can guarantee its place in the neighborhood despite gentrification. Oftentimes green spaces and gardens are not prioritized over new housing or commercial space during renewal strategies. Or if they are, only cater to new residents (Marche, 2015; Egerer & Fairbairn, 2018). Therefore, the generalizability of this research is limited to whether a city's living and housing policies are conducive to supporting a garden that empowers participants, which would help encourage the other three causal mechanisms. There were also limitations for this research surrounding aspects of the methodology. The data I was able to collect was dependent on the attendance of volunteers at this garden during the three-month data collection period. Though I interviewed each person present at the garden during the nine site visits, the research could have benefitted from more volunteers and their responses. The overall six-month timeline of this thesis is also a limitation on the depth of research that can be completed. This time frame only allowed me to observe the garden during the spring and none of the supplemental activities occurred during this time. Observing these activities would have elucidated more on the social cohesion capacity of the garden and how the public responds to these events.

6. Conclusion

This case study of Vredestuin Noord/ Rotterdam North is based on the social cohesion capabilities of an urban community garden in a neighborhood that is currently gentrifying. Gentrification is a process that is currently occurring globally throughout cities, which can be determined by several indicators including rising property values, increased average income, and an outmigration of minorities in neighborhoods. This research has discussed the negative effects this can have on the social cohesion of a neighborhood through the lack of interaction between incumbent and new residents. Social cohesion is something cities commonly strive for as it can lead to more social order through residents connecting with each other and their neighborhood. Previously, urban community gardens have shown to be places where social cohesion can develop. The results of this study have found that this can still be the case even in a gentrifying neighborhood if the garden empowers its participants, boosts their mood, expands their social network and increases neighborhood attachment. This has implications concerning how cities plan their neighborhoods and what infrastructure upgrades they should include. Adding a garden that has the above characteristics to a neighborhood would help retain residents and create a more socially connected community. This should especially be considered in housing policies in which urban renewal is planned, and may result in gentrification. The social and wellbeing benefits of urban community gardens like these would also integrate well in a city's Resilience vision as they can be included in green space upgrades for the longevity of a neighborhood's community.

Due to the limitations of this study, there are opportunities for further research concerning this topic and case study. Specific to the Vredestuin Noord garden, research that allows for data collection over the span of a year would elucidate what each season is like in the garden. This would give insight as to what the events such as potlucks and Harvest Festivals bring to their volunteers and the wider community, and how the winter meetings are run. Conducting the research throughout the year would also bring a larger sample size as each season has a varying number of volunteers. Because effects of gentrification are happening throughout the city, expanding the research to include more of the nine GroenGoed gardens would also increase the sample size and improve the generalizability of the research to make it more applicable to future scenarios (Bryman, 2016). Along with this, adding a way to quantify these results such as through surveys would allow the degree of social cohesion to be measured. This would add to the measurement validity and reliability of the results (Bryman, 2016). Along the same lines, creating a comparative study between those Rotterdam North residents who volunteer at

Vredestuin Noord and those that do not would increase the external validity of whether these findings on social cohesion expand to the broader community (Bryman, 2016).

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8. Appendix

Table 1: Interview Respondents

Respondents	Role, Demographic, Interview Date and Location
A	Ex-boardmember, Male, Dutch March 25th, 2022, Rotterdam, NL
B	Volunteer, 50s, Male, Dutch July, 14th, 2022, Phone Interview, Gouda, NL.
C	Volunteer, 30s, Male, United States April 20th, 2022, Rotterdam, NL
D	Volunteer, 20s, Female, United States April 20th, 2022, Rotterdam, NL
E	Volunteer, 50s, Male, German April 20th, 2022, June 9th, 2022, Rotterdam, NL
F	Volunteer, 70s, Female, Dutch April 20th, 2022, Rotterdam, NL
G	Employee, 30s, Female, Dutch April 28th, 2022, Rotterdam, NL
H	Volunteer, 20s, Female, Turkish April 28th, 2022, Rotterdam, NL
I	Volunteer, 20s, Female, Italian May 5th, 2022, Rotterdam, NL
J	Volunteer, 30s, Female, Dutch May 5th, 2022, Rotterdam, NL

K	Volunteer, 20s, Male, Dutch May 4th, 2022, Rotterdam, NL
L	Volunteer, 50s, Male, Dutch May 11th, 2022, Rotterdam, NL
M	Volunteer, 30s, Male, Dutch June 2nd, 2022, Rotterdam, NL
N	Co-Founder, Male, Dutch March 25th, 2022, Rotterdam, NL
O	Volunteer, 40s, Male, Afghan April 6th, 2022, Rotterdam, NL
P	Marly Weemen, Female, Dutch March 18th, 2022, Rotterdam, NL

Table 1: Interview respondents (Thesis Interview transcripts, 2022).

Transcripts of the interviews

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