

Co-housing:
Contributing to an inclusive neighborhood

M.D. de Beuze

Master's Thesis in Spatial Planning

Specialization Planning, Land and Real Estate Development

Nijmegen School of Management

Radboud University

April 2025



Title: Co-housing
Contributing to an inclusive neighborhood

Author: M.D. de Beuze (Marloes)

Student ID: s1086720

Master's Programme: Spatial Planning
Planning, Land and Real Estate Development
Nijmegen School of Management
Radboud University

Thesis Supervisor: Prof. dr. P.M. Ache (Peter)
Nijmegen school of Management
Radboud University

2nd reader: Prof. dr. S.V. Meijerink (Sander)
Nijmegen school of Management
Radboud University

Date: 05-04-2025

Word Count: 20.974

Keywords: Co-housing, social inclusion, social cohesion, neighborhood, Mixed Methods.



Preface

Hereby I present to you my master's thesis: 'Co-housing: Contributing to an inclusive neighborhood', for the master's programme Spatial Planning with the specialization of Planning, Land, and Real Estate Development. This thesis gave me the opportunity to delve deeper into two topics that are of great interest to me: alternative housing and social inclusion.

I would like express my gratitude to my thesis supervisor Prof. dr. P.M. Ache for providing guidance and feedback throughout the thesis process. I would also like to thank the respondents for their participation in the research. Lastly, I would like to thank my family and friends for their ongoing support.

Marloes de Beuze

Utrecht, April 5th 2025

Summary

The aim of the research was to examine if co-housing communities can contribute to an inclusive neighborhood. To support in answering the main question, the following research questions were formulated: What are the characteristics of co-housing communities?; Which dimensions contribute to inclusive neighborhoods?; How is social inclusion described in the policy documents of municipalities with co-housing facilities (i.e., Tilburg and Almere)?; How does the co-housing community contribute to social inclusion in the neighborhood in which it is located?; To what extent do residents of the co-housing community, and neighborhood surrounding it, feel connected to the neighborhood?

For this research the core design of convergent mixed methods was chosen. The qualitative and quantitative methods used were: document analysis, semi-structured interviews, and surveys. The convergent mixed methods core design was combined with a case study design. Three case studies were selected, two were located in Tilburg: Centraal Wonen De Meenthe and Centraal Wonen de Stam. One case study was located in Almere: Centraal Wonen de Wierden.

The literature review identified that the economic-, social-, and political dimension contribute to an inclusive neighborhood. The economic dimension takes into account that the access to opportunities could be influenced by where one resides. The social dimension concerns the social capital and social networks of residents. The political dimension takes into account the opportunity to participate in local organizations.

The document analysis of municipal policy suggests that when residents feel more involved in their neighborhood, they feel invited to take initiatives themselves. This could increase liveliness and social cohesion according to the Gemeente Tilburg (2015, p.47). The interviews indicate that all three co-housing communities try to contribute to social inclusion in the neighborhood by hosting a yearly open day. The results of the survey indicated that the respondents feel the most connected to their direct neighbors. The respondents felt the least connected to neighbors that live further away.

This research aimed to identify whether co-housing communities could contribute to an inclusive neighborhood. The results, based on the analysis of qualitative and quantitative data and the three case studies, do not suggest that. The hypotheses, based on the literature review, suggested that bridging social capital of the co-housing community could contribute to an inclusive neighborhood. The empirical results of the research do not align with the hypotheses, therefore indicating that co-housing communities contributions to an inclusive neighborhood are limited.

Keywords: Co-housing community, inclusion, Social networks, Neighborhoods, Mixed Methods

Contents

Preface.....	4
Summary	5
1. Introduction.....	9
1.1 Introduction to the research	9
1.2 Research aim	9
1.3 Research questions.....	10
1.4 Societal relevance.....	10
1.5 Scientific relevance.....	10
2. Literature review	11
2.1 Scientific literature review	11
2.1.1 Co-housing.....	11
2.1.1.1 Types of co-housing communities	12
2.1.2 Social cohesion and social inclusion theories.....	13
2.1.2.1 Dimensions of social cohesion on the state level.....	14
2.1.2.2 Dimensions of social inclusion on the state level.....	17
2.1.3 Social cohesion and social inclusion on the neighborhood level	18
2.1.3.1 Dimensions of social cohesion on the neighborhood level.....	18
2.1.3.2 Dimensions of social inclusion on the neighborhood level.....	19
2.4 Ecological model.....	20
2.5 Dutch context of social cohesion and social inclusion	21
2.6 Hypotheses and conceptual model	22
3. Methodology	23
3.1 Research paradigm.....	23
3.2 Research design.....	24
3.3 Selection of case studies	25
3.3.1 Centraal Wonen ‘De Meenthe’	26
3.3.2 Centraal Wonen ‘De Stam’	28
3.3.3 Centraal Wonen ‘De Wierden’	29
3.4 Operationalization.....	31
3.5 Research methods.....	31
3.5.1 Document analysis	31
3.5.2 Interviews	32
3.5.3 Survey.....	33
3.6 Approach to data analysis	35
3.6.1 Survey data analysis	35

3.7 Validity, reliability and ethics of the research	40
3.7.1 Validity of the research	40
3.7.2 Reliability of the research.....	40
3.7.3 Ethics of the research	40
4. Findings.....	41
4.1 Document analysis	41
4.2 Interviews	43
4.2.1 CW de Meenthe	43
4.2.2 CW de Stam	43
4.2.3 CW de Wierden	43
4.3 Surveys	45
5. Conclusion	50
6. Discussion	52
6.1 Reflection on findings of the research	52
6.2 Reflection of the research limitations	54
6.3 Recommendations.....	55
6.3.1 Recommendations for further research.....	55
6.3.2 Recommendations for praxis	55
7. References	57
Appendixes	64
Appendix I.....	64
Appendix II.....	68

List of figures and tables

Figure 1. Inclusion of Community in the Self-Scale.....	20
Figure 2. Ecological model of social inclusion.....	21
Figure 3. The conceptual model.....	23
Figure 4. Map of CW de Meenthe and the neighborhood Quirijnstok Noord-West.....	26
Figure 5. Impression of CW de Meenthe.....	27
Figure 6. Collective space of CW de Meenthe.....	27
Figure 7. Map of CW de Stam and the neighborhood Sint Pieterspark.....	28
Figure 8. Impression of CW de Stam.....	29

Figure 9. Map of CW de Wierden and the neighborhood Hoekwierde, Kimwierde and Zandwierde...	29
Figure 10. Impression of CW de Wierden.....	30
Figure 11. Communal garden of CW de Wierden.....	30
Figure 12. Histogram and normal distribution of age for the response group of CW de Meenthe.....	36
Figure 13. Histogram and normal distribution of age for the response group of CW de Stam.....	37
Figure 14. Histogram and normal distribution of age for the response group of CW de Wierden.....	38
Figure 15. Relevant dimensions of the ecological model.....	52
Table 1. Dimensions of Social Cohesion and Their Threats.....	14
Table 2. Overview of the methods used.....	25
Table 3. Overview of case studies.....	26
Table 4. Frequency table of document analysis codes.....	32
Table 5. Overview of interviews.....	33
Table 6. Description of the Survey Response for Data Analysis.....	35
Table 7. Overview of statistical analyses.....	39
Table 8. Description per group of residents and the number of responses used.....	45
Table 9. Analysis of The inclusion of community in the self-scale.....	46
Table 10. Residents of the co-housing community and bridging social capital.....	47
Table 11. Crosstabulation of taking part in activities and residency.....	47
Table 12. Crosstabulation of Willingness to participate and type of house.....	48
Table 13. Correlations Between the Three Social Cohesion Variables.....	49

1. Introduction

1.1 Introduction to the research

The Dutch National Strategy on Spatial Planning and the Environment, The NOVI, envisions that in 2050 we live in inclusive, social communities where everyone has the opportunity to participate in social life, with possibilities for social interaction (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties [BZK], 2020). This vision is in line with Sustainable Development Goal 11, which is to *'Make cities and human settlements inclusive, safe, resilient and sustainable'* (United Nations, 2022, p. 12). In addition, multiple municipalities aspire to create more inclusive cities and neighborhoods, for example Gemeente Tilburg (2021) and Gemeente Almere (2023). Even though individualization has increased in society, people still aspire to be part of a community (Gemeente Tilburg, 2020).

The NOVI argues that developing forms of communal or collaborative housing in cities could result in the creation of a more socially connected living environment and the improvement of social networks (BZK, 2020). These housing alternatives could contribute to the NOVI's goal of inclusive communities. One type that already exists in the Netherlands is co-housing. Co-housing is a collaborative form of housing, where residents live in a private home and share communal spaces (Centrum Groepswoonen, n.d.) It is more than merely a physical concept, since co-housing has an inherently social component, according to the research of Jarvis (2015). Sanguinetti (2014) argues that the goal of co-housing is to create a social environment based on mutual support, while also sharing tools (e.g., a lawnmower) and facilities (e.g., a laundry room).

According to Tummers (2015), co-housing is associated with the creation of a vital urban living environment as well as with community and social cohesion. These aspects align with the vision of what the NOVI hopes to achieve (BZK, 2020). Williams (2005b) however, argues that when a co-housing community is a homogenous group and has a high degree of social cohesion within the co-housing communities, it could have a negative effect on the wider neighborhood by excluding them. Williams (2005b) argues that a solution for this could be integration with the wider neighborhood instead of segregation from the wider neighborhood. The question is whether there is a way that these positive aspects of co-housing communities could spread out to the surrounding neighborhood and thereby contribute to a more inclusive neighborhood itself.

1.2 Research aim

Inhabitants of cities suffer from social exclusion, even within their neighborhood. Co-housing communities exist in that same neighborhood and are associated with the creation of community. Therefore, the aim of the research is to examine if co-housing communities can contribute to an inclusive neighborhood.

1.3 Research questions

The main question that this thesis will try to answer is: Can co-housing communities contribute to an inclusive neighborhood?

To assist in answering the main question, the following research questions are formulated:

1. What are the characteristics of co-housing communities?
2. Which dimensions contribute to inclusive neighborhoods?
3. How is social inclusion described in the policy documents of municipalities with co-housing facilities (i.e., Tilburg and Almere)?
4. How does the co-housing community contribute to social inclusion in the neighborhood in which it is located?
5. To what extent do residents of the co-housing community, and neighborhood surrounding it, feel connected to the neighborhood?¹

1.4 Societal relevance

When residents experience social exclusion, they are hindered in participating fully in society. This includes not having access to employment or lacking social networks for support. This can lead to a lack of self-reliance, feelings of loneliness and a lower sense of self (United nations, 2016).

The neighborhood can be a significant place for the creation of social networks (Foster et al., 2015). These social networks can lead to more connectedness between people, which can therefore lead to pro-social behavior and result in contributing to inclusion (Aron et al., 1992). The process of social inclusion can create opportunities for residents to participate more fully in society.

The co-housing community already has connectedness between its residents and this research will try to measure in what way co-housing communities can contribute to an inclusive neighborhood. Co-housing communities could be used as an example for how communities in cities on the neighborhood level should function.

1.5 Scientific relevance

Many academics have researched the topic of co-housing (Ache & Fedrowitz, 2012; Vestbro & Horelli, 2012; Boyer, 2014; Jarvis, 2015) or that of social inclusion (Vranken et al., 2003; Silver, 2015). Few research has been done into the combination of co-housing and social inclusion. The researchers that combined these two topics have merely focused on social inclusion within the co-housing community (Williams, 2005a; Bresson & Labit, 2020). Firstly, this research can contribute to the scientific debate because it focuses on social inclusion of the surrounding neighborhood, which includes the co-housing community but does not limit to it. Secondly, this research uses case studies from the Netherlands and researches co-housing and social inclusion in the Dutch context therefore it adds a new perspective to the already existing research.

¹ Initially, this research also wanted to examine whether there were social networks within the neighborhood. However, participating residents did not provide enough detailed information to create such a network. Therefore, this question was dropped from the research.

2. Literature review

This chapter begins with a review of the relevant theories in the academic literature on the topics of co-housing, social cohesion and social inclusion. Then a short review of the Dutch context regarding social cohesion and social inclusion follows. Thereafter, the literature review narrows down to theories about social cohesion and social inclusion on the neighborhood level. The review concludes with an overview of the gaps and weaknesses in the discussed literature. Based on the hypotheses derived from the literature review, the conceptual model is visualized.

2.1 Scientific literature review

2.1.1 Co-housing

According to Chiodelli and Baglione (2014), the term co-housing originally came from the in the 1960s and 1970s invented Danish *bofaelleskab* model, which meant living together. During that period the *bofaelleskab* model spread through most of northern Europe. McCamant and Durrett (1988) were inspired by the model and came up with the term 'co-housing'. In the 1980s, *bofaelleskab*, which was then renamed co-housing, found its way to the United States and Canada (McCamant & Durrett, 2011).

Although the term co-housing was, as described above, invented in the 1980s (McCamant & Durrett, 1988), the definition of the term and what co-housing entailed in practice was much debated decades later. In 2012, the term co-housing was described by Ache and Fedrowitz (2012) as a daily practice as well as a physical concept, including close contacts with neighbors and communal activities; a sense of community that can have different shapes and forms. Fromm (2012) introduced the term collaborative housing to entail all the different types of co-housing practices. Amongst the types that Fromm (2012) included is the classic Danish form, which according to McCamant and Durrett (1988) meant: co-housing with involvement in the development of the project by all residents and weekly shared meal. This is the most 'resident-involved type'. The least resident-involved co-housing community types) do not involve the residents in the developing stage and have no strict communal meals (Fromm (2012). Similar to Fromm (2012), various co-housing types are included in the definition of Vestbro and Horelli (2012). Although, according to Vestbro and Horelli (2012), co-housing is seen as a resident-led development. Droste (2015) also includes variations of resident involvement in the definition of co-housing, for instance initiatives that are self-organized, cooperatively driven or community driven (thereby including former squats and elderly housing) .

Next to the debate on which social characteristics should belong to co-housing, there is also debate about what size a co-housing community could be. Ache and Fedrowitz (2012) argue that co-housing communities can vary in size between as little as a few houses to as much as a complete city quarter. Boyer (2014), however specifies the size of a co-housing community by arguing that it almost never exceeds fifty households.

Within the academic literature the concept of co-housing is fuzzy. As described, over the years the definition of the term co-housing has broadened. Nevertheless, the academic literature lacks a strictly defined concept of what co-housing entails. Therefore, all studies adhere to their own definition of co-housing. This however, can lead to weakening of the reliability of the co-housing definition and therefore of the research on the topic of co-housing. Since, researchers that reference works of other researchers do not necessarily have a similar definition of co-housing.

2.1.1.1 Types of co-housing communities

There is ongoing debate on whether co-housing should be seen as an intentional community or as a gated community (Tummers, 2015). Therewith, it should be noted that these two types of communities are not mutually exclusive. Ruiu (2014) was the first to make the comparison between co-housing and gated communities. Gated communities are physically fenced-off neighborhoods or residential areas. Access is controlled by a gate or security and therewith outsiders are excluded from access (Atkinson & Flint, 2004). Atkinson and Blandy (2005) argue that gated communities are built to create a 'safe space' for wealthy families by fencing themselves off from more deprived areas or people.

According to Ruiu (2014), gated communities are arranged via a top-down model. Ruiu (2014) argues that this is contrasting to co-housing communities, which are more bottom-up oriented and share similarities with grassroots movements. The way in which a co-housing community is managed, can affect the intentions of the residents for living in said community.

Research of Chiodelli (2015), focusses more on the similarities between co-housing and gated communities. According to Chiodelli (2015), the evidence that gated communities are only formed because of safety reasons is not strong enough nor is the evidence that people choose co-housing for communitarian reasons.

Jarvis (2015) argues that based on the aspect of intention, co-housing should be seen as a form of intentional community precisely because of these communitarian reasons. Jarvis (2015) argues that in addition to sharing spaces, people actively choose to live and engage in the lifestyle and the communal ideology of a community. The researcher views that with that intention the mainstream option of housing is rejected and an alternative is being created (Jarvis, 2015).

The research of Jarvis (2015) views co-housing as an intentional community. According to Meijering et al. (2007), there are four types of intentional communities, these are religious-, ecological-, practical-, and communal-communities. Co-housing described by Jarvis (2015) would seem to share similarities with the communal communities described by Meijering et al. (2007). According to Meijering et al. (2007) in the communal community, which is centered around relational contacts between individuals, residents might have a pessimistic view of the outside world and therewith withdraw from society to the community.

Tchoukaleyska (2011) argues that out of the four types of intentional communities described by Meijering et al. (2007), co-housing could be viewed best as a practical community. The practical community is according to research of Meijering et al. (2007), based on people residing together for efficiency reasons. Living in a community could be cheaper, since facilities such as a kitchen or garden and goods such as tools or vehicles could be shared. These financial benefits might have resulted in it being the most common community type. This type of community does not have a shared ideology and is generally situated in (sub)urban regions. Financially and socially the residents are oriented outward, working outside the local area and connecting with friends, family and neighbors outside of the community (Meijering et al., 2007).

According to Meijering et al. (2007), in intentional communities residents are involved in the process of granting access to new residents or visitors. Therefore, intentional communities can be welcoming towards non-residents and other outsiders. However, according to research of Storey (2001) access

could also be denied and therefore intentional communities could exclude people from their territory. The rate to which communities are open to outsiders differs per type of community, both gated or intentional.

The definition of co-housing communities of Jarvis (2015) and the definition of communal communities by Meijering et al. (2007) also seem to share some overlap with gated communities. Atkinson and Flint (2004) argue that gated communities are also inward oriented. According to research of Meijering et al. (2007) residents of communal communities, in contrast to residents of gated communities, might withdraw from society while at the same time remaining close with friends and family outside the community.

As reviewed in the subparagraph above, the concept of co-housing is broad. Co-housing can entail different types of communities and the degree of connection with their surrounding neighborhood varies. The degree to which the neighborhood surrounding the community feels connected with the community aligns with the type of community. The academic literature seems to suggest that co-housing can be seen as an intentional community rather than a gated community. However, this is not generally accepted and some authors still debate it.

In this thesis the concept of co-housing will be defined as: a daily practice as well as a physical concept, including close contacts with neighbors and communal activities (Ache & Fedrowitz, 2012). It is a resident-led development (Vestbro & Horelli, 2012) that contains fifty households at maximum (Boyer, 2014). Co-housing is a form of intentional community (Jarvis, 2015). Out of the four types of intentional communities described by Meijering et al. (2007) co-housing can be viewed as both a communal- and practical community.

2.1.2 Social cohesion and social inclusion theories

Commissariat Général du Plan (1997) describes social cohesion as a series of social processes that on an individual level create a feeling of belonging to a community and create a feeling of being recognized as being a part of that community (as cited in Jenson, 1998, p.4-5). According to Vranken et al. (2003), social cohesion can be viewed as a horizontal relationship between individuals of similar levels. Social inclusion is viewed as a vertical relationship, where individuals integrate and participate in a larger whole. The process of inclusion grants individuals or groups access to the community of interest.

Silver (2015) describes the process of social inclusion more comprehensive as: *“A multi-dimensional, relational process of increasing opportunities for social participation, enhancing capabilities to fulfill normatively prescribed social roles, broadening social ties of respect and recognition, and at the collective level, enhancing social bonds, cohesion, integration, or solidarity”* (pp. 2-3). Between the two different levels of social inclusion described by Silver, the individual level relates to the creation of social capital as described by Klein (2011).

The United Nations report of 2016 defines social inclusion as *“the process of improving the terms of participation in society for people who are disadvantaged on the basis of age, sex, disability, race, ethnicity, and economic and migration status”* (p.1). The focus of this definition lies on the ability to participate.

Bresson and Labit (2020) present social inclusion as: “A broad and multifaceted concept, enabling it to be used in different domains: education, health, housing, digital technologies, etc. It can be applied to all groups at risk of exclusion (women, young people, the elderly, people with disabilities, immigrants, etc.), and it is now tagged on to all types of social reality (inclusive education, inclusive housing, inclusive city, inclusive society, inclusive development, etc.)” (p.120). This definition agrees with the definition of Silver (2015) that the process of inclusion is a comprehensive process that touches various aspects of life. However, the definition of Bresson and Labit (2020) does not take the mechanisms of the process of inclusion into account. Vranken et al. (2003), Silver (2015) and the United Nations (2016) all take into account that creating opportunities to participate lies at the root of the inclusion process.

The definitions of social inclusion mentioned above include participation, social networks and cohesion. Research of Vranken et al. (2003) suggests that social exclusion and social cohesion are not opposite concepts. Instead, these concepts appear to overlap. They can only exist because of each other, there is no social exclusion without social cohesion. Silver (2015) argues that even though the discourse has been shifted from using the word exclusion to using the word inclusion, the terms are not the exact opposite of each other even though most researchers use them that way.

2.1.2.1 Dimensions of social cohesion on the state level

Various dimensions contribute to social cohesion in society and it can exist on various levels in society. This paragraph reviews the different dimensions of social cohesion on a state level. Jenson (1998) describes five dimensions that represent social cohesion (see Table 1). The first dimension is belonging. This means that people share the same values, have commitment to a group and or feel like they are part of the same community. Second is the dimension of inclusion, specifically in markets. With this the equality of opportunity in a market society is meant, as well as having equal access and effective opportunity to the markets in society (e.g., in labor markets). The third dimension is participation, which means that local authorities are involved and the local people are engaged. The fourth dimension is recognition for all the different values, norms and beliefs: pluralism instead of a unified system, acceptance and tolerance. The fifth dimension is legitimacy, in the sense that private and public institutions act as mediators and support the creation of social cohesion. People cannot create social cohesion as individuals.

Table 1

Dimensions of Social Cohesion and Their Threats

Dimension	Threat
Belonging	Isolation
Inclusion	Exclusion
Participation	Non-involvement
Recognition	Rejection
Legitimacy	Illegitimacy

Note: (Jenson, 1998).

After Jenson's first paper on social cohesion in 1998, Beauvais and Jenson (2002) reviewed the literature on social cohesion that was produced between 1998 and 2002. They review the five dimensions named by Kearns and Forrest (2000). According to Kearns and Forrest (2000) social cohesion consists out of the following dimensions: *"Common values and a civic culture; social order and social control; social solidarity and reductions in wealth disparities; social networks and social capital; and territorial belonging and identity"* (p. 996). Beauvais and Jenson (2002) argue that the five dimensions could be both linked to each other or seen as separate elements. Vranken et al. (2003) argue that two dimensions are more coherent than five and therefore regroup the dimensions presented by Kearns and Forrest (2000) into two dimensions, the relational dimension and the cultural dimension. According to Vranken et al. (2003) the relational dimension consists of solidarity, interpersonal networks and social capital. The cultural dimension entails communal values and group identification (Vranken et al., 2003).

Kearns and Forrest (2000) describe the dimension of 'common values and a civic culture' as social cohesion through general shared values. These shared values, combined with shared morals and behavior, lead among members of society to mutual aims and objectives. In addition to these 'common values', political systems and institutions are respected and supported. This is similar to the dimension of belonging by Jenson (1998), who viewed shared values as a mechanism for social cohesion. Beauvais and Jenson (2002) later nuance this by arguing that common values are not detached from the social or economic context, which might foster or suppress these values.

The second dimension by Kearns and Forrest (2000) is described as 'social order and social control'. Hereby is meant that there are no general societal conflicts and that the current social system or order is not disrupted. All members of the societal system are interdependent and feel that there is a place for them in the system. Tolerance is viewed as a foundation for social order. Beauvais and Jenson (2002) critique this dimension by arguing that maintaining the social order to create social cohesion might lead to conservatism. Conflict is legitimate in a pluralist society and should, according to their critique, not be denied.

The third dimension of social cohesion by Kearns and Forrest (2000), is that of social solidarity and reductions in wealth disparities. Durkheim (1893/1960) reflects that the division of labor has led to interdependency between citizens. Durkheim (1893/1960) views this interdependency as a form of 'organic solidarity' and argues that it is an important mechanism to maintain social cohesion in the present day. The 'organic solidarity' should be complemented by 'mechanic' solidarity, for example by laws. Vranken et al. (2003) describe solidarity as the government providing social services, since this is a form of organized or mechanic solidarity. This third dimension is similar to legitimacy, the fifth dimension of Jenson (1998).

Kearns and Forrest (2000) argue that social cohesion is related to social solidarity. The researchers view that the European Union policy is at the root of this and solidarity is the societal development of common standards by redistribution of opportunities between its members. Social solidarity does not emerge spontaneously, although shared norms and common goals can congregate this. Stjernø (2004) argues that resource sharing and group loyalty occurred in feudal societies, long before the term solidarity existed. Family or kinship ties were used for reciprocal help and dependence. Sharing food with neighbors or looking after children was common. Stjernø (2004) argues that *"if I help you then you will help me, if and when the need arises"* (p. 25) was a widespread belief. This feeling of solidarity was based on people feeling similar to one another.

According to Kearns and Forrest (2000), socially cohesive societies are believed to have a high amount of social interaction between members of communities and their families. Meaning that social cohesion is viewed as something local, on the neighborhood level instead of on a citywide level. This concerns the dimension of '*Social networks and social capital*' (Kearns and Forrest, 2000, p.966). Kearns and Forrest (2000) state that these networks are important sources of various forms of support, such as economic and social support. Vranken et al. (2003) argue that social connections between individuals are viewed as interpersonal networks, which are the second aspect of the relational dimension described by Vranken et al (2003). Since networks shape the identities and relations of individuals and can define a person's place or status in society, the term social network is often used (Vranken et al., 2003).

Granovetter (1973) was interested in analyzing such networks and developed a theory on the 'strength of weak ties'. The theory argued that indirect connections (and thus weak ties) with people in strong positions provide access to resources, such as career opportunities and wealth. According to Granovetter (1973) strong ties with people in equal positions, such as friends and family, could be limited to emotional support. Strong ties might be less resourceful than weak ties. Granovetter (1973), argues that weak ties have the ability to create opportunities to climb up socially or economically, individually or as a group. Feld (1981) argued that when individuals of different groups meet, their social networks intersect.

According to Kearns and Forrest (2000) it is the combination of various types of ties and social networks that is at the heart of social cohesion. As an individual, having a social network does not automatically translate into a socially cohesive society; however it can foster mutual support networks that create social cohesion within that specific social network. Beauvais and Jenson (2002) argue that social cohesion can arise when there is a foundation of social networks. Networks can adapt over time in quality and quantity and can diffuse spatially.

To be able to create these social networks it can be argued that social capital is needed first. However, there are various perspectives on if social capital is needed for social networks or the other way around. Therefore, a few of the most cited definitions are listed:

According to the fundamental works of Bourdieu (1986), social relations are seen as a form of social capital. Social capital, in the form of social relations can provide access to organizations and thus to economic capital. According to Coleman (1988), social capital entails the available resources for individuals inside their social network as decided by their normal practices and commitments. Opposing to that view, Putnam (1995) stated that social capital is in itself a resource of multiple people that can profit individuals. Social connections and therefore social capital, can accommodate lots of advantages, including the provision of information and emotional support (Putnam, 1995).

However, according to Szreter and Woolcock (2004), the definition is broader than the definitions of the researchers mentioned above. Szreter and Woolcock (2004), argue that social capital consists of three types: bonding (within group), bridging (outside group), and linking. These types can be accomplished through social connectedness. The creation of social capital through social connectedness could lead to social cohesion. However, according to Klein (2011) it is important to understand that social capital is created on an individual level, while social cohesion prevails on the community level. Although an accumulation of multiple individuals' social capital could lead to social cohesion, it is not guaranteed. Individuals can have a broad and diverse social network with various

forms of social capital; however their networks might not intersect with others on for example the neighborhood level to create social cohesion in that specific place.

Massey (1991) argues that the identity of people that have a strong feeling of attachment to a place, are intertwined with that place. This place attachment, which fits into the fifth dimension: *'Territorial belonging and identity'* (Kearns and Forrest, 2000, p.966), can contribute to a will to engage in social networks and to create social capital. The feeling of belonging to a group seems similar to the description of the dimension of belonging, the first dimension of Jenson (1998). Kearns and Forrest (2000), argue that a feeling of belonging can also awaken territorial behavior. This behavior contributes to the social cohesiveness of the place and to the solidarity between its members. Beauvais and Jenson (2002), critique that this dimension of social cohesion is therefore not inherently positive, as it can also promote exclusion.

As reviewed above, there is an ongoing debate on the concept of social cohesion and which dimensions it includes. For this thesis the concept of social cohesion is defined as follows: a horizontal relationship between individuals of similar levels (Vranken et al., 2003). Social cohesion consists out of the following dimensions: *'Common values and a civic culture; social order and social control; social solidarity and reductions in wealth disparities; social networks and social capital; and territorial belonging and identity'* (Kearns and Forrest, 2000, p. 996).

2.1.2.2 Dimensions of social inclusion on the state level

Segregation or spatial exclusion, separating people from each other physically, is a key mechanism of social exclusion and leads to reduced interaction between those people (Silver, 2015). Physically sharing spaces would lead to more shared interests in the economic, social and political environment. Silver views these three environments as the dimensions of social inclusion. Since the dimensions can all be related to the spatial level of the neighborhood, this will be discussed in depth later on (see paragraph 2.1.3.2).

In general, the economic dimension described by Silver (2015) entails the poverty reduction and the reduction of income inequality. Both of these concepts are also mentioned by Kearns and Forrest (2000). Silver (2015) adds to this economic dimension of social inclusion, the realization of the sustainable development goals established by the United Nations (2022). For the social dimension Silver (2015) states that homogeneity is not a guarantee for social inclusion, while diversity or pluralism is also not always a success formula. Therefore, shared values and group commitment are seen as important to create inclusion. Vranken et al. (2003) argue that in a homogenous society, social exclusion may have a different result than in a heterogenous society. Exclusion from groups in a heterogenous society, can lead to inclusion in other groups in society. In a homogenous society this is not possible. Therefore, the sociocultural context of a society is of influence on social inclusion.

The outcomes of social inclusion vary depending on the (local) sociocultural context, for the economic and social dimension, but for the political dimensions as well. Depending on municipal policy and local context social inclusion can either be supported or suppressed by political participation (Silver, 2015).

In this thesis the concept of social inclusion is defined as: a vertical relationship where individuals integrate and participate in society. The process of inclusion grants individuals or groups improved opportunities to participate in the community of interest (Vranken et al.,2003; Silver, 2015; United Nations, 2016). Social inclusion has political, social and economic dimensions (Silver, 2015).

2.1.3 Social cohesion and social inclusion on the neighborhood level

Social inclusion and exclusion exist on various levels. On the local level it concerns the neighborhood. Vranken et al. (2003) state that, when compared with changes in society, neighborhoods are significantly stable. Therefore, neighborhoods can, to a certain degree, create a permanent social group and therewith a form of residential segregation. According to Foster et al. (2015) neighborhood borders can be strictly defined due to municipal policy or the boundaries can be a cognitive boundary. A road, stream or other environmental obstacles can act as visual and therefore cognitive boundary between different parts of neighborhoods or between complete neighborhoods (Foster et al, 2015). According to Hipp and Perrin (2009) these environmental obstacles, which increase the physical distance between neighbors, have a negative effect on the creation of social networks between residents.

The neighborhood can either be passive or active, depending on where people spend most of their time (Vranken et al., 2003). The neighborhood becomes active when people identify with it and create social connections. It depends per person if the neighborhood has lost or gained significance over the years. The way neighborhoods are used by their residents also influences the neighborhood boundaries, some residents have most of their social networks close to their house, while others have a more spatially diffuse social network (Foster et al., 2015). Research of Hipp and Perrin (2009) suggests that the amount of time residents have lived in the neighborhood also has a strong positive effect on social networks, both on the creation of strong and weak ties.

2.1.3.1 Dimensions of social cohesion on the neighborhood level

The dimension entailing social networks and social capital is most relevant for social cohesion on the neighborhood level (Kearns & Forrest, 2000). A high level of social interaction among residents is important. Linking social capital between local

Authorities and residents enable a thriving community. However, it should be noted that commitment to a place and a feeling of community does not equal social cohesion, which is dependent on the social context (Forrest & Kearns, 1999). Areas with a high level of crime and affluent areas could have similar commitment to a place and a similar feeling of community, however the outcome is different. Kearns and Forrest (2000) also argue that it is not the goal to create the highest degree of social cohesion possible in a neighborhood, since this would lead to a neighborhood that is closed off from other neighborhoods or from society.

Social heterogeneity, population turnover and in-and out-migration are indicators of social cohesion (Kearns & Forrest, 2000). High population turnover and a pattern of in-migration of low-income residents could be an indicator for a decrease in social cohesion (Engbersen et al., 2020). Social heterogeneity is a highly debated indicator for social cohesion. Engbersen et al. (2020) suggest that the more diverse a neighborhood is, the less socially cohesive the residents perceive it to be: where residents more often feel like they do not know their neighbors well and have little contact with each other. Williams (2005a) agrees that homogeneity in behavior and values promotes social contact between residents. However, she suggests that a difference in income or household size increases the level of social interaction. In addition, a variety of expertise or knowledge among residents promotes interaction since more problems can be solved within the neighborhood.

2.1.3.2 Dimensions of social inclusion on the neighborhood level

In the process of inclusion described by Vranken et al. (2003) the community of interest can be a neighborhood, because neighborhoods are communities made out of social networks that have realized the monopoly on a certain kind of social capital.

The economic dimension of social inclusion on the neighborhood level described by Silver (2015) takes into account that access to opportunities can be determined by where one resides. Therefore, spatial segregation for example based on income can affect the opportunities given to individuals or groups (Silver, 2015). Spatial segregation is a key mechanism for social exclusion, therefore a low degree of segregation could indicate that there is a lower level of social exclusion.

The social dimension of social inclusion by Silver (2015) is applicable to both the neighborhood and the co-housing community. According to research of Tummers and MacGregor (2019) co-housing communities are primarily inhabited by residents belonging to the group of White and middle-class citizens. Therewith, social inclusion and exclusion are related to social capital, since people that are not similar to the people living in the co-housing community, and do not fit into that group, have to obtain bridging capital to gain access to the co-housing community. Bridging capital could also be obtained by the co-housing community while organizing activities for the wider neighborhood (Williams, 2005a).

The community of interest within a neighborhood, can be the co-housing community (Vranken et al., 2003). The co-housing community itself can be viewed as an in-group. The co-housing community has internal solidarity, internal networks and communal values. According to Sørvoll and Bengtsson (2018) internal solidarity is vital for a co-housing community to function. It is also deemed necessary to be able to do collective work such as gardening or communal meal preparation (Sørvoll & Bengtsson, 2018). A diversity in older members and newcomers in a co-housing community could increase social cohesion, if the new members feel welcome and the community is open for change. Social cohesion within the co-housing community could decrease if diversity is not accepted and residents limit their interaction with other members (Silver, 2015). Co-housing communities with a high degree of social cohesion within the community, the in-group, might be prone to exclude people outside the community, the out-group.

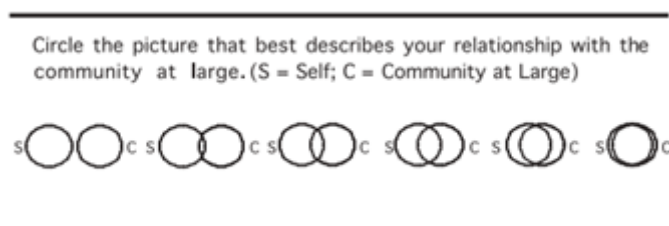
The out-group, everybody who is not in the co-housing community, could be seen as a threat to the in-group. The threat of the out-group serves as an external force for a stronger in-group (Sørvoll & Bengtsson, 2020). Co-housing communities that are welcoming towards the out-group also have a degree of external solidarity. Organizing activities or taking part in influencing governmental policy are seen as examples of external solidarity. Within the diversity of co-housing communities there are different degrees of internal and external solidarity, and are therefore more focused on the inside of the community or more on the wider neighborhood.

The political dimension of social inclusion by Silver (2015) focuses on civic inclusion and local organization. For newcomers, social interaction with older residents of the neighborhood could help integrate the newcomers and minimize conflict. Being able to participate in local organizations can contribute to social inclusion. When a group of homogeneous residents has a high level of participation, either in the neighborhood or in the co-housing community, this could lead to social exclusion. For groups at risk of exclusion it is more difficult to gain access to local or political organizations.

To measure the degree of connectedness people feel with a certain community, Mashek et al. (2007) developed the inclusion of community in the self-scale (ICS). The ICS is based on the IOS, the Inclusion of Others in Self scale (Aron et al., 1992). The IOS has been shown to be thorough and versatile for analyzing connectedness, and the ICS appears to be of similar quality as the IOS (Folk et al., 2019). The ICS extends the idea of the inclusion of others in one's sense of self to a broader level and 'captures the essence of community connectedness' (Mashek et al., 2007, p. 271). Hence, it measures the degree of connectedness people feel with a certain community. Respondents choose one of the six pairs of circles that best describe the relationship with the community, see figure 1 (Mashek et al., 2007).

Figure 1

Inclusion of Community in the Self-Scale



Note. (Mashek et al., 2007)

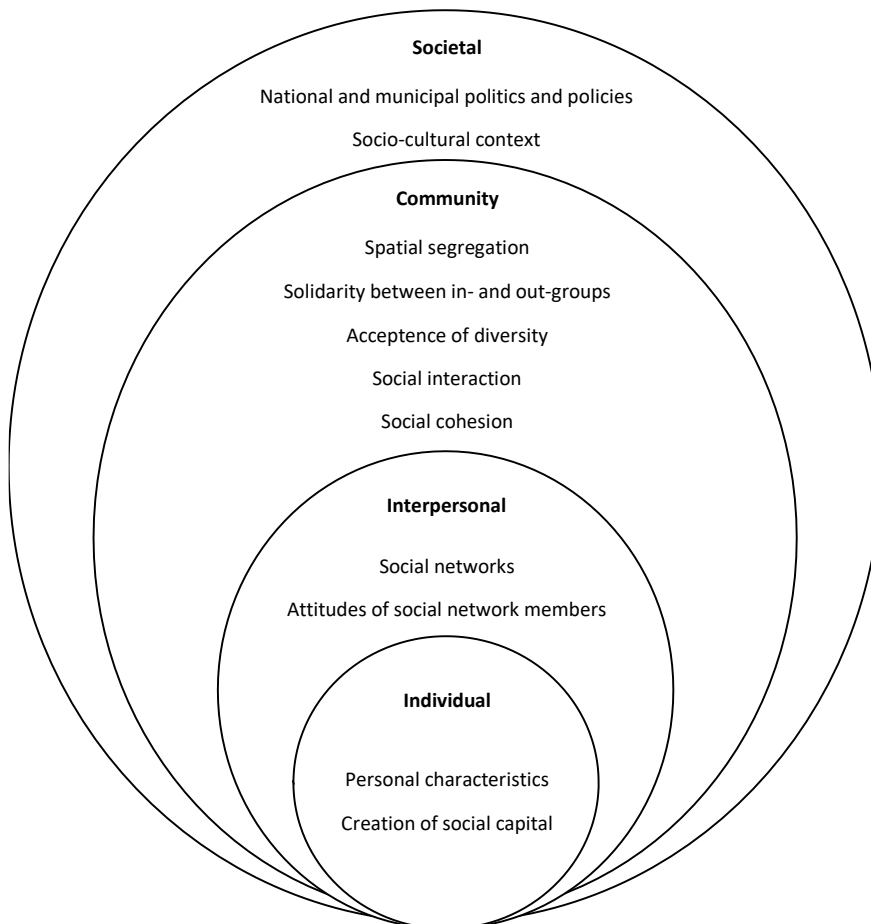
According to Sanguinetti (2014), close relationships and frequent social contact could help increase connectedness in a co-housing community. A high degree of connectedness is reflected in people viewing themselves as part of a greater community in which they feel united. The community aligns with their personal values and has a shared identity (Mashek et al., 2007). Aron et al. (1992) argue that connectedness between people leads to pro-social behavior and therefore to inclusion. This pro-social behavior can also be extended to pro-community behavior. Examples of this are engaging in activities that benefit the community and not necessarily the individual, and participating in activities organized by the community.

2.4 Ecological model

The ecological model of social inclusion created by Simplican et al. (2015) gives a clear overview of the levels of mechanisms contributing to the formation of social inclusion. In figure 2, the adapted ecological model is displayed. The innermost circle of the model displays the individual characteristics. These personal characteristics have an influence on the creation of social capital, since social capital is created on the individual level (Klein, 2011). The creation of social capital can contribute to or diminish social inclusion (Vranken et al., 2003; Kearns & Forrest, 2000). The second circle displays the interpersonal level of social inclusion. To create social capital, social networks are needed and the other way around (Bourdieu, 1986; Coleman, 1988; Putnam, 1995). Social networks do not imply social inclusion (Kearns & Forrest, 2000). Therefore, the attitudes of social network members in social interactions can either foster or diminish social inclusion (Silver, 2015). The community level is linked to spatial segregation as a mechanism of social inclusion (Silver, 2015). The level of solidarity between in- and out- groups, acceptance of diversity, social interaction and social cohesion in the community can either contribute to or diminish social inclusion. The outer circle is the societal level, which displays the national and municipal politics and policies, and the social-

cultural context. The outer circle provides the societal context in which the mechanisms contributing to or diminishing social inclusion are functioning.

Figure 2
Ecological model of social inclusion



Note. Model adapted from Simplican et al. (2015)

2.5 Dutch context of social cohesion and social inclusion

Within the Dutch context, social cohesion seems to share similarities with the concept of ‘Brede welvaart’. ‘Brede welvaart’, which translates to broad welfare, entails different levels of wellbeing in the present, while also keeping in mind that these have to be maintained in the future (Stiglitz et al. 2009). Vranken et al. (2003) argue that maintaining a level of social cohesion in the present as well as ensuring to maintain this level in the future can also be described as sustainable social cohesion. According to (PBL et al., 2017) ‘Brede welvaart’ includes everything that contributes to living ‘a good life’, thus including economic and non-economic dimensions. An example of the economic dimension is income. An example of a non-economic dimension could be the natural environment or access to facilities. However, examples of the non-economic dimension could also be more personal, like health and satisfaction with life (PBL et al., 2017).

According to the United Nations (2016), national and local contexts shape the process of social inclusion. There is not a singular strategy or policy that can be applied to all countries. The coalition

agreement of 2024 (PVV et al., 2024), focusses on the economic dimension of social inclusion by stating that the coalition will work towards an inclusive labor market.

The NOVI, (BZK, 2020) views inclusion more broadly and describes future cities, and villages as diverse, open to everybody, and tailored to the shifting demographics of the Dutch population. They are hereby arguing that people reside in inclusive, social communities where everyone has the chance to engage in social life and where opportunities for social contact are provided (BZK, 2020).

According to the Inspectie der Rijksfinanciën (2020) an inclusive society is seen as a society in which people can fully participate and in which people are supported when needed. The different forms of participation can be grouped into three categories: labor, society and social. Societal participation could be voluntary work or education. Social participation could be social contacts, or taking part in an association or organization.

In addition to the policy and visions about social inclusion in the Netherlands, the dimensions of social inclusion described by Silver (2015) could also be applied. For the economic dimension, one could look at the income inequality or at the state of the sustainable development goals. According to Ministerie van Algemene Zaken (2023), the trend of decreasing income inequality in general has stagnated. However, the level of poverty still remains low in the Netherlands (SDG1) and the employment opportunities remain high (SDG 8) (Ministerie van Algemene Zaken, 2023). In the economic dimension one could also look at the segregation. According to Bolt et al. (2008) income segregation on the neighborhood level is, compared to European countries and the United States, relatively low in The Netherlands. Another form of spatial segregation is based on ethnicity, the level of this type of segregation is viewed as high in the Netherlands compared to other countries (Bolt et al., 2008).

2.6 Hypotheses and conceptual model

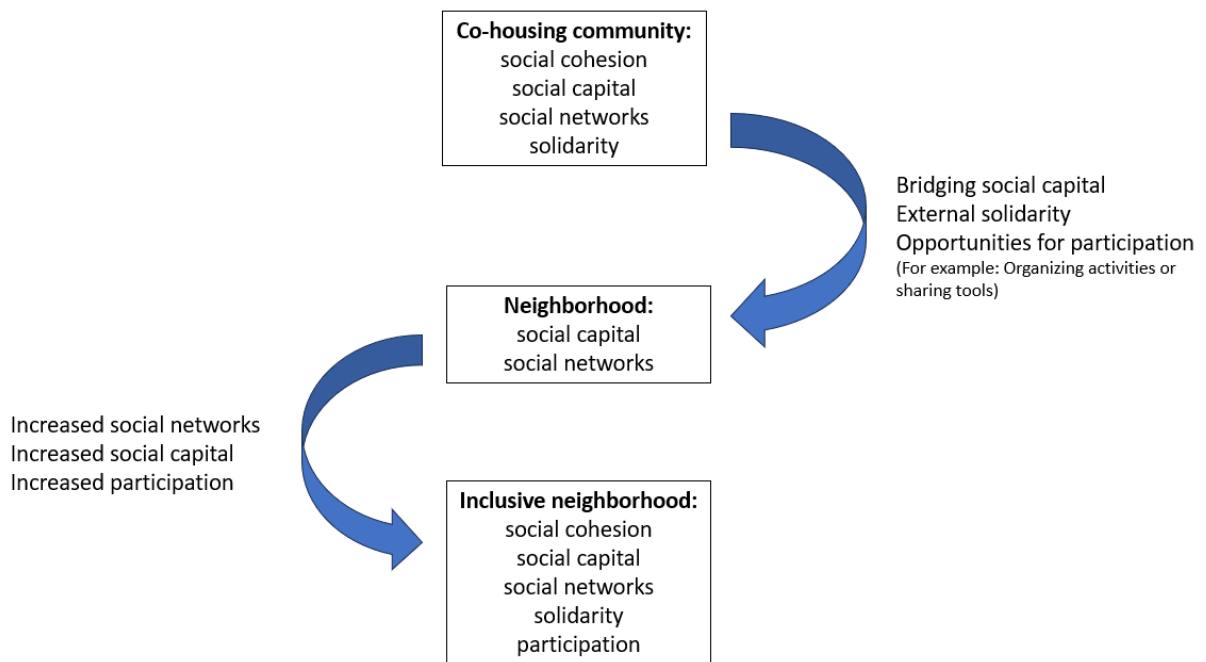
The co-housing communities in this research are practical communities, which are expected to be outward-oriented and welcoming to outsiders. The co-housing community consists of residents, which individually have social networks within and outside of the community and an amount of social capital, which together have an amount of social cohesion. The amount of social cohesion is affected by factors such as internal solidarity, commitment to participate, conflicts and resident turnover and can change over time.

The surrounding neighborhood also consists of residents with social capital and social networks. It is the hypothesis of this thesis that residents of the co-housing community use their bridging social capital to connect with residents of the surrounding neighborhood. The presence of bridging social capital and external solidarity of the co-housing community towards the surrounding neighborhood is shown by the willingness of the co-housing community to organize activities, share resources, and take care of ill or old neighbors or children of neighbors.

These efforts of the residents of the co-housing community in turn could lead to an increase in social networks, social capital and social cohesion in the whole neighborhood. These increases could then contribute to a more socially inclusive neighborhood.

Figure 3

The conceptual model



Note: Created by the researcher

3. Methodology

This chapter first describes the research paradigm and research approach. Then an overview of the research questions and methods to answer these questions is given. Thereafter, the selection of case studies will be explained and the descriptions of the three case studies will follow. Then the operationalization will be presented. The paragraph discussing the research methods will follow. Then the approach to data analysis will be described. The chapter lastly discusses the validity, reliability and ethics of the research.

3.1 Research paradigm

For this research it was examined if co-housing communities could contribute to an inclusive neighborhood. Social inclusion can be perceived by individuals and the degree of social inclusion can differ among individuals. Therefore, out of the four types of research paradigms, positivism, post positivism, critical theory and constructivism, presented by Guba and Lincoln (1994) the constructivist research paradigm suited this research the most. According to Guba and Lincoln (1994) the constructivist paradigm believes the nature of reality to be dependent on personal characteristics and experiences.

Moses and Knutsen (2012) similarly argue that constructivists believe individual and social characteristics can enable or obstruct certain worldviews thus individuals perceive reality different than other individuals.

The epistemological beliefs of constructivism are transactional and subjectivist, meaning that the relationship between the researcher and the to-be-researched subject is interactive and influenced by the ontological beliefs. The interactive nature of the epistemology influences the methodology, the researcher and the respondents interact to gain data (Guba & Lincoln, 1994).

3.2 Research design

This research examined if co-housing communities can contribute to an inclusive neighborhood. For this research the core design of convergent mixed methods was chosen. With a convergent mixed methods approach, the researcher converges the qualitative and quantitative data to create a comprehensive data set. The data from both methods is gathered around the same time and is integrated during the analysis (Creswell & Creswell, 2018).

The convergent mixed methods core design was combined with a case study design. The mixed methods case study design offers a more comprehensive set of data, since it combines multiple methods with multiple case studies (Creswell & Creswell, 2018). For this research a deductive approach was chosen. The three case studies were selected before the start of the data collection (Creswell & Creswell, 2018). Multiple case studies were used, because this allowed exploring the topic from multiple perspectives. Therefore, comparison among the cases is possible and insights can be supported from multiple sources.

When using both quantitative and qualitative methods in a mixed methods design, triangulation can be used to validate the findings (Van Thiel, 2014). Triangulation, according to Merriam (2009), makes use of multiple forms of data, to confirm the findings and to create a higher internal validity and reliability. To ensure that the research is both valid and reliable, this study has made use of multiple methods and two types of sources: primary data and secondary data.

In table 2 an overview is presented of the research questions and which method was used to answer those questions. A qualitative approach is chosen for research questions 3 and 4, because qualitative research is most suitable for describing, interpreting and gathering in depth information (Winchester & Rofe, 2016). The qualitative methods conducted for each case study, document analysis and interviews, provide context and give insight in the experiences of the residents. The interviews also provided context for the case study descriptions². According to Winchester & Rofe (2016), qualitative research can be used for contextualization and could therefore assist in interpreting quantitative findings as well. The quantitative method, the survey, complements the qualitative data by providing statistical insights in trends and patterns.

² The interviewees were asked to provide background information about the co-housing community. This information has been used to create to enrich the case study description, which was based on the websites of the co-housing communities themselves.

Table 2*Overview of the methods used*

Research question	Method
1. What are the characteristics of co-housing communities?	Literature review
2. Which dimensions contribute to inclusive neighborhoods?	Literature review
3. How is social inclusion described in the policy documents of municipalities with co-housing facilities (i.e., Tilburg and Almere)?	Document analysis of policy documents by the municipality of Almere and Tilburg
4. How does the co-housing community contribute to social inclusion in the neighborhood in which it is located?	Semi-structured interviews with residents of the co-housing communities
5. To what extent do residents of the co-housing community, and neighborhood surrounding it, feel connected to the neighborhood?	Survey for both residents of the co-housing community and residents living in the surrounding neighborhood.

3.3 Selection of case studies

The three case studies that have been chosen were selected by the following criteria: the size of the city, the type of co-housing community, the size of the co-housing community, if the community had a website, and if the municipality had named social inclusion in the housing policy or in the environmental vision.

All three communities are a Centraal Wonen community (the Dutch version of co-housing), meaning that all residents have their own home and share a communal garden, kitchen, and/or other spaces (Centrum groepswoon, n.d.). All three case studies are members of the Community Housing Association (Vereniging Gemeenschappelijk wonen, n.d.). According to the websites of the co-housing communities, all three communities align with the Danish co-housing type and share the most similarities with the category of practical community out of the four types of intentional communities (Meijering et al., 2007; De Meenthe Tilburg, n.d.; CW de Wierden, 2021a; Vereniging Centraal Wonen Tilburg, n.d.). The co-housing communities reside in Tilburg and Almere. Both cities are medium-sized and are situated in an area with a low degree of urbanity (Thissen & Content, 2022). In addition, the municipalities of Tilburg, and Almere both mention social inclusivity in their environmental vision and in their housing vision or housing agenda (Gemeente Tilburg, 2020; Gemeente Almere, 2020). Both municipalities are around the same size and have similar neighborhood characteristics (CBS, 2025).

Table 3
Overview of case studies

	CW de Meenthe	CW de Stam	CW de Wierden
City	Tilburg	Tilburg	Almere
Number of city residents	227.707	227.707	222.825
Neighborhood	Quirijnstok Noord-West	Sint Pieterspark	Hoekwierde, Kimwierde en Zandwierde
Neighborhood residents	1050	2305	1540
Number of households	20	18	20
Type of ownership	Owned by residents	Social housing	Social housing

Note. Table adapted from CBS Statline (2025)

3.3.1 Centraal Wonen ‘De Meenthe’

De Meenthe is a co-housing community located in the north of the city of Tilburg, in the neighborhood Quirijnstok Noord-West. CW de Meenthe and the surrounding neighborhood are displayed in figure 4. The red circle indicates the area within walking distance of the co-housing community.

Figure 4:
Map of CW de Meenthe and the neighborhood Quirijnstok Noord-West.



Note: Created by the author in GIS

De Meenthe was built in 1981 and consists of twenty houses and multiple shared areas, such as a communal kitchen and a garden (De Meenthe Tilburg, 2021). The houses are built in an oval form

and have the shared garden in the middle of it. All houses are fully equipped to function as independent houses and even have a tiny patio attached, which is not shared with other residents. The website of the Meenthe Tilburg (2021) states that the reason for setting up the co-housing community, is the importance of mutual involvement and care for the living environment. To be more than anonymous neighbors is the goal. Activities hosted by the community are the celebration of national holidays or having dinner together. There is no obligation to participate in the activities. The initiator of CW de Meenthe, described the co-housing community as a 'Woongroep' (I-CWdM1, par. 17): a group of people that reside together. The resident mentioned that CW de Meenthe does not view themselves as a commune. The plan to set up a co-housing community originated from the friend group of the interviewed resident. The friend group, consisting of four couples, already took care of each other's children when needed.

For financial, emancipatory and social reasons living closer to each other just made sense. It was also thought that it would also be practical to be able to share resources, like a lawn mower (I-CWdM1, par. 17)

The municipality provided one hectare of land that could be used for the co-housing community. Because of the size of the land, it was decided to build twenty houses. Four of those houses would be used by the friend group, five houses were rented out by the social housing company of Tilburg and the other houses were sold. One of those five houses was a house modified for people with a physical disability. In 1981 the new residents moved into the houses of the co-housing community. The houses were built with a lot of help from the residents themselves, only the outer structure was provided by a construction company. In the present day all twenty houses are owned by their residents; the house with adaptations is now a regular house (I-CWdM1, par. 17& 19).

Figure 5

Impression of CW de Meenthe



Figure 6

Collective space of CW de Meenthe



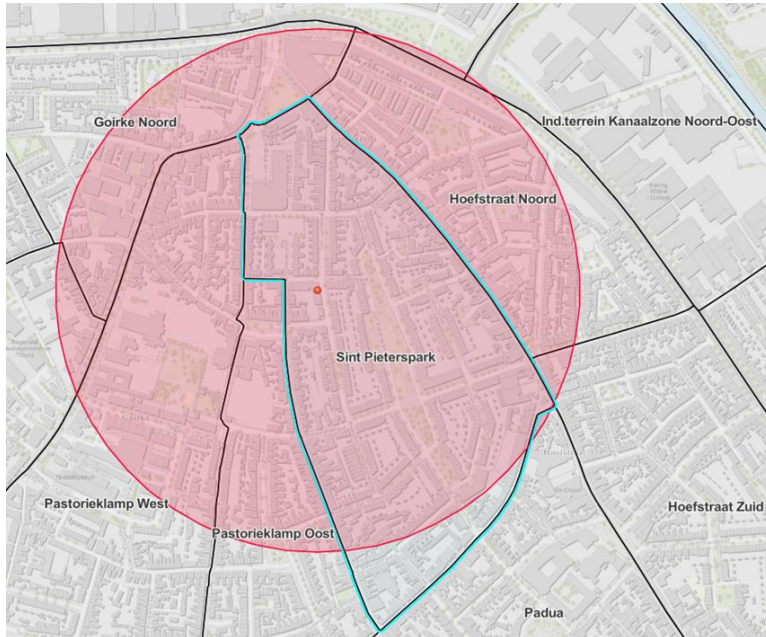
Note: both pictures are taken by the researcher.

3.3.2 Centraal Wonen 'De Stam'

Co-housing community 'De Stam' is also placed in the northern part of Tilburg. The map of CW de Stam and the surrounding neighborhood is displayed in figure 7. The red circle indicates the area within walking distance of the co-housing community.

Figure 7

Map of CW de Stam and the neighborhood Sint Pieterspark.



Note. Created by the researcher in GIS

CW De Stam, of which the build was completed in 2013, consists of five single-family homes and thirteen apartments (Vereniging Centraal Wonen Tilburg, n.d.). The houses have their own facilities and are built as sustainable as possible and are low in energy consumption (CW de Stam, n.d.). In addition to complete houses, CW de Stam has a multifunctional common room (Vereniging Centraal Wonen Tilburg, n.d.) and a playground. The collective garden is at the heart of the community and all the houses are positioned around it (CW de Stam, n.d.).

'Nabuurship', meaning being a good neighbor, is valued highly by the residents of CW de Stam. Both towards residents of CW de Stam and towards residents of the surrounding neighborhood (CW de Stam, n.d.). Normally you are able to choose a house and not your neighbors. In CW de Stam people actively decide to become neighbors with each other and therewith create their own concept of a neighborhood which to them has a positive meaning (CW de Stam, n.d.). Collective work and social activities are organized in the co-housing community, but they are not obligated (Vereniging Centraal Wonen Tilburg, n.d.).

The interviewed resident of CW de Stam has lived in the co-housing community since the beginning. The people who came up with the idea to create a co-housing community, had the intention to give their child a neighborhood full of other kids to play with. When the project was finally finished, the child soon moved out of the house to go studying (I-CWdS1, par. 8). According to the resident there are three types of houses in CW de Stam: single-family homes, apartments and art studio houses. Only two of the houses are owned by their residents, all the other houses are social housing. The co-

housing community was developed in cooperation with the social housing association (I-CWdS1, par. 15-18).

Figure 8

Impression of CW de Stam



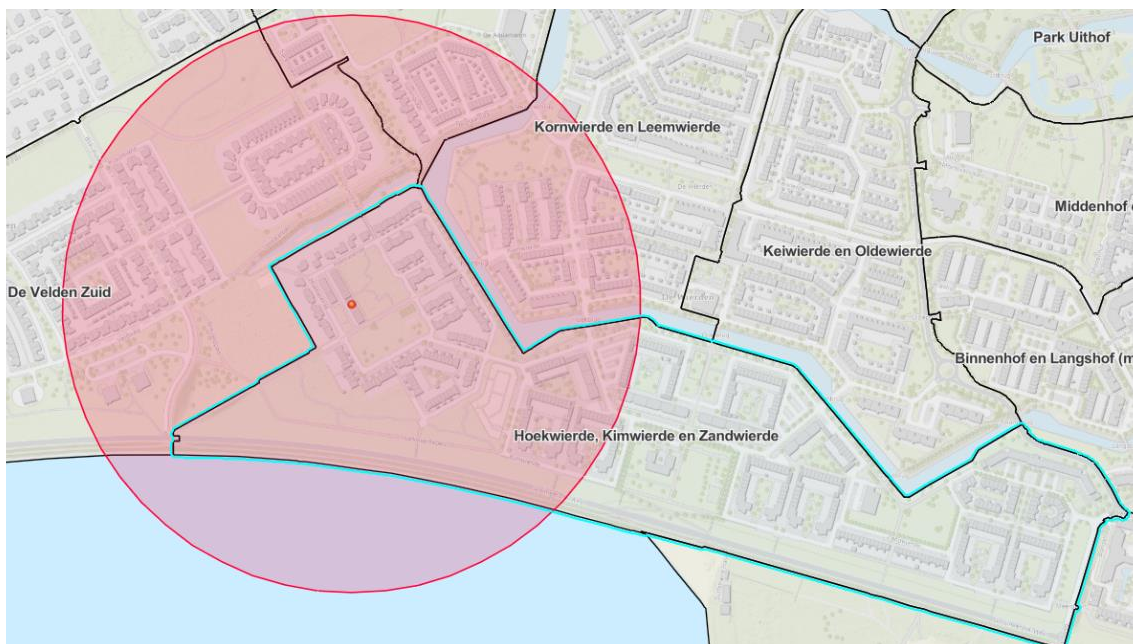
Note. Picture taken by the researcher.

3.3.3 Centraal Wonen 'De Wierden'

Centraal Wonen de Wierden consists of twenty houses and lies in the city of Almere. The community emerged in 1984 in the neighborhood Hoekwierde, Kimwierde and Zandwierde (CW de Wierden, 2021b). The map of CW de Wierden and the surrounding neighborhood is displayed in figure 9. The red circle indicates the area within walking distance of the co-housing community.

Figure 9

Map of CW de Wierden and the neighborhood Hoekwierde, Kimwierde and Zandwierde.



Note: Created by the researcher in GIS

The co-housing community consist of twenty houses, a communal area, washing facilities and a shared garden (CW de Wierden, 2021c). All the houses are independent, everybody has their own kitchen, own bathroom, etc. There is also a collective space, which consists of a living room, a bicycle storage, a shed that can be used for hobby projects and a shared laundry room. The residents of the co-housing community also share a garden and orchard. The houses and the collective spaces are divided by a walking path (I-CWdW1, par. 8).

CW de Meenthe originated in the early eighties. A group of friends came up with the plan for a co-housing community, which was more common then (I-CWdW1, par. 20). In Almere pioneering was important, therefore the opportunity to create this community was given. All the common spaces of the co-housing community have been helped built by the residents, the houses were built by the social housing association (I-CWdW1, par. 30). Originally, the houses of CW de Wierden were rental houses, but not social housing. This changed the last couple of years, and now all of them are. (I-CWdW2, par. 14).

Figure 10

Impression of CW de Wierden



Figure 11

Communal garden of CW de Wierden



Note: Both pictures have been taken by the researcher.

3.4 Operationalization

Based on the literature review the definitions for social cohesion and social inclusion were:

Social cohesion: a horizontal relationship between individuals of similar levels (Vranken et al., 2003). Social cohesion consists out of the following dimensions: “*Common values and a civic culture; social order and social control; social solidarity and reductions in wealth disparities; social networks and social capital; and territorial belonging and identity*” (Kearns and Forrest, 2000, p. 996).

For example, a dimension of social cohesion is: (internal) social solidarity and reductions in wealth disparities. An indicator of this dimension would be to share resources both material and immaterial. A survey question to identify this would be: Are you willing to share goods, like tools and vehicles, with other people?

Social inclusion: a vertical relationship, where individuals integrate and participate in society. The process of inclusion grants individuals or groups improved opportunities to participate in the community of interest (Vranken et al., 2003; Silver, 2015; United Nations, 2016). Social inclusion has political, social and economic dimensions (Silver, 2015).

For example, contact between insiders and outsiders would be an indicator for the social dimension of social inclusion. A survey question to identify this would be: Are you willing to organize activities for the neighborhood?

In Appendix I. the complete operationalization table can be found.

3.5 Research methods

3.5.1 Document analysis

Research question number three: *How is social inclusion described in the housing policy documents and the environmental vision of Tilburg and Almere?* Was answered by conducting a document analysis. The housing vision (Gemeente Almere, 2020), the environmental vision of the municipality of Almere (Gemeente Almere, 2017), the housing agenda (Gemeente Tilburg, 2020) and the environmental vision of the municipality of Tilburg (Gemeente Tilburg, 2015) were thematically analyzed. The municipal policy documents were deductively coded based on the operationalization (Van Thiel, 2014; Scheepers et al., 2016). Whereas the dimensions in the operationalization were used as codes. The text was coded with Nvivo12. The text within the codes was thematically analyzed. A frequency table of the codes is displayed below (table 4).

It was chosen to analyze the municipal housing policy and the municipal environmental policy of Tilburg and Almere, since the case studies reside in those municipalities. Even though these municipalities have social policies on the subject of social inclusion, it was chosen not to include those policies, because these policies did not connect the social issue of social inclusion to spatial planning or housing. It was therefore not deemed relevant to this thesis.

Table 4

Frequency table of document analysis codes

Concept	Dimensions	Woonagenda		Woonvisie		Total
		Omgevingsvisie Tilburg	2020-2025 Tilburg	Omgevingsvisie Almere	Almere 2020-2030	
Social cohesion	Common values and a civic culture	0	0	0	0	0
	Social order and social control	0	2	0	2	4
	(Internal) solidarity and reductions in wealth disparities	2	0	0	2	4
	Social networks and social capital	2	1	0	2	5
	Territorial belonging and identity'	3	0	0	1	4
Social inclusion	Economic	0	2	0	1	3
	Social	3	0	1	0	4
	Political	0	0	0	0	0
Total		10	5	1	8	24

3.5.2 Interviews

To answer the fourth research question: *How does the co-housing community try to contribute to social inclusion in the neighborhood in which it is located?* The qualitative research approach of semi-structured interviews was chosen. Semi-structured interviews were held with the selected residents, to ensure a structured meeting while also providing enough room for follow-up questions (Mason, 2018). The questions of the interview were based on the operationalization (appendix I) and can be found in appendix II. In addition, background information such as when the co-housing community was founded was also asked.

In addition to the semi-structured resident interviews, one expert interview was conducted. According to Meuser and Nagel (2009), an open interview with a topic list is the most suitable for an expert interview. Meuser and Nagel (2009) argue that providing room for the expert to reflect and present examples is important to reveal information about the expert's experiences and outlooks. The topic list can be found in appendix II

The co-housing communities were contacted via email, with information about the study. A request was made if the spokesperson or a resident that was actively involved in the co-housing community was willing to do an interview. The co-housing community resident was interviewed to examine in which ways the co-housing community tries to connect with the surrounding neighborhood. A total of four resident interviews and one expert interview were conducted.

For CW de Meenthe an interview was held with the initiator of the co-housing community (duration: one hour). The interviewee of CW de Stam was a resident since the start of the community and that interview took half an hour. Two residents from CW de Wierden were willing to do an interview,

both interviews took half an hour per interview. I-CWdW1 has been living in the co-housing community since 1982, the other resident moved in in 2008 (I-CWdW2).

Table 5

Overview of interviews

Type of interview	Case study	Respondent code	Date of interview
Resident interviews	CW de Meenthe	I-CWdM1	20-04-2023
	CW de Stam	I-CWdS1	25-05-2023
	CW de Wierden	I-CWdW1	18-04-2023
		I-CWdW2	21-04-2023
Expert interview	CW de Wierden	E-CWdW1 E-CWdW2	13-07-2023

The expert interview was conducted to reflect on the case study of CW de Wierden. The interview was held with two experts at the same time. The first respondent, E-CWdW1, is the area management consultant (in Dutch: consulent gebiedsbeheer) of social housing corporation Ymere. Ymere facilitates the rental process of CW de Wieren. The other respondent is the area manager (in Dutch: Gebiedsmanager) of Almere Haven, which is the district where CW de Wierden is situated. The code given to this municipal official is E-CWdW2.

These two experts were chosen based on their active involvement and familiarity with the area. The municipality and the social housing company both aspire to create a higher degree of livability in the area and hope to increase social inclusion, the experts selected are both working on these topics. In addition, both experts have experience with similar communities that tried to promote social inclusion in a housing setting.

The interviews were recorded with permission from the respondents. After the interview the recording was verbatim transcribed. The text of the transcript was then sent to the respondent to proofread in order to avoid possible misinterpretations. After the verification by the respondent, the transcribed text was encoded in Atlas.ti.

For the thematic analysis of the resident interviews, the transcripts were deductively coded based on the operationalization (Van Thiel, 2014; Scheepers et al., 2016). The text within the codes was thematically analyzed per case study. The codebook was based on the operationalization which can be found in Appendix I

The expert interview was first deductively coded based on the operationalization. After the first round of coding, concepts that did not fit into concepts mentioned in the operationalization were given a new code.

3.5.3 Survey

In addition to the interviews, a survey was conducted to answer the fifth research question: *To what extent do residents of the co-housing community, and neighborhood surrounding it, feel connected to the neighborhood?*

A survey was chosen, to collect information on the attitudes of the residents of the co-housing community and the surrounding neighborhood. According to Van Thiel (2014), a survey is suitable for deductive research and it can be used to either test hypotheses or to describe attitudes of people. A large-scale survey was used, since it is efficient and can be generalized thus creating a higher external validity (Van Thiel, 2014). This quantitative method was used to compare the data obtained from the interviews and to examine if the intentions of the co-housing community reflected the feeling of connection to the neighborhood. The survey made use of open questions, questions with multiple answer options, and Likert scales. According to Van Thiel (2014) Likert scales can be used to measure opinions and characteristics. Therewith, multiple questions can be used to measure the same concept.

The survey was created in Qualtrics, an online survey tool and was based on the operationalization of the concepts from the theoretical framework (see appendix I for operationalization). To create a reliable survey, survey questions from previous research were used.

For the indicator of common values, questions from the European Social Survey (2020) were used. *"The European Social Survey (ESS) is an academically driven cross-national survey that has been conducted across Europe since its establishment in 2001"* (European Social Survey, n.d. para. 1.). It is academically driven and analyzes behaviors, beliefs and attitudes of European residents (European Social Survey, n.d.). For the indicators of solidarity and territorial belonging, questions from the survey of research of Dekker and Bolt (2005) were used.

As well as the questions based on the operationalization, the survey contained the Inclusion of Community in the Self Scale (Mashek et al., 2007). This scale, as explained in the literature review, consists of a singular question that measured the connection that the respondents have with the community. The scale was adapted three times to measure the relationship with the co-housing community, the relationship with the neighborhood surrounding the co-housing community within walking distance, and the relationship with the neighborhood surrounding the co-housing community outside walking distance. The 'walking distance' was based on the idea of the pedestrian shed, which was introduced in research of Perry in 1929 (Perry, 2020). The pedestrian shed is an area that has a distance of 400 meters or 5 minutes walking time (Wabe & Montalbo, 2022).

The survey was distributed via email to the residents with whom the interview was conducted. The residents were requested to share the survey with the other residents of the co-housing community. In addition, invitations to fill in the survey were deposited in the mailboxes of the residents of the co-housing community. The invitation was written in both Dutch and English to try to reach as many people as possible. It contained a link to the survey and a QR-code that could be scanned to access the survey. In total, 58 invitations have been distributed to the residents of the co-housing communities. The whole population was targeted and everybody has the same chance to be included in the survey.

To reach the residents of the neighborhood surrounding the co-housing communities, it was decided to distribute invitations to 100 households per neighborhood. In total, 300 invitation cards have been distributed in the mailboxes of residents. The 100 households per neighborhood that received an invitation were selected randomly. Every address was put on a list and a random number generator selected 100 addresses per neighborhood. Therefore, every household had the same chance to be invited to participate in the survey.

3.6 Approach to data analysis

3.6.1 Survey data analysis

The statistical software SPSS26 was used to perform the statistical analyses required to test the hypotheses. In order to perform the analyses, the data from Qualtrics was downloaded in SPSS format and imported into SPSS. Qualtrics was set to also save the answers if the participant had not completed the entire questionnaire. A number of questions in the survey asked about personally sensitive topics, like income, voter preference or sexual orientation for example. Since participants might not want to answer some or all of these questions, the option had been given to leave questions unanswered. When respondents had only left a few questions unanswered, their response to the total questionnaire has been used. When more data was missing, for instance if they quit the questionnaire, they were excluded from the research (see Table 6). Everyone else was included to retain as much data as possible, therefore, some of the statistical analyses have a lower number of valid observations than the total number of participants.

Before statistical analyses could be performed, the data was prepared. First, the results of the statements were assigned the interval measurement level in SPSS in connection with the Likert scale with which they were measured (Verhoeven, 2022). In addition to the preparation of the dataset, a scale variable had been added in SPSS. This concerns the variable 'Common values'. This variable consists of all sub-questions of question 17, minus questions 17_1 and 17_5. If these two questions are removed, there is a Cronbach's alpha of $>.72$. Cronbach's Alpha (α) test was used to determine the internal coherence of items that together form a scale. Items can reliably be combined into a scale for further analysis (on group level) when alpha is at least 0.70.

Table 6

Description of the Survey Response for Data Analysis.

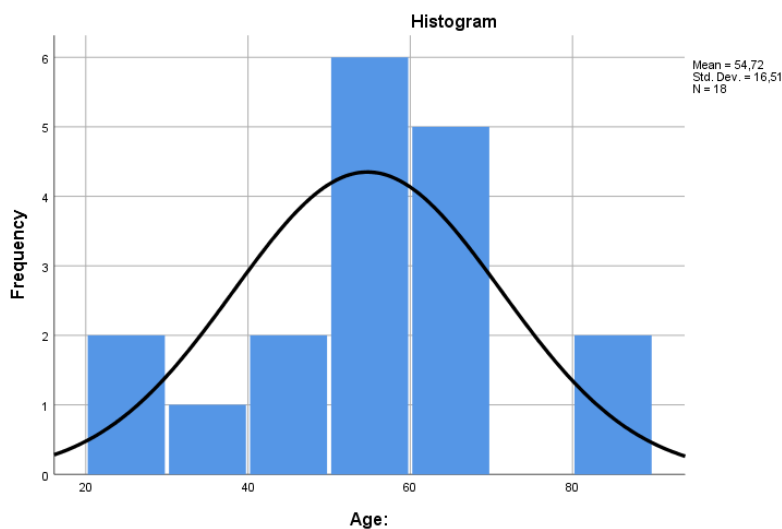
Co-housing	Total nr of residents neighborhood	Distributed surveys	Response / % of population	Dropout after 1 st question	Dropout halfway	Dropout other reasons	Total nr used
De Meenthe	1050	120	28 / 2,7%	10			18
De Stam	2305	120	18 / 0,8%	3	2	1	12
De Wierden	1540	120	28 / 1,8%	7	2		19

CW de Meenthe

The response group used for the analysis is 18 people. The response group is less than 30 people, therefore the central limit theorem does not apply. To see if age and gender were representative of the population, a histogram was made to visually inspect if the age of the respondents was normally distributed, see figure 12, which appeared to be the case. To verify this, a Shapiro-Wilk test of normality was conducted, where $p = .900$ which is $>.05$. Therefore, the age of the response group is seen as normally distributed.

Figure 12

Histogram and normal distribution of age for the response group of CW de Meenthe



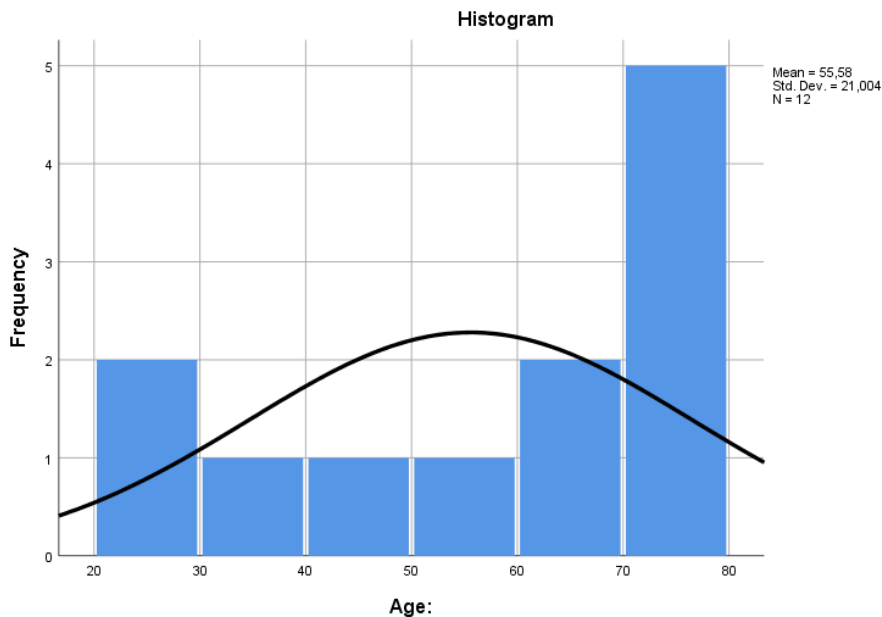
Next, the distribution of gender was examined. The population of Quirijnstok Noord-West is 1050 residents (CBS Statline, 2025), the responses used 1,7% of the total population. The gender distribution in the response group is 38,9% male and 61,1% female, whereas the overall gender distribution of the neighborhood Quirijnstok Noord-West 50,5% male and 49,5% female (CBS Statline, 2025). A chi-square goodness of fit test was applied to test the representativeness of the response group, which yielded a chi-square of 0.802, $p = .370$, meaning $>.05$ thus the percentages of males and females did not differ significantly from the population and are therefore representative for the population.

CW de Stam

The response group that can be used for analysis is 12 people. To see if age and gender were representative of the population, a histogram was made to visually inspect if the age of the respondents was normally distributed, see figure 13, which appeared to be the case. To verify this, a Shapiro-Wilk test of normality was conducted, where $p = .046$ which is $<.05$. Therefore, the age of the response group is seen as not normally distributed.

Figure 13

Histogram and normal distribution of age for the response group of CW de Stam



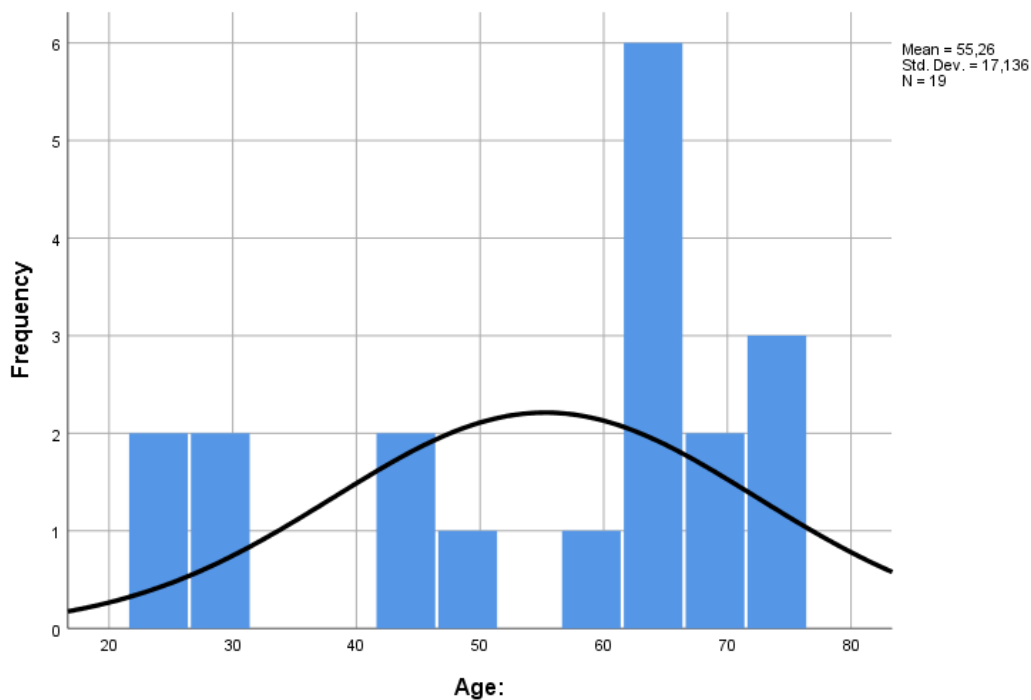
The gender distribution in the response group is 66,7% male and 33,3% female whereas the overall gender distribution of the neighborhood Sint Pieterspark is 50,3% male and 49,7% female (CBS Statline, 2025). A chi-square goodness of fit test was applied to test the representativeness of the response group, which yielded a chi-square of 2.400, $p = .301$, meaning $>.05$ thus the percentages of males and females did not differ significantly from the population and is therefore representative.

CW de Wierden

The response group that is used for the analysis is 19 people. The response group is less than 30 people, therefore the central limit theorem does not apply. A histogram was made to visually inspect if the age of the respondents was normally distributed, see figure 14, which did not seem to be the case. This was confirmed by the Shapiro-Wilk test of normality that was conducted, $p = .022$ thus $<.05$ and not normally distributed.

Figure 14

Histogram and normal distribution of age for the response group of CW de Wierden



The 19 responses used are 1,2% of the total population of the neighborhood, which is 1540 (CBS Statline, 2025). The gender distribution in the response group is 31,6% male and 63,1% female and 5,3% nonbinary, whereas the overall gender distribution of the neighborhood Hoekwierde, Kimwierde and Zandwierde is 47,7% males and 52,3% females, with no percentage for nonbinary (CBS Statline, 2025).

A chi-square goodness of fit test could not be applied to test the representativeness when the category nonbinary was included, because the CBS data does not include nonbinary. When only the binary categories of male and female were used, chi-square was 1.529, $p = .216$.

Since all of the surveys conducted on the three case studies received less than a hundred responses, it was decided that the responses of the case studies would be combined into one dataset. A variable was created in the dataset to reflect residency: residents of the co-housing communities (23), residents within walking distance of the co-housing communities (21) and residents of the surrounding neighborhood (5). This made it possible to conduct statistical analysis on the differences between these groups. The outcome of the analysis only applies to the respondents of the survey and cannot be generalized. In table 7 an overview is given of the statistical analyses that will be conducted.

Table 7*Overview of statistical analyses*

Variables	Statistical analysis
'Where do you live' & ICS-Scale	One way Anova
'People living in co-housing communities' & 'take part in collective work for the community (e.g. gardening or preparing a group meal)' & 'organize activities for the neighborhood' & 'share goods, like tools and vehicles, with other people' & 'take care of ill or old neighbors, or children of neighbors'.	Crosstabs analysis
'People living in co-housing communities' & 'take part in collective work for the community (e.g. gardening or preparing a group meal)' & 'organize activities for the neighborhood' & 'share goods, like tools and vehicles, with other people' & 'take care of ill or old neighbors, or children of neighbors' & Type of house	Frequency table
'People living in co-housing communities' & 'take part in collective work for the community (e.g. gardening or preparing a group meal)' & 'organize activities for the neighborhood' & 'share goods, like tools and vehicles, with other people' & 'take care of ill or old neighbors, or children of neighbors' & 'How many years have you been living in this neighborhood'	Pearson's correlation
'People living in co-housing communities' & I take part in activities hosted by the co-housing community	Frequency table Chi-square goodness of fit test
'Everybody in this neighborhood is tolerated' & 'Everybody in this neighborhood is accepted' & 'Common Values'	Pearson's correlation
'Where do you live' & 'Common Values'	One way Anova
'Where do you live' & 'Everybody in this neighborhood is accepted'	One way Anova
'Where do you live' & 'Everybody in this neighborhood is tolerated'	One way Anova
'Where do you live' & 'I have the same opportunities as other people in this neighborhood'	One way Anova

3.7 Validity, reliability and ethics of the research

3.7.1 Validity of the research

The qualitative data collection was gathered with the use of semi-structured interviews for which the topic list was the same for all residents. The topic list arose from the operationalization of the concepts from the theoretical framework. The operationalization of the concepts in the theoretical framework contributes to measuring what the research aims to measure (Schepers et al., 2016).

In addition to the operationalization, the survey questions are used from the European Social Survey (2020) and the survey of research Dekker and Bolt (2005). These surveys have been used before and proved to accurately measure the concepts. According to Van Thiel (2014) a high non-response could impair the validity. Therefore, a high number of surveys have been distributed to create an as high as possible response rate.

The internal validity of the data that the interviews and the surveys collect will be reached by the use of a correct operationalization of the variables. Consequence in the use of concepts is also deemed important for validity. The topic list of all the interviews was the same, just as all the surveys had the same questionnaire.

In this research both quantitative and qualitative methods were used in a mixed-methods design. Therefore, triangulation can be used to validate the findings (Van Thiel, 2014). Triangulation, according to Merriam (2009), makes use of multiple forms of data, to confirm the findings and to create a higher internal validity and reliability. To ensure that the research is both valid and reliable, this study has made use of multiple methods and two types of sources: primary data and secondary data.

3.7.2 Reliability of the research

For reliable research, accuracy and consistency are of great importance. The instruments that are used to measure, such as a questionnaire or topic list, need to be accurate according to Van Thiel (2014). Therefore, the variables that are meant to be measured with the data collection, are described as precise and as detailed as attainable in the operationalization. In addition to accuracy, the research needs to be consistent: meaning that repeating the research conducted under the same circumstances should yield the same results (Van Thiel, 2014).

For reliable qualitative data collection all interviews were conducted via video calling (Zoom or MS Teams) or physically. All interviews were recorded and transcribed. In order to guarantee the reliability of the data, the transcript was sent to the respondents prior to coding so that any erroneous interpretations could be corrected.

3.7.3 Ethics of the research

Prior to the interview and the survey, respondents were explained what the research entailed and what their answers were used for.

Prior to the interview, the respondents were also asked for permission to record the interview. All respondents were asked whether they wanted to be mentioned by name or by position in the transcript. The names of the respondents who only wanted to be mentioned by function and who nevertheless mentioned their name during the interview were removed from the transcript in

consultation with the respondent. All interview respondents signed a consent form to consent to the use of the interview for this thesis. Privacy-sensitive information and very personal anecdotes have been extracted from the transcript in consultation with the respondent.

All the respondents of the interviews, surveys or survey for the network analysis must be at least eighteen years old. This is to prevent children from providing information for the research, without fully comprehending what the personal information is used for. The data will only be shared with the first and second assessors of the thesis. After the assessment, the thesis is sent to the participating respondents who are interested in the outcomes.

4. Findings

4.1 Document analysis

To answer the third research question: *How is social inclusion described in the housing policy documents and the environmental vision of Tilburg and Almere?* A deductive document analysis was done on these policies per municipality. In the municipal housing policies and environmental policies the word social inclusion is not mentioned often. When the term social inclusion is used, it is mostly in combination with specific target groups such as the elderly or people with disabilities in need of assistance.

Tilburg

The environmental vision of the Gemeente Tilburg (2015, p.26) stated that society is becoming more and more individualized. Meanwhile, people still have a need for social connections and familiarity on a small scale and there seems to be a desire for more community spirit. People contribute to the community when it offers them an 'advantage' and the situation more or less forces them to do so; although some citizens also contribute to society in the form of voluntary work Gemeente Tilburg (2015, p.26).

According to Gemeente Tilburg (2020, p.16) new housing initiatives such as communal living could contribute to the self-reliance of residents. The demand for these types of housing is increasing and the municipality wants to encourage this by committing to expanding these forms of housing. Communal housing initiatives can sometimes also provide a solution for vulnerable residents. Care can be provided efficiently and effectively here and for the people themselves it can be a safe and sheltered living environment (Gemeente Tilburg, 2020). Gemeente Tilburg (2015, p.26) argued that the role of the government is changing, from a welfare state to a participation society. Therefore, more often people, instead of the government, will (have to) take care of themselves and of their friends, family or neighbors.

The Tilburg Housing agenda identifies the problem that some neighborhoods with a lot of social housing are becoming more vulnerable. Previously these neighborhoods consisted of a mix of housing for low- and middle income groups. Nowadays social housing corporations have to ensure that social housing for low incomes is allocated to residents with a low income, instead of allocating those houses to people with a middle income³. Therefore, neighborhoods with social housing are becoming more homogeneous in terms of income. For some neighborhoods this also leads to a lower

³For more information on this see Artikel 46 Woningwet. This policy entails the appropriate allocation of social housing, which is also known in Dutch as: 'Passend toewijzen'.

social capacity and lower livability. To counter this development, the municipality intends to differentiate the housing provision more and tries to spread out the social housing for low income groups all over the city (Gemeente Tilburg, 2020, p.7). The municipality of Tilburg wants to take an integrated approach and create heterogeneous districts to match with the diversity of residents, while still having homogenous neighborhoods in those districts (Gemeente Tilburg, 2015, p.115-116).

The municipality of Tilburg (2020, p.17) wants to change how the public space is arranged in such a way that people are encouraged to exercise and visit each other. This strengthens the sense of community and contributes to decreasing loneliness. The municipality of Tilburg (2020, p.14) states that involving citizens right from the start in the process of (re)designing public space and the maintenance of it can increase responsibility, connection and social cohesion in neighborhoods and districts (Gemeente Tilburg, 2020). When people feel more involved in their neighborhood they feel invited to take initiatives themselves in which the government no longer automatically plays a role. This increases liveliness and social cohesion according to the Gemeente Tilburg (2015, p.47).

Almere

The municipality of Almere states in the housing vision that, against their hopes, income segregation has increased (Gemeente Almere, 2020, p.14). People with a lower income are unable to get a house in Almere. The goal of the municipality is to decrease the income segregation by building more affordable houses. The municipality of Almere strives to create districts where people of different income groups live next to each other (Gemeente Almere, 2020, p. 19). The municipality argues that this creates the biggest chance of social cohesion, social connection and safety in the district. The housing vision (Gemeente Almere, 2020, p.12) also states that the municipality wants the city to be for everyone. The municipality offers space to various groups, including people of various ages, incomes and household sizes. Gemeente Almere (Gemeente Almere, 2020, p.12) adds that there should be a mix of people in houses within neighborhoods and between neighborhoods.

The municipality pays attention to vulnerable residents that need extra support. Almere wants to be an inclusive city, where residents in a vulnerable position are adequately supported (Gemeente Almere, 2020, p.20). The housing vision of Almere specifically mentions social inclusion for older people (Gemeente Almere, 2020, p.34). The municipality is working on a coherent commitment of residents, volunteers, partner organizations and various departments in the municipal organization. The municipality focuses on topics such as health and housing; however, social networks are also mentioned as important. A socially safe environment is perhaps the most important quality. It stimulates encounters, being seen and vigilance. Therefore, it can be pleasant if there are forms of cohabitation or living together. Forms of collective living can provide this, for example: co-housing in independent homes, or independent homes with collective spaces where residents meet each other (Gemeente Almere, 2020, p.21). The idea is that this would also support the quality of life in the neighborhood.

Social networks and social safety are not only important for elderly residents. Gemeente Almere (2020, p.19) argues that residents of Almere that are looking to move, are more likely to look for housing close to their current place of residence, preferably in their own neighborhood (Gemeente Almere, 2020, p.19). When making construction plans, the municipality of Almere wants to play a role in maintaining existing social safety and social cohesion. To promote this, Almere wants to design in such a way that residents can easily meet each other and can continue to live in their own home and neighborhood, for longer (Gemeente Almere, 2020, p.31). Gemeente Almere (2017, p. 5) stimulates that residents come up with initiatives or projects that support the goals of the municipality and contribute to the development of Almere.

4.2 Interviews

To answer the fourth research question: *How does the co-housing community try to contribute to social inclusion in the neighborhood in which it is located?* Semi-structured interviews were held with the selected residents. These interviews were transcribed and deductively coded based on the operationalization (Van Thiel, 2014; Scheepers et al., 2016). The text within the codes was thematically analyzed per case study. Per case study a summary of the thematic analysis is displayed.

4.2.1 CW de Meenthe

De Meenthe itself does not organize projects or activities for the neighborhood itself. That is more the role of the community center according to the resident of De Meenthe. When residents of CW de Meenthe are doing voluntary work in the neighborhood, the co-housing community will sometimes engage in this when asked by a resident (I-CWdM1, par.102).

The resident of de Meenthe stated that: *"People do not come here so easily, unless we invite them over and we do not invite them that much. We say: 'you are welcome.' But then again, that's not how it works, is it? You have to know people"*. (I-CWdM1, par.106) The threshold to visit the co-housing community is viewed as very high by the neighbors. We do not view ourselves as a community center either, says the resident. People outside of CW de Meenthe often talk about our shared living room as 'the canteen or the hall'. The resident said that the shared living room has been rented out to parties for a while, but that does not happen anymore. Outsiders used the room as some sort of canteen, the residents did not enjoy that (I-CWdM1, par. 134).

Even though De Meenthe does not view itself as a community center, its residents are still making efforts to involve the neighborhood. Once per year there is an open day and friends of residents are allowed to come to movie nights and bar nights. Most of the time the same friends visit those nights. The co-housing community participated once in a neighborhood project, where people with backgrounds of different countries came to visit to prepare and eat dinner together with the residents (I-CWdM1, par. 94) They also hosted Ukrainian refugees for a while (I-CWdM1, par. 159).

4.2.2 CW de Stam

CW de Stam tries to regularly involve residents of the surrounding neighborhood. According to the resident it is a little less than at the start of the co-housing community, but they have the intention to involve the neighborhood a bit more. The resident stated: *"I think a number of people here saw it as a certain kind of duty or obligation, yes, to promote good neighborliness beyond the co-housing community"* (I-CWdS1, par. 84)

The resident mentioned that it is important to keep in mind that the Covid-19 pandemic occurred, and that changed quite a lot for the community. Organizing activities was more natural before the pandemic and it still has an effect now.

The resident argues that it depends on the group composition as well if there are a lot of activities hosted or not. CW de Stam has participated in the open day of Central housing communities as well as in other open days. On those days the co-housing community opened the doors to local residents, who were then also invited for dinner. This is according to the resident not something structural or something that happens very often (I-CWdS1, par.76).

4.2.3 CW de Wierden

According to I-CWdW1, the co-housing community is supported by a select group of active residents. More than half of the residents of CW de Wierden do not participate at all in the community (I-

CWdW1, par. 34). There is a high rate of participation by a homogeneous group (I-CWdW1, par. 54), mostly older residents. For years it have been the same people that participated (I-CWdW2, par. 22).

I-CWdW2 states that it has not always been that way. Previously, there was more solidarity within the group and people were more active. Now, you greet the other residents, but that is all it is (I-CWdW2, par. 76)

Since 2011 CW de Wierden became a place for social housing, this income segregation led to a less diverse group of residents and at the same time the social capacity decreased (I-CWdW2, par.14). People did not have time nor energy for the co-housing community as a collective anymore, argues I-CWdW1 (par.46).

I-CWdW2 argues that there is more contact with the nearby neighbors outside the co-housing community than inside the community (I-CWdW2, par. 76). However, de Wierden also does not put a lot of effort into connecting with the outside neighborhood. According to I-CWdW2 (par. 42), de Wierden does organize a yearly open day, where people can come visit the community. However, this mostly attracts residents from outside the neighborhood who are interested in the concept of co-housing instead of neighborhood residents. The neighborhood organizes activities such as a barbecue for the neighborhood and people of CW de Wierden sometimes participate, not the other way around (I-CWdW1, par.98).

I-CWdW1 states that the solidarity in the neighborhood where CW de Wierden is situated, is very high: *"It is a very social neighborhood in my opinion"* par.74. I-CWdW1 states that the solidarity in the neighborhood is higher than in the co-housing community itself (I-CWdW1, par.74). Although, when the co-housing community was just created there was no integration with the neighborhood at all. Over the last ten to twelve years this has changed a lot. According to I-CWdW1, the reason for this change in the relationship with the neighborhood is that the neighborhood got the opportunity to maintain the greenery by themselves. The municipality offered to assign this maintenance to the neighborhood and I-CWdW2 states that this opportunity influenced the atmosphere in the neighborhood positively.

Once a month about thirty-five residents, coming from both the neighborhood and the co-housing community, come together to do maintenance. This group uses the collective space of CW de Wierden for coffee breaks or for meetings. I-CWdW1 states that the co-housing community really became a part of the neighborhood this way. Once a week people get a news update about the neighborhood, when there are people that need some assistance, residents of the neighborhood come to help (I-CWdW1, par.82).

Instead of the complete co-housing community being in contact with the neighborhood, it is only the few people that are also active in the co-housing community that connect with the neighborhood. The co-housing residents that do not contribute to CW de Wierden, also do not contribute to the wider neighborhood. So it is only a select group of people that is connected (I-CWdW2, par. 40). The neighborhood and the co-housing community only mix to a certain extent, however I-CWdW2 (par. 32) states that the whole neighborhood could be seen as a co-housing community on a much bigger scale.

Expert interview CW de Wierden

(E-CWdW2, par. 127) *"And then you say, look in the Hoekwierde it was very beautiful because it always involved very large outdoor spaces. Yes, and you can actually find common ground for something very quickly."*

The neighborhood de Hoekwierden contained a big area of green space. The two active residents said: “We can do much nicer things with that area than is currently happening, or that the municipality has money for. Give us that area of green space to manage ourselves”(E-CWdW2, par. 21). The two very active residents created a self-management group that consists of neighbors that are tight-knit and motivated. The group has for example already realized a natural playground (E-CWdW2, par. 21). Working on and taking care of the outdoor space of your living environment together. That acts as an enormous connector. The goal is what binds them says E-CWdW2, par. 55.

(E-CWdW2, par. 55) The goal of De Hoekwierden self-management group is of course a completely different one than that of the co-housing community. The goal of the co-housing community is living together. And the goal of the self-management group is a qualitative outdoor area, which includes creating a higher livability of the area. The co-housing community asks for more commitment to the group, than the self-management group (E-CWdW2, par. 59). This commitment might feel restrictive. E-CWdW2, par. 187 argues that co-housing activities might be obligated and that often might scare people off; people enjoy being able to choose when they want to participate or not.

4.3 Surveys

To answer the fifth research question: *to what extent do residents of the co-housing community, and neighborhood surrounding it, feel connected to the neighborhood* a survey was conducted. The survey consisted of open questions, questions with multiple answer options, and Likert scales. The survey was based on the operationalization of the concepts from the theoretical framework (see appendix 1 for operationalization)

The responses of the three case studies were combined into one dataset. A variable was created in the dataset to reflect residency. Table 8 shows an overview of the description per group of residents and the number of responses used.

Table 8

Description per group of residents and the number of responses used

Description	Short description	Number of responses used
Residents of the co-housing community.	Co-housing	23
Residents of the neighborhood withing walking distance of the co-housing community. These residents are located within the red circle displayed in the survey.	Red circle	21
Residents of the surrounding neighborhood outside of walking distance from the co-housing community.	Neighborhood	5

Connectedness to the neighborhood

The inclusion of community in the self-scale (ICS-Scale) was used to examine if all residents in the neighborhood had a similar relationship to all the parts of the neighborhood or if there would be a difference in connectedness among the residents depending on where they reside. For this question respondents could choose on a scale of 1 to 5 how connected they felt, where 1 was the least connected and 5 the most. The indicator for these survey questions is ‘Feeling of belonging to a place’, which falls under the territorial belonging and identity dimension of social cohesion. For this analysis the variable of the ICS-Scale and the variable of ‘Where do you live’, was used.



When looking at the descriptions it is evident that the mean feeling of connectedness for all residents was highest for the area they live in, see table 9 displayed below. To see if the answers to question were significantly different among the groups, a one-way ANOVA was calculated. For the question 'Chose circle 1-5 which fits your relationship with the co-housing community the best' the answers were significantly different at the .05 level $F(2, 44)=7,417, p= .002$. For the answers to the question 'Chose circle 1-5 which fits your relationship with the area in the red circle' there was a significant difference at the .05 level $F(2, 45)=4,265, p=.02$. The results indicate that the respondents feel most connected to their direct neighbors. The respondents feel less connected to neighbors that live further away.

Table 9

Analysis of The inclusion of community in the self-scale

		N	Mean	Std. Deviation
Connectedness to the co-housing community	Co-housing	22	4,18	1,622
	Red circle	21	2,86	1,682
	Neighborhood	4	1,25	0,5
	Total	47	3,34	1,809
Connectedness to the area in the red circle	Co-housing	22	2,64	1,049
	Red circle	21	3,43	1,72
	Neighborhood	5	1,60	0,548
	Total	48	2,88	1,453
Connectedness to the area outside the red circle	Co-housing	22	1,86	1,082
	Red circle	21	2,52	1,47
	Neighborhood	5	2,8	1,483
	Total	48	2,25	1,329

Willingness to participate

A crosstabs analysis measured if the variable: 'People living in co-housing communities' would be likely to take part in collective work for the community (e.g. gardening or preparing a group meal); share goods, like tools and vehicles, with other people; take care of ill or old neighbors, or children of neighbors; and organize activities for the neighborhood

The variables used were: 'Taking part in collective work', 'Sharing resources' and 'Taking care of ill or old neighbors or children of neighbors'. These are based on the indicators for the (internal) solidarity and reductions in wealth disparities dimension of social cohesion. The indicators are: 'Willingness to provide assistance'; 'Engage in collective action with one-sided benefits'; 'Share resources both material and immaterial'; and 'Collective work'.

And the variable: 'Organize activities for the neighborhood' was based on the social dimension of social inclusion and the indicators: 'Contact between insiders and outsiders (bridging social capital)' and 'Organizing activities for people outside of the community'.

The table below displays that the majority of the residents of the co-housing communities are willing to: take part in collective work for the community (e.g. gardening or preparing a group meal); organize activities for the neighborhood; share goods, like tools and vehicles, with other people; and take care of ill or old neighbors, or children of neighbors. Residents of the co-housing communities

are most likely to take care of ill or old neighbors, or children of neighbors and they are least likely to organize activities for the neighborhood.

Table 10

Residents of the co-housing community and bridging social capital

Are you willing to:	Yes	No	Total	%Willing
Take part in collective work for the community (e.g. gardening or preparing a group meal)	17	6	23	73.9%
Organize activities for the neighborhood	11	11	23	47,8%
Share goods, like tools and vehicles, with other people	19	4	23	82,6%
Take care of ill or old neighbors, or children of neighbors	20	3	23	87%

When the co-housing community hosts activities and residents from outside of the co-housing community attend, it could indicate ‘Contact between insiders and outsiders (bridging social capital)’. This indicator is part of the social dimension of social inclusion. To measure if people that lived outside of the co-housing community feel the opportunity to take part in activities hosted by the co-housing community, a chi-square goodness of fit test was applied. Table 10 shows that residents of the co-housing community are significantly more likely to take part in an activity hosted by the co-housing community than people that reside outside of the co-housing community. $\chi^2(4, N = 48) = 29.52, p = <.001$. Only two residents that live in the neighborhood, as opposed to 19 from the co-housing community, answered that they take part in activities.

Table 11

Crosstabulation of taking part in activities and residency.

I take part in activities hosted by the co-housing community:	I live:		
	In the co-housing community	Outside of the co-housing community	Total
Yes	19	2	21
No	3	14	17
There are no activities	1	9	10
Total	23	25	48

Note: 9 people that live in the neighborhood answered that there were no activities. However, they were not unwilling to participate: out of those 9 people 5 answered that if there were activities they would join, the other 4 respondents would not.



To examine if housing type was of influence on the participation, a crosstable was made. Table 12 displays that type of house does not depend on if people are willing to take part in collective work, organizing activities, sharing goods and taking care of ill or old neighbors. It seems that it is evenly distributed. Half of the respondents that lived in a co-housing community are homeowners and half of the people that answered that they were willing to take part in ‘...’ are homeowners as well.

Table 12

Crosstabulation of Willingness to participate and type of house

Willing to take part in:		Type of house:			Total
		Owned	Rented	Social housing	
Collective work for the community (e.g. gardening or preparing a group meal)?	Yes	9	3	5	17
	%	52,9%	17,7%	29,4%	100%
Organizing activities for the neighborhood?	Yes	7	3	2	12
	%	58,3%	25%	16,7%	100%
Sharing goods, like tools and vehicles, with other people?	Yes	9	4	6	19
	%	47,4%	21,1%	31,6%	100%
Taking care of ill or old neighbors, or children of neighbors?	Yes	11	4	5	20
	%	55%	20%	25%	100%

To measure if the willingness to participate correlated with the number of years a resident had been living in this neighborhood, a Pearson’s correlation was calculated. The variable ‘How many years have you been living in this neighborhood’ belongs to the indicator ‘Contact between long-term residents and newcomers’ which is part of the political dimension of social inclusion.

There was a significant moderate negative relationship between ‘Would you be willing to: take part in collective work for the community (e.g. gardening or preparing a group meal)’ and ‘How many years have you been living in this neighborhood’. $r(46) = -.317, p = .028$. This indicates that people who have been living in this neighborhood for a long time, are less likely to participate in collective work. It also indicates that people who have been living in this neighborhood for a short amount of time are more likely to participate.

Social cohesion in the neighborhood

The analysis examined if the variables ‘Everybody in this neighborhood is tolerated’, ‘Everybody in this neighborhood is accepted’ and ‘Common values’ were correlated.

The indicators: ‘Respect for differences’ and ‘Tolerance between individuals and groups’, fall under the social order and social control dimension of social cohesion. For this analysis the variables: ‘Everybody in this neighborhood is tolerated’, and ‘Everybody in this neighborhood is accepted’ were used. The indicator to measure the common values and a civic culture dimension of social cohesion is

the variable ‘Common values’. This variable consists of all sub-questions of question 17, which was used in the European Social Survey (2020), minus questions 17_1 and 17_5.

First Pearson’s correlations were calculated, these are displayed in Table 13 There was a significant and strong positive correlation between ‘Everybody in this neighborhood is tolerated’ and ‘Everybody in this neighborhood is accepted’, and a moderate significant correlation between ‘Common values’ and ‘Everybody [...] is tolerated’. The correlation between common values and ‘everybody [...] is accepted’ was not significant.

Table 13

Correlations Between the Three Social Cohesion Variables.

	Tolerated	Accepted	Common values
Tolerated			
Accepted	.852**		
Common values	.362*	.204	

Note: * $p < .05$, ** $p < .01$ (N=47)

To then examine if the variable ‘common values’ is similar for residents of the co-housing community and for residents outside of the co-housing community, the variable ‘Where do you live’ was included. A one way ANOVA was performed, which was not significant, $F(2,46) = 0.397, p = .674$.

To examine if the variable ‘Everybody in this neighborhood is accepted’ is similar for residents of the co-housing community and for residents outside of the co-housing community a one-way ANOVA test was performed, which was not significant, $F(2,44) = 1.952, p = .154$.

To examine if the variable ‘Everybody in this neighborhood is tolerated’ is similar for residents of the co-housing community and for residents outside of the co-housing community a one-way ANOVA test was performed, which was not significant, $F(2,45) = 2.051, p = .140$.

The results indicate that there were no significant differences between the residents from the co-housing community and the residents outside the co-housing community for the variables ‘Common values’, ‘Everybody [...] is accepted’, ‘Everybody [...] is tolerated’.

To measure if residents (in addition to having similar common values, and a similar view of the acceptance and tolerance in the neighborhood) feel like they have similar opportunities compared to other residents a one-way ANOVA test was performed. The variable ‘I have the same opportunities as other people in this neighborhood’ is part of the economic dimension of social inclusion. A one-way ANOVA test was performed, which was not significant, $F(2,45) = .603, p = .552$. Therefore, the results indicate that there were no significant differences between the residents from the co-housing community and the residents outside the co-housing community.

5. Conclusion

In this thesis it is tried to answer the question ‘Can co-housing communities contribute to an inclusive neighborhood?’. To answer the main question five research questions were formulated. The research used a convergent mixed methods core design combined with a case study design and the methods to answer these questions were: literature review, document analysis, semi-structured interviews and surveys. Per research question a brief conclusion will be drawn.

1. What are the characteristics of co-housing communities?

The literature review suggests that the characteristics of co-housing communities cannot be strictly defined. The thesis used the definitions of Ache and Fedrowitz (2012) and Droste (2015) as guidelines and describes co-housing both as a daily practice as well as a physical concept. It is a resident-led development (Vestbro & Horelli, 2012) that contains fifty households at maximum (Boyer, 2014) and includes close neighbor contacts and hosting of communal activities (Ache & Fedrowitz, 2012; Droste, 2015). Co-housing communities in this thesis are defined as intentional communities (Jarvis, 2015) that are a combination of communal and practical communities (Meijering et al., 2007).

2. Which dimensions contribute to inclusive neighborhoods?

The literature review indicates that the economic-, social-, and political dimension contribute to an inclusive neighborhood. The economic dimension takes into account the access to opportunities could be influenced by where one resides. Therefore, spatial segregation, which can be based on income, can have an effect on the opportunities given to individuals or groups (Silver, 2015). Spatial segregation is seen as a key mechanism for social exclusion, therefore decreasing the degree of spatial segregation could be a contribution to an inclusive neighborhood. The social dimension takes into account the social capital and social networks of residents. Close relationships and frequent social contact could help increase connectedness (Sanguinetti, 2014). This could lead to pro-social behavior, in the form of bridging social capital, and therefore to inclusion (Aron et al., 1992). This pro-social behavior can also be extended to pro-community behavior. A high degree of connectedness is reflected in people viewing themselves as part of a greater community in which they feel included (Mashek et al., 2007). The political dimension takes into account that being granted the opportunity to participate in local organizations can contribute to social inclusion.

3. How is social inclusion described in the environmental and housing policy documents of Tilburg and Almere?

The analysis of the environmental and housing policy documents of Tilburg and Almere indicates that the economic dimension of social inclusion is described by the municipality of Tilburg (2020) as a plan to decrease income segregation by differentiating the housing offer. The municipality of Almere describes the economic dimension as a plan to decrease income and ethnic segregation by offering spaces to various groups (Gemeente Almere, 2020).

The analysis indicates that the social dimension of social inclusion is described in the policy documents of Gemeente Tilburg (2015, p.26) as a focus on more self-reliance and bonding social capital, more often people, instead of the government, will (have to) take care of themselves and of their friends, family or neighbors. And in the policy documents of Almere attention is paid to vulnerable residents that need extra support. Almere wants to be an inclusive city, where residents in a vulnerable position are adequately supported (Gemeente Almere, 2020, p.20). The idea is that this would also support the quality of life in the neighborhood. Participation, self-reliance, health and housing are primarily focused on older people and people with a disability (Gemeente Almere, 2020).

Both Gemeente Tilburg (2020, p.16) and Gemeente Almere (2020, p.21) indicate that collaborative housing could stimulate social contacts en provide support for residents.

The analysis indicates that the political dimension of social inclusion is described in the policy documents of the municipality of Tilburg as involving residents at the beginning of the process of (re)designing public space. That could in combination with the involvement of residents in the maintenance of it increase responsibility, connection and social cohesion in neighborhoods and districts (Gemeente Tilburg, 2020). When people feel more involved in their neighborhood they feel invited to take initiatives themselves in which the government no longer automatically plays a role. This increases liveliness and social cohesion according to the Gemeente Tilburg (2015, p.47). Gemeente Almere (2017, p. 8) also believes that initiatives of residents can play a role in achieving the goals of the municipality.

4. How does the co-housing community contribute to social inclusion in the neighborhood in which it is located?

The interviews indicate that all three co-housing communities try to contribute to social inclusion in the neighborhood by hosting a yearly open day. During the open day neighbors are invited to visit the co-housing community. All three co-housing communities used to take more initiative to organize activities and engage regularly with neighbors outside of the co-housing community. Due to various reasons (bad experiences, a pandemic, and decreases in the social capacity of the residents), the co-housing communities are not as active as they used to be in taking initiative.

CW de Meenthe does have a welcoming attitude towards neighbors, however neighbors do not usually come over uninvited. Friends of residents, who sometimes live in the surrounding neighborhood, are invited for movie nights and bar nights. CW de Stam tries to actively engage with neighbors by promoting good neighborliness and has the intention to organize more activities in the future. CW de Wierden does not take initiative for activities, but some of the residents participate in activities organized by the surrounding neighborhood.

5. To what extent do residents of the co-housing community, and neighborhood surrounding it, feel connected to the neighborhood?

The survey used the inclusion of community in the self-scale (ICS-Scale) of Mashek et al. (2007) to examine if all residents in the neighborhood had a similar relationship to all the parts of the neighborhood, or if there would be a difference in connectedness among the residents depending on where they reside. The results of the survey indicated that the respondents feel the most connected to their direct neighbors. The respondents felt the least connected to neighbors that live further away.

The survey indicated that the majority of the residents of the co-housing communities are willing to: take part in collective work for the community (e.g. gardening or preparing a group meal); organize activities for the neighborhood; share goods, like tools and vehicles, with other people; and take care of ill or old neighbors, or children of neighbors. The residents of the co-housing community are also more likely to take part in an activity hosted by the co-housing community than people that reside outside of the co-housing community.

This research aimed to identify whether co-housing communities could contribute to an inclusive neighborhood. The results, based on the analysis of qualitative and quantitative data and the three case studies, do not suggest that. The hypotheses, based on the literature review, suggested that bridging social capital of the co-housing community could contribute to an inclusive neighborhood. The empirical results of the research do not align with the hypotheses, therefore indicating that co-housing communities contributions to an inclusive neighborhood are limited.

6. Discussion

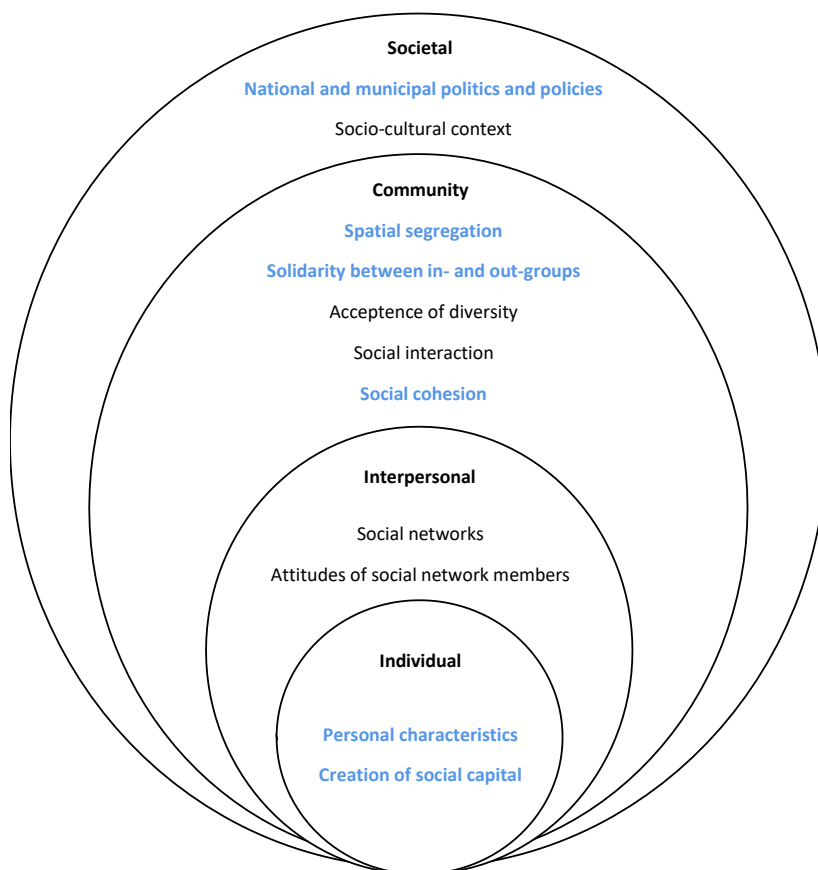
The final chapter of this thesis reflects on the research itself and discusses the limitations of the research. Recommendations for further research are presented and the chapter concludes with recommendations for praxis.

6.1 Reflection on findings of the research

With the use of the adapted ecological model of Simplican et al. (2015) this paragraph will reflect on the findings of this research. The ecological model was included in the literature review. The dimensions that were deemed relevant for the research have been colored blue in the model. The model is displayed in figure 15.

Figure 15

Relevant dimensions of the ecological model



Note. Adapted from Simplican et al. (2015)

The innermost circle of the model displays the individual level. These personal characteristics have an influence on the creation of social capital, since social capital is created on the individual level (Klein, 2011). According to Vranken et al. (2003) the neighborhood can either be passive or active, depending on where people spend most of their time. The way neighborhoods are used by their residents also influences the neighborhood boundaries, some residents have most of their social networks close to their home, while others have a more spatially diffuse social network (Foster et al.,

2015). Social inclusion in the neighborhood might therefore be of great importance for one resident while being irrelevant to another resident.

The creation of social capital can contribute to or diminish social inclusion (Vranken et al., 2003; Kearns & Forrest, 2000). Social inclusion and exclusion are related to social capital. Neighbors that are not living in the co-housing community have to obtain bridging social capital to gain access to the co-housing community. Bridging capital could also be obtained by the co-housing community while organizing activities for the wider neighborhood (Williams, 2005a). Bridging social capital can be accomplished through social connectedness (Szreter & Woolcock, 2004). Bridging capital needs to be present in both residents of the co-housing community and residents of the surrounding neighborhood to contribute to social inclusion.

The third circle displays the community level. The level of solidarity between in- and out-groups and social cohesion in the co-housing community can either contribute to or diminish social inclusion, spatial segregation can contribute to social exclusion (Silver, 2015). The co-housing community itself can be viewed as an in-group. The co-housing community has internal solidarity, internal networks and communal values. According to Sørvoll and Bengtsson (2018) internal solidarity is vital for a co-housing community to function. It is also deemed necessary to be able to do collective work such as gardening or communal meal preparation (Sørvoll & Bengtsson, 2018). Co-housing communities with a high degree of social cohesion within the community, the in-group, might be prone to exclude people outside the community, the out-group. Co-housing communities that are welcoming towards the out-group also have a degree of external solidarity. Organizing activities can be seen as an example of external solidarity.

In the interview I-CWdW2 states that previously there was more solidarity within the co-housing community and people were more active (I-CWdW2, par. 76). This could indicate that solidarity fluctuates over time.

The survey results display that the majority of the residents of the co-housing communities are willing to: take part in collective work for the community (e.g. gardening or preparing a group meal); organize activities for the neighborhood; share goods, like tools and vehicles, with other people; and take care of ill or old neighbors, or children of neighbors. Residents of the co-housing communities are most likely to take care of ill or old neighbors, or children of neighbors and they are least likely to organize activities for the neighborhood. This would suggest that there is a certain amount of internal solidarity in the co-housing community. The residents of the co-housing community answered that they were least likely to organize activities for the neighborhood, this could indicate a lower amount of external solidarity.

When the co-housing community hosts activities and residents from outside of the co-housing community attend, this could indicate bridging social capital. Only two residents that live in the neighborhood, answered that they take part in activities. Fourteen residents answered that they would not attend. This indicates that both the residents of the co-housing community and residents of the surrounding neighborhood should have bridging social capital present.

Separating people from each other physically contributes to social exclusion and leads to reduced interaction between those people (Silver, 2015). The survey results indicate that the respondents feel most connected to their direct neighbors. The respondents feel less connected to neighbors that live further away.

The outer circle is the societal level and it includes the national and municipal politics and policies which can contribute to or diminish social inclusion. According to the United Nations (2016), national and local contexts shape the process of social inclusion. The municipality of Tilburg (2020, p.14) states that involving citizens right from the start in the process of (re)designing public space and the maintenance of it can increase responsibility, connection and social cohesion in neighborhoods and districts (Gemeente Tilburg, 2020). When people feel more involved in their neighborhood they feel invited to take initiatives themselves in which the government no longer automatically plays a role. This increases liveliness and social cohesion according to the Gemeente Tilburg (2015, p.47). Gemeente Almere (2017, p. 5) stimulates that residents come up with initiatives or projects that support the goals of the municipality and contribute to the development of Almere. The interview indicates that when the co-housing community was just created there was no integration with the neighborhood at all. Over the last ten to twelve years this has changed a lot. According to I-CWdW1, the reason for this change in the relationship with the neighborhood is that the neighborhood got the opportunity to maintain the greenery by themselves. The municipality offered to assign this maintenance to the neighborhood and I-CWdW2 states that this opportunity influenced the atmosphere in the neighborhood positively.

Once a month about thirty-five residents, coming from both the neighborhood and the co-housing community, come together to do maintenance. A self-management group was created that consists of neighbors that are tight-knit and motivated. Working on and taking care of the outdoor space of their living environment together. The goal is what binds them says E-CWdW2, par. 55.

This group uses the collective space of CW de Wierden for coffee breaks or for meetings. I-CWdW1 states that the co-housing community really became a part of the neighborhood this way. Once a week people get a news update about the neighborhood, when there are people that need some assistance, residents of the neighborhood come to help (I-CWdW1, par.82).

The ecological model helps to understand social inclusion as a vertical relationship, where individuals integrate and participate in a larger whole. The process of inclusion grants individuals or groups access to the community of interest (Vranken et al., 2003).

6.2 Reflection of the research limitations

The research has several limitations that have to be taken into account.

All three communities align with the Danish co-housing type and share the most similarities with the category of practical community out of the four types of intentional communities (Meijering et al., 2007; De Meenthe Tilburg, n.d.; CW de Wierden, 2021a; Vereniging Centraal Wonen Tilburg, n.d.). The co-housing communities are located in medium-sized cities and are situated in an area with a low degree of urbanity (Thissen & Content, 2022) The municipalities are around the same size and have similar neighborhood characteristics (CBS, 2025). Therefore, generalization of this research would only be limited to co-housing communities with similar characteristics.

The findings of the research are not generalizable, due to the small size of the response group of the survey. To ensure a higher response more survey invitations, than the 120 invitations per case study, could have been distributed. Another option would have been to collect the answers of the respondents of the surveys in person. Due to limitations in time and personal circumstances it was chosen not to collect the answers in person.

Among the residents of the co-housing communities four interviews had been conducted. The researcher had contacted these participants through the email address that was displayed on the websites of the co-housing communities. The residents that reacted to the email were enthusiastic about the research and wanted to contribute. There is a selection bias and participants may therefore not paint a representative picture of the entire co-housing community.

Initially, this research also wanted to examine whether there were social networks within the neighborhood and what those social networks looked like if those existed. However, residents participating in the name-generating survey did not provide enough detailed information to create such a network. The research question was therefore dropped from the research and remains unanswered.

6.3 Recommendations

6.3.1 Recommendations for further research

This research did not include a network analysis of the social networks between the co-housing community and the neighborhood. A recommendation for further research would be to conduct a name-generating survey, in which respondents indicate the strength of their relationships with the names provided. Both residents of the co-housing community and residents of the surrounding neighborhood should be invited to participate in this survey. Based on the outcomes of the survey an overview could be made of the various social networks between or among the co-housing community and the neighborhood. This overview could create insight into the process of bridging social capital. This would be helpful for the analysis of the contribution of co-housing communities to an inclusive neighborhood.

It was chosen to analyze the municipal housing policy and the municipal environmental policy of Tilburg and Almere, since the case studies are located in those municipalities. Even though these municipalities have social policies on the subject of social inclusion, it was chosen not to include those policies. These policies did not directly connect the social issue of social inclusion to spatial planning or housing and it was therefore not deemed relevant to this thesis. Further research could include these policies among other social policies and conduct a broader policy analysis on the topic of social inclusion.

The case studies selected for this research were all the Danish type of co-housing communities and shared the most similarities with practical communities. Further research could compare different types of co-housing communities with each other. A recommendation would be to explore with a case study design if the type of co-housing community has an influence on the contribution to an inclusive neighborhood.

6.3.2 Recommendations for praxis

Being hindered in participating fully in society and therefore experiencing social exclusion can include lacking social networks for support (United nations, 2016). The neighborhood can be a significant place for the creation of these social networks (Foster et al., 2015). These social networks can lead to more connectedness between people, which can therefore lead to pro-social behavior and result in contributing to inclusion (Aron et al., 1992). The process of social inclusion can create opportunities for residents to participate more fully in society.

This research came across the example of the self-management group De Hoekwierden. Two residents had a clear goal in mind: creating a qualitative outdoor area, which includes creating a



higher livability of the area. Around this goal a self-management group that consists of neighbors that are tight-knit and motivated was created. E-CWdW2, par. 55 argues that working on and taking care of the outdoor space of your living environment together acts as a connector between the residents, the goal is what binds them. This self-management group has influenced the atmosphere in the neighborhood positively and when there are people that need some assistance, residents of the neighborhood come to help (I-CWdW1).

This example indicates that neighborhood initiatives created by residents, with a clear goal in mind to create a higher livability of the area, could create an opportunity for (excluded) residents to participate in the neighborhood. Such an initiative could contribute to more connectedness and therefore to more inclusion in the neighborhood.

7. References

- Ache, P. M., & Fedrowitz, M. (2012). The development of co-housing initiatives in Germany. *Built Environment*, 38(3), 395-412. <https://doi.org/10.2148/benv.38.3.395>
- Aron, A., Aron, E. N., & Smollen, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, 63(4), 596-612. <https://doi.org/10.1037/0022-3514.63.4.596>
- Atkinson, R., & Flint, J. (2004). Fortress UK? Gated communities, the spatial revolt of the elites and time-space trajectories of segregation, *Housing Studies*, 19(6), 875-892. <https://doi.org/10.1080/0267303042000293982>
- Atkinson, R., & Blandy, S. (2005). Introduction: International perspectives on the new enclavism and the rise of gated communities, *Housing Studies*, 20(2), 177-186. <https://doi.org/10.1080/0267303042000331718>
- Beauvais, C., & Jenson, J. (2002). Social cohesion: Updating the state of the research (Discussion Paper No. F.23). Canadian Policy Research Network. https://oaresource.library.carleton.ca/cprn/12949_en.pdf
- Bolt, G., Van Kempen, R., & Van Ham, M. (2008). Minority ethnic groups in the Dutch housing market: Spatial segregation, relocation dynamics and housing policy. *Urban studies*, 45(7), 1359-1384. <https://doi.org/10.1177/0042098008090678>
- Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241-258). Greenwood Press.
- Boyer, R. H. (2014). Sociotechnical transitions and urban planning: A case study of eco-cohousing in Tompkins County, New York. *Journal of Planning Education and Research*, 34(4), 451-464. <https://doi.org/10.1177/0739456X14554037>
- Bresson, S., & Labit, A. (2020). How does collaborative housing address the issue of social inclusion? A French perspective. *Housing, Theory and Society*, 37(1), 118-138. <https://doi.org/10.1080/14036096.2019.1671488>
- CBS Statline (2025). *Kerncijfers wijken en buurten 2023* [Data set and code book]. <https://opendata.cbs.nl/#/CBS/nl/dataset/85618NED/table?dl=BB3A5>
- Centrum Groepswonen. (n.d.). *Co-housing of Centraal Wonen. Wat is co-housing?* Retrieved March 10, 2022, from <https://www.centrumgroepswonen.nl/co-housing.html>
- Chiodelli, F. (2015). What is really different between cohousing and gated communities? *European Planning Studies*, 23(12), 2566-2581. <https://doi.org/10.1080/09654313.2015.1096915>
- Chiodelli, F., & Baglione, V. (2014). Living together privately: For a cautious reading of cohousing. *Urban Research and Practice*, 7(1), 20-34. <https://doi.org/10.1080/17535069.2013.827905>
- Coleman, J.S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94(1), 95-120. <https://doi.org/10.1086/228943>

- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Crossley, N., Bellotti, E., Edwards, G., Everett, M. G., Koskinen, J., & Tranmer, M. (2015). *Social network analysis for ego-nets*. SAGE Publications Ltd. <https://doi.org/10.4135/9781473911871>
- CW de Stam. (n.d.). *Wat houd CW voor De Stam in?* Google sites. Retrieved March 8, 2023, from <https://sites.google.com/site/cwdestam/centraal-wonen/wat-houd-cw-voor-de-stam-in>
- CW de Wierden. (2021a). *Aanmelden*. Retrieved March 9, 2023, from <http://www.cwdewierden.nl/aanmelden.html>
- CW de Wierden. (2021b). *Centraal Wonen "De Wierden" Almere*. Retrieved March 9, 2023, from <http://www.cwdewierden.nl/cwdewierden.html>
- CW de Wierden. (2021c). *Voorzieningen*. Retrieved March 9, 2023, from <http://www.cwdewierden.nl/voorzieningen.html>
- CW De Meenthe Tilburg. (2021). *Centraal Wonen*. Wordpress. Retrieved March 14, 2023, from <https://demeenthe.wordpress.com/centraal-wonen/>
- CW De Meenthe Tilburg. (n.d.). *De Meenthe*. Wordpress. Retrieved March 14, 2023, from <https://demeenthe.wordpress.com>
- Dekker, K. and Bolt, G. (2005), Social cohesion in post-war estates in the Netherlands: differences between socioeconomic and ethnic groups. *Urban Studies*, 42 (2), 2447-2470.
- Droste, C. (2015). German co-housing: An opportunity for municipalities to foster socially inclusive urban development? *Urban Research and Practice*, 8(1), 79-92. <https://doi.org/10.1080/17535069.2015.1011428>
- Durkheim, E. (1960). *The division of labour in society* (G. Simpson, trans). The Free Press. (Original work published 1893). <http://fs2.american.edu/dfagel/www/Class%20Readings/Durkheim/Division%20Of%20Labor%20Final%20Version.pdf>
- Engbersen, G. B. M., Bovens, M. A. P., Bokhorst, A. M., & Jennissen, R. P. W. (2020). *Samenleven in verscheidenheid Beleid voor de migratiesamenleving*(WRR-Rapport 2020-103). Wetenschappelijke Raad voor het Regeringsbeleid. <https://www.wrr.nl/publicaties/rapporten/2020/12/14/samenleven-in-verscheidenheid>
- European Social Survey (2020). *ESS Round 10 Source Questionnaire*. ESS ERIC Headquarters c/o City; University of London. https://www.europeansocialsurvey.org/sites/default/files/2023-06/ESS-Round-10-Source-Questionnaire_FINAL_Alert-06.pdf
- European Social Survey. (n.d.). *About the European Social Survey European Research Infrastructure (ESS ERIC)*. Retrieved April 2, 2023, from <https://www.europeansocialsurvey.org/about-ess>
- Feld, S. L. (1981). The focused organization of social ties. *American Journal of Sociology*, 86(5), 1015-1035. <https://doi.org/10.1086/227352>

Folk, J. B., Enriquez, K., Cebas, L., Stuewig, J., Tangney, J. P., & Mashek, D. (2019). The comparability of the visual and verbal versions of the inclusion of community in self scale. *Journal of Community Psychology*, 47(6), 1449-1461. <https://doi.org/10.1002/jcop.22196>

Forrest, R., & Kearns, A. (1999). *Joined-up places? Social cohesion and neighbourhood regeneration*. Joseph Rowntree Foundation.

Foster, K. A., Pitner, R., Freedman, D. A., Bell, B. A., & Shaw, T. C. (2015). Spatial dimensions of social capital. *City & Community*, 14(4), 392-409. <https://doi-org.ru.idm.oclc.org/10.1111/cico.12133>

Fromm, D. (2012). Seeding community: Collaborative housing as a strategy for social and neighbourhood repair. *Built Environment*, 38(3), 364-394. <https://doi-org.ru.idm.oclc.org/10.2148/benv.38.3.364>

Gemeente Almere. (2017). *Omgevingsvisie Almere. Structuurvisie Almere conform Wro*. Ruimtelijke plannen. Retrieved February 7, 2023, from https://www.ruimtelijkeplannen.nl/documents/NL.IMRO.0034.SValg01-vg01/d_NL.IMRO.0034.SValg01-vg01.pdf

Gemeente Almere. (2020). *Thuis in Almere. Woonvisie 2020-2030. Evenwichtig bouwen aan de toekomst*. Almere. Retrieved February 7, 2023, from https://www.almere.nl/fileadmin/files/almere/bestuur_en_organisatie/beleidsstukken/Beleidsnota_s/200710_19c_BL_Woonvisie_Thuis_in_Almere_2020-2030_WOONVISIE.pdf

Gemeente Almere. (2023). *Actieprogramma Almere divers en inclusief 2023-2026*. Sociale wegwijzer Almere. Retrieved February 7, 2022, from <https://www.socialewegwijzeralmere.nl/wp-content/uploads/2024/03/Actieprogramma-Almere-Divers-en-Inclusief-002.pdf>

Gemeente Tilburg. (2015). *Omgevingsvisie Tilburg 2040*. Commissie mer. Retrieved February 9, 2022, from <https://www.commissiemer.nl/projectdocumenten/00003841.pdf>

Gemeente Tilburg. (2020). *Woonagenda Tilburg 2020 - 2025*. Tilburg Raadinformatie. Retrieved February 9, 2022, from <https://tilburg.raadsinformatie.nl/document/8872685/1/204050-02%20Woonagenda%202020-2025>

Gemeente Tilburg. (2021). *Beleidsnota inclusie - Tilburg, stad van verbinding*. VNG. February 9, 2022, from <https://vng.nl/sites/default/files/2021-08/beleidsnota-inclusie-tilburg-stad-van-verbinding.pdf>

Granovetter, M. S. (1973). The strength of weak ties. *American journal of sociology*, 78(6), 1360-1380. <https://doi.org/10.1086/225469>

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). SAGE Publications.

Hipp, J. R., & Perrin, A. J. (2009). The simultaneous effect of social distance and physical distance on the formation of neighborhood ties. *City & Community*, 8(1), 5-25. <https://doi-org.ru.idm.oclc.org/10.1111/j.1540-6040.2009.01267.x>

Inspectie der Rijksfinanciën. (2020, May). *Naar een inclusieve samenleving In ons land, niemand aan de kant. Brede maatschappelijke heroverweging*. Rijksoverheid. <https://open.overheid.nl/repository/ronl-615e7ed7-e3f0-414f-9fbd-1ad990daa6a1/1/pdf/bmh-6-inclusieve-samenleving.pdf>

- Jarvis, H. (2015). Towards a deeper understanding of the social architecture of co-housing: evidence from the UK, USA and Australia. *Urban Research & Practice*, 8(1), 93-105. <http://dx.doi.org/10.1080/17535069.2015.1011429>
- Jenson, J. (1998). *Mapping social cohesion: The state of Canadian research* (Working Paper No. F.03). Canadian Policy Research Network. http://www.cccg.umontreal.ca/pdf/cprn/cprn_f03.pdf
- Kearns, A. & Forrest, R. (2000). Social cohesion and multilevel urban governance, *Urban Studies*, 37(5-6), 995-1017. <https://doi.org/10.1080/00420980050011208>
- Klein, C. (2013). Social capital or social cohesion: What matters for subjective well-being? *Social Indicators Research*, 110(3), 891-911. <https://doi.org/10.1007/s11205-011-9963-x>
- Mashek, D., Cannaday, L. W., & Tangney, J. P. (2007). Inclusion of community in self scale: A single-item pictorial measure of community connectedness. *Journal of Community Psychology*, 35(2), 257-275. <https://doi.org/10.1002/jcop.20146>
- Massey, D. (1991). The political place of locality studies. *Environment and Planning A*, 23(2), 267-281. <https://doi.org/10.1068/a230267>
- McCamant, K., & Durrett, C. (1988). *Cohousing - A contemporary approach to housing ourselves*. Habitat Press.
- McCamant, K., & Durrett, C. (2011). *Creating cohousing: Building sustainable communities*. New Society Publishers.
- Meijering, L., Huigen, P., & Van Hoven, B. (2007). Intentional communities in rural spaces. *Tijdschrift voor Economische en Sociale Geografie*, 98(1), 42-52. <https://doi-org.ru.idm.oclc.org/10.1111/j.1467-9663.2007.00375.x>
- Merriam S. B. (2009). *Qualitative research: A guide to design and implementation*. Jossey-Bass.
- Meuser, M., & Nagel, U. (2009). The expert interview and changes in knowledge production. In A. Bogner, B. Littig, W. Menz (Eds.), *Interviewing Experts*. (pp. 17-42). Palgrave Macmillan. https://doi.org/10.1057/9780230244276_2
- Ministerie van Algemene Zaken. (2023, 17 May). *Zevende Nationale SDG Rapportage - Nederland Ontwikkelt Duurzaam*. Rijksoverheid. <https://www.rijksoverheid.nl/onderwerpen/ontwikkelingssamenwerking/documenten/rapporten/2023/05/17/zevende-nationale-sdg-rapportage-nederland-ontwikkelt-duurzaam>
- Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. (2020, September). *Nationale Omgevingsvisie Duurzaam perspectief voor onze leefomgeving*. Rijksoverheid. <https://www.denationaleomgevingsvisie.nl/publicaties/novi-stukken+publicaties/HandlerDownloadFiles.ashx?idnv=1760380>
- Moses, J. W., & Knutsen, T. L. (2012). *Ways of knowing: Competing methodologies in social and political research*. Macmillan Education.

- PBL, SCP & CPB (2017). *Naar een verkenning brede welvaart*. Planbureau voor de Leefomgeving. <https://www.pbl.nl/uploads/default/downloads/pbl-2017-naar-een-brede-verkenning-brede-welvaart-2919.pdf>
- Perry, C. (2020). The neighborhood unit: From the regional plan of New York and its environs (1929). In R. T., LeGates & F., Stout (Eds.), *The city reader* (7th ed., pp. 557-569). Routledge.
- Pinkster, F. (2009). Neighborhood-based networks, social resources, and labor market participation in two Dutch neighborhoods, *Journal of Urban Affairs*, 31(2), 213-231. <https://doi.org/10.1111/j.1467-9906.2009.00442.x>
- Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy*, 6(1), 65-78. https://doi.org/10.1007/978-1-349-62397-6_12
- PVV, VVD, NSC, & BBB. (2024). Regeerprogramma. *Uitwerking van het hoofdlijnenakkoord door het kabinet*. <https://open.overheid.nl/documenten/ronl-f525d4046079b0beabc6f897f79045ccf2246e08/pdf>
- Raad voor Volksgezondheid en Samenleving & College van Rijksadviseurs. (2022). *Ruimte maken voor ontmoeting: De buurt als sociale leefomgeving*. <https://www.collegevanrijksadviseurs.nl/binaries/college-van-rijksadviseurs/documenten/publicatie/2022/09/05/ruimte-maken-voor-ontmoeting/Advies+Ruimte+maken+voor+ontmoeting.pdf>
- Ruiu, M. L. (2014). Differences between cohousing and gated communities. A literature review. *Sociological Inquiry*, 84(2), 316-335. <https://doi.org/10.1111/soin.12031>
- Sanguinetti, A. (2014). Transformational practices in cohousing: Enhancing residents connection to community and nature. *Journal of Environmental Psychology*, 40, 86-96. <https://doi.org/10.1016/j.jenvp.2014.05.003>
- Scheepers, P. L. H., Tobi, H., & Boeije, H. R. (2016). *Onderzoeksmethoden* (9th ed.). Boom.
- Silver, H. (2015). The contexts of social inclusion (Working Paper No. 144). SSRN. <http://dx.doi.org/10.2139/ssrn.2641272>
- Simplican, S. C., Leader, G., Kosciulek, J., & Leahy, M. (2015). Defining social inclusion of people with intellectual and developmental disabilities: An ecological model of social networks and community participation. *Research in developmental disabilities*, 38, 18-29. <https://doi.org/10.1016/j.ridd.2014.10.008>
- Sørvoll, J., & Bengtsson, B. (2018). The pyrrhic victory of civil society housing? Co-operative housing in Sweden and Norway. *International Journal of Housing Policy*, 18(1), 124-142. <https://doi.org/10.1080/14616718.2016.1162078>
- Sørvoll, J., & Bengtsson, B. (2020). Autonomy, democracy and solidarity. The defining principles of collaborative civil society housing and some mechanisms that may challenge them. *Urban Research & Practice*, 13(4), 390-410, <https://doi.org/10.1080/17535069.2019.1573267>
- Stiglitz, J. E., Sen, A., & Fitoussi, J. P. (2009). *The measurement of economic performance and social progress revisited* [No. 2009-33]. Centre de recherche en économie de Sciences Po. <https://www.ofce.sciences-po.fr/pdf/dtravail/WP2009-33.pdf>

- Stjernø, S., (2004). *Solidarity in Europe. The history of an idea*. Cambridge University Press.
- Storey, D. (2001). *Territory: The claiming of space*. Pearson Education.
- Szreter, S., & Woolcock, M. (2004). Health by association? Social capital, social theory, and the political economy of public health. *International journal of epidemiology*, 33(4), 650-667. <https://doi.org/10.1093/ije/dyh013>
- Tchoukaleyska, R. (2011). Co-housing childhoods: parents' mediation of urban risk through participation in intentional communities, *Children's Geographies*, 9(2), 235-246. <https://doi.org/10.1080/14733285.2011.562384>
- Tummers, L. (2015). The re-emergence of self-managed co-housing in Europe: A critical review of co-housing research. *Urban Studies*, 53(10), 2023-2040. <https://doi.org/10.1177/0042098015586696>
- Tummers, L., & MacGregor, S. (2019). Beyond wishful thinking: a FPE perspective on commoning, care, and the promise of co-housing. *International Journal of the Commons*, 13(1), 62-83. <https://www.jstor.org/stable/26632713>
- Thissen, M., & Content, J. (2022). *Brede welvaart in Nederlandse gemeenten: het belang van regionale samenhang*. Planbureau voor de Leefomgeving. <https://www.pbl.nl/uploads/default/downloads/pbl-2022-brede-welvaart-in-nederlandse-gemeenten-4688.pdf>
- United Nations. (2022). Global indicator framework for the sustainable development goals and targets of the 2030 agenda for sustainable development. https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%202022%20refinement_Eng.pdf
- United Nations. (2016). Leaving no one behind: The imperative of inclusive development. Report on the world social situation 2016. <https://www.un.org/esa/socdev/rwss/2016/full-report.pdf>
- Van Thiel, S. (2014). *Research methods in public administration and public management: An introduction*. Routledge.
- Vereniging Centraal Wonen Tilburg. (n.d.). Tumblr. Retrieved March 8, 2023, from <https://cwdestam.tumblr.com/over-de-stam>
- Vereniging Gemeenschappelijk Wonen. (n.d.). *Woongemeenschappen*. Retrieved March 10, 2022, from <https://www.gemeenschappelijkwonen.nl/adressen-lid-woongemeenschappen>
- Verhoeven, N. (2022). *Wat is onderzoek? Praktijkboek voor methoden en technieken* (7th ed.). Boom.
- Vestbro, D. U., & Horelli, L. (2012). Design for gender equality: The history of co-housing ideas and realities. *Built Environment*, 38(3), 315-335. <https://doi.org/10.2148/benv.38.3.315>
- Vranken, J., De Decker, P., & Van Nieuwenhuyze, I. (2003). *Social inclusion, urban governance and sustainability: Towards a conceptual framework for the UGIS research project*. Garant.



Wabe, A. G., & Montalbo, C. M. (2022). Factors affecting the size of a mass transit station's pedestrian shed in Quezon city, Philippines. *Mindanao Journal of Science and Technology*, 20(1), 143-164.

Williams, J. (2005a). Designing neighbourhoods for social interaction: The case of cohousing. *Journal of Urban Design*, 10(2), 195-227. <https://doi.org/10.1080/13574800500086998>

Williams, J. (2005b). Sun, surf and sustainable housing - cohousing, the Californian experience. *International Planning Studies*, 10(2), 145-177.

Winchester, H. P. M., & Rofo, M. W. (2016). Qualitative research and its place in human geography. In I. Hay (Ed.), *Qualitative research methods in human geography* (4th ed., pp. 3-27). Oxford University Press.

Appendixes

Appendix I

Concept	Dimensions	Indicators	Survey questions / interview questions
Social cohesion	Common values and a civic culture	<ul style="list-style-type: none"> -common values -common morals -common codes of behavior -engagement with political systems -support for political system 	<p>Questions used the European Social Survey (2020, p.93-100)</p> <p>'A. Thinking up new ideas and being creative is important to me. I like to do things in my own original way.</p> <p>B. I think it is important that every person in the world should be treated equally. I believe everyone should have equal opportunities in life.</p> <p>C. It is important to me to live in secure surroundings. I avoid anything that might endanger my safety.</p> <p>D. I believe that people should do what they're told. I think people should follow the rules at all times, even when no-one is watching.</p> <p>E. It is important to me to listen to people who are different from me. Even when I disagree with them, I still wants to understand them.</p> <p>F. It is important to me to be humble and modest. I try not to draw attention to myself.</p>



		<p>G. It's very important to me to help the people around me. I want to actively promote their well-being.</p> <p>H. It is important to me that the government guarantees me safety against all threats. I want the state to be strong so it can defend its citizens.</p> <p>I. It is important to me to always to behave properly. I want to avoid doing anything people would say is wrong.</p> <p>J. I strongly believe that people should care for nature. Looking after the environment is important to me.</p> <p>K. Tradition is important to me. I try to follow the customs handed down by my religion or my family.'</p>
social order and social control	<ul style="list-style-type: none"> -Absence of conflict -Respect for differences -Tolerance between individuals and groups 	<p>-How would you describe the contact between people in your neighborhood?</p> <ul style="list-style-type: none"> -This neighborhood is diverse -In this neighborhood everybody is accepted -In this neighborhood everybody is tolerated
(internal) solidarity and reductions in wealth disparities	<ul style="list-style-type: none"> -interest in their well-being of co-citizens - willingness to provide assistance -engage in collective action with one-sided benefits - Share resources both material and immaterial. -collective work 	<p>-Are you willing to take care of ill or old neighbors, or children of neighbors?</p> <p>-Are you willing to share goods, like tools and vehicles, with other people?</p> <p>- Are you willing to take part in collective work for the community (e.g. gardening or preparing a group meal)?</p>



		-Boundary is strictly defined, place or group.	
	social networks and social capital	-high degree of social interaction -mutual support networks -quality of the networks -population turnover (CBS) -in-out migration (CBS) -social heterogeneity	-Do you see this neighborhood as diverse? -How many years have you been living here? -Type of house: homeowner, rental, social housing.
	territorial belonging and identity'	-territorial behavior -feeling of belonging to a place	<p>Questions used in research of Dekker & Bolt, 2005, p. 2457</p> <p><i>"-I feel at home in this neighborhood</i> <i>-Most people in this neighborhood can be trusted</i> <i>-In this neighborhood we take care of each other</i> <i>-I feel connected to this neighborhood</i> <i>-I feel proud of this neighborhood</i> <i>-People outside this neighborhood think that this is a good neighborhood</i> <i>-This is a cozy neighborhood</i> <i>-I feel responsible for the live-ability in this neighborhood</i> <i>-I feel involved in this neighborhood</i> <i>-This neighborhood is special</i> <i>-It hurts when people say something negative about this neighborhood</i> <i>-This neighborhood has a lively atmosphere</i> <i>-This neighborhood is better than others"</i></p> <p>-Choose a circle that fits your relationship with (the co-housing community, the neighborhood within a 400m range, the neighborhood outside a 400m range)best on the ICS scale (Mashek et al.,2007)</p>



Social inclusion	Economic	-ethnic segregation (CBS) -income segregation (CBS)	-I have the same opportunities as other people in this neighborhood -Do you work?
	Social	-contact between insiders and outsiders (bridging social capital) -bonding social capital -organizing activities for people outside of the community -boundary is not strictly defined	-I do volunteering work -What do you spend most of your time on during the day? - Are you willing to organize activities for the neighborhood? -I take part in activities hosted by the co-housing community, How often. If there are no activities: would you take part if they were organized? -Are you a part of an association (e.g. Sport, church, etc?)
	Political	-contact between long-term residents and newcomers -high level of participation by homogenous residents → exclusion	-How long have you lived in this neighborhood?

Appendix II

Topic list for semi-structured interview:

About the co-housing community itself

What is the CW de (meenthe/wierden/stam)?

What is the reason that co-housing community was set up?

What are the shared norms and values in this co-housing community?

Are people sharing things like tools or vehicles with other inhabitants?

Do people care for other inhabitants when someone is ill or for kids?

Are there activities hosted within the co-housing community for the co-housing community inhabitants? If yes what kind? And what is the goal of these activities?

About the connection between the co-housing community and the surrounding neighborhood

Is CW de (Meenthe/Wierden/Stam) a neighborhood on its own or is it part of a larger neighborhood? If it is part of a larger neighborhood, what is included?

What are the shared norms and values in the neighborhood?

Are people sharing things like tools or vehicles with people from the co-housing community?

Do people care for other inhabitants when someone is ill or for plants or kids?

Does the co-housing community try to engage with specific groups or people in the surrounding neighborhood?

Are there activities hosted by the co-housing community for the surrounding neighborhood? If yes what kind? And what is the goal of these activities?

Which people come to the activities? Do people participate regularly or sporadic? Do people have the same mindset etc?