



LUNDS
UNIVERSITET

Theorising affordability in co-housing: unravelling the how and when of its affordability potential

Roos van der Togt

Department of Human Geography
SGM08
Spring Semester 2023

Examiner: Tomas Germundsson
Supervisor: Anders Lund Hansen

Table of Content

Abstract	3
Introduction	4
Research aim & question.....	5
Literature review – Co-housing and affordability	7
Methodology	11
Theoretical framework	15
Affordability, housing and the Right to the city.....	15
Co-housing as theoretical concept.....	17
Affordability in housing studies	18
Analytical framework – Theorising affordability in co-housing.....	20
Institutional context.....	21
Affordability as value.....	23
Organisational Dimension.....	24
Relational Dimension.....	26
Physical dimension.....	27
Theoretical summary.....	28
Operationalisation – Measuring affordability methods.....	29
Case study of Swedish co-housing projects	32
Rudbeckia.....	33
Stacken	35
Tunnan.....	36
Discussion & Reflection.....	39
Conclusion.....	45
Acknowledgements	45
References	46
Appendix I – Interview guide.....	50

Abstract

Affordability is often cited as a beneficial aspect of co-housing; however, the specific factors that contribute to its affordability and the theoretical understanding of this phenomenon have received limited attention in research. Against the backdrop of the ongoing affordable housing crisis, this study seeks to investigate the circumstances under which co-housing holds the potential for affordability. Specifically focusing on co-housing with shared spaces and adopting a comprehensive perspective on affordability, the paper develops an analytical framework that emphasizes the significance of the institutional context and tenure structure within co-housing projects for achieving affordability. To enrich the analysis, the framework is applied to three case studies of Swedish co-housing initiatives. The findings underscore that affordability is not an automatic outcome of co-housing but requires active efforts. By revealing the underlying mechanisms influencing affordability, this paper aims to contribute to the advancement of more affordable co-housing in general.

Keywords: Co-housing – Affordability – Swedish housing

Introduction

We are experiencing a housing crisis in our cities and societies today, particularly in the area of affordable housing (Archer, 2022; Freeman & Schuetz, 2017; Mulliner & Maliene, 2011; Pittini, 2023). Currently, it is increasingly difficult to access affordable housing in a central location, due to an incredible shortage. Despite the need for affordable housing in cities, social, communal, and non-profit common housing is disappearing as a result of neoliberal housing reforms (Pittini, 2021). One of the responses to this crisis, is the emerging of more (small-scale) collaborative housing projects across Europe, a ‘self-help’ solution to create affordable, sustainable and sociable housing, described as a ‘third way’ of organising housing (Czischke et al., 2020), deviating from traditional market vs. state dichotomy of housing production and ownership.

Collaborative housing, or co-housing, is an alternative form of housing that puts an emphasis on shared living and collective-self organisation (Beck, 2020). It is based on the idea that living spaces should be shared and managed collectively by multiple households. This can include sharing kitchens, bathrooms, laundry facilities and other common areas, and the collective development and governance of homes. By sharing resources and facilities, co-housing can help to reduce costs, conserve energy and resources, and promote a sense of community. Solutions that are considered important to today’s society, and housing market more specifically. These matters translate into the three core pillars of why co-housing is defined as desirable; Social integration, affordability, and sustainability.

Since the 1980s onwards in Scandinavia (Laine et al., 2020; Vestbro & Horelli, 2012) and from the 2000s onwards in other parts of Europe and the rest of the world, this form of housing has gained increasing interest (Czischke et al., 2020; Tummers, 2016). This interest has been translated in the realisation of more co-housing spaces, but also in more academic work surrounding the topic. Scholars and (urban) activists see co-housing as the ‘third way’ of organising housing in the future (Brysch & Czischke, 2022; Tummers, 2016) and a weapon against social exclusion, neo-liberalisation of urban space and affordability crises in housing markets as a result of that (Thompson, 2020).

Affordability is mentioned in almost all papers as a potential positive outcome (Brysch & Czischke, 2022; Lang et al., 2020). However, the literature usually presents affordability as something that is naturally given in the context of co-housing, or mentioned as a potential positive side effect. Rarely is the concept discussed or scrutinised in detail. This while realising affordable housing could be one of co-housing greatest strengths. In Recent years, some papers however have made an effort to theorise and develop the concept more, they for example focus on building costs (Brysch & Czischke, 2022), Tenure structure (Archer, 2022; Bossuyt, 2022; Thompson, 2020) or emphasise the residents own capabilities in planning, designing and building their home (Laine et al., 2020). Despite the popularity of such collective models, evidence of their impact on housing affordability is limited. Even fewer are studies which reveal the causal connection between collective forms and functions and any outcomes they secure for residents (Archer, 2022).

Research aim & question

The primary objective of this paper is to continue the theorisation of affordability in co-housing studies, as well as linking affordability in co-housing to larger urban processes. In recent years, co-housing has become a growing area of scholarly research that emphasises more structural perspective, this paper builds upon this by placing co-housing in a broader institutional context, and moving away from the particular. By building an analytical framework, it unites and expands on previous work regarding affordability studies in co-housing, and brings them in relation to each other. The analytical framework is further explored in the empirical context of Swedish co-housing through case studies.

The question this thesis tries to answer is *How and when does co-housing have the potential to become affordable?* . The research question emphasises the interest of the paper in exploring the causality of affordability, next to the concept of affordability in itself. The *how* and *when* stress that affordability is created by certain factors, in a certain context. The thesis does not try to answer the question of whether co-housing is affordable as a whole.

The project starts by reviewing and organising the current literature around co-housing and its relation to affordability, it too elaborates on the research gap and need to peruse further studies in structural co-housing research. Second, the project sets out the research methodology and complimentary methods, whereby the project is anchored in the philosophy of critical realism. Third, the theoretical framework embeds the research and research question in larger (urban) challenges by connecting itself to the concept of the right to the city. This section too elaborates on the way that this project understands the theoretical concepts of (co-)housing and affordability. Out of the theoretical framework section, a operationalisation of the concepts identified shape the analytical framework, which forms the core of the research. This will be explored empirically in the context of Swedish co-housing. The findings section is a preliminary and exploratory research on how the mechanisms of affordability play out in Swedish co-housing as an example. The thesis ends with a discussion between the empirical findings, the analytical framework and the larger theoretical framework. It too develops pointers for further research.

Literature review – Co-housing and affordability

Literature on collaborative housing and co-housing has grown immensely in the last two decades. As an example, Lang et al. (2020) review over 160 papers, most of which were written after 2000, that address co-housing and collaborative housing. This section gives the reader a short introduction to the concepts, debates and development in the academic field of co-housing. It also elaborates on the previous literature on co-housing and affordability. The section concludes by elaborating on the research question and research gap that the thesis tries to fill.

Literature in the field has traditionally had a strong empirical and case-based focus (Bossuyt, 2022). The field originated mostly from scholarly activists, who often themselves were residents of such co-housing projects. Their main focus is on exploring the uniqueness of co-housing projects, their historic development, and how they rose out of orthodox housing markets. Examples are the articles around the co-housing movements in Scandinavia (Beck, 2020; Blomberg & Kärnekull, 2019; Laine et al., 2020; Vestbro, 1992; Vestbro & Horelli, 2012), Austria (Lang & Stoeger, 2018) and France (Bresson & Denèfle, 2015) and follow a strong geographical pattern. They link the co-housing project to the socio-economic contexts that they emerged from. These case-based research projects often focus on the residents (e.g. Arroyo et al., 2021; Laine et al., 2020), portraying them as crucial enablers and agents in the process of creating and reproducing co-housing.

Since the large growth of academic literature, more recently a significant number of articles have a strong focus on conceptualisation (Czischke et al., 2020; Lang et al., 2020; Tummers, 2015, 2016). They try to strengthen academic scholarship by developing specific concepts and shared topologies to better define collaborative housing, and do justice to its diverse nature. A shared definition is challenged by the many differences in geographical contexts and linguistic concepts (Tummers, 2016), and the complex ontological nature of co-housing makes generalisations in theory hard (Bossuyt, 2022). Collaborative housing can include housing cooperatives, co-housing focused on shared spaces, community land trusts, and other forms of self-organised and self-build housing projects. Terms of collaborative housing, co-housing, resident-led housing are sometimes

used interchangeably in the literature, and even though they all stress some form of cooperation, whether in the sense of governing, building, or living (Czischke, 2018), they can still be very different from each other. The theoretical framework section of this thesis further elaborates on the understanding of (co-)housing in this project, focusing on the presence of shared and common spaces.

The recent turn of stronger conceptualisation facilitates more structural research, which focuses more on theory building than on ‘the particular’ of the earlier papers. Good illustrative examples of this are Archer (2022), Bengtsson (2000), Bossuyt (2022), Czischke (2018) and Sørvoll & Bengtsson (2018). Rather than focussing on a single case study, they explore co-housing in more abstract dimensions, and work towards framework and theory building. This structural research is needed to better understand the workings of co-housing, particularly in relation to the outside world. The texts, however, recognize that certain structures and specific outcomes of co-housing are hard to disentangle from one another due to socioeconomic characteristics and organizational form (Archer, 2022). Meaning that it is difficult to attribute a certain outcome of co-housing to a specific functioning of that housing, affordability included. These texts make a substantial methodological contribution by taking case studies and other empirical data, and shaping them into analytical frameworks and structures of causal mechanisms.

The literature review by Lang et al. (2020) briefly discusses affordability as one of the core ‘effects’ of co-housing. Meaning affordable living can be realised through co-housing. The section is short, and mostly refers to UK based literature around community land trusts (CLTs), UK scholars in the 1990s ‘discovered’ how such tenure mechanisms can ensure affordability in the long run. For example, Thompson (2020) traces the historic paths of CLTs and housing cooperatives in Liverpool, and how it relates to residents’ quality of life and affordable living. It does however not address what *causes* co-housing to be affordable. This is a tendency that can be observed in many papers; their introduction mentions that next to social inclusion and sustainability, co-housing is considered a viable housing alternative because of its potential to be affordable (e.g. Williams, 2005), but hardly elaborates further. Or as Archer (2020, p. 22) states “[..] in a field where claims about outcomes are plentiful, causal explanations are rare”.

On the other hand, several papers do elaborate on the socio-economic composition of co-housing. Co-housing, then, tends to be inhabited by well-educated, middle- and upper-class households (Bossuyt, 2022; Bresson & Denèfle, 2015; Laine et al., 2020; Lang et al., 2020). This could potentially suggest that co-housing is not always affordable, or affordability is not always accessible to everyone.

There have been a few efforts to address this research gap in researching *what* makes co-housing affordable. They have, however, mainly focussed on one particular aspect. Brysch & Czischke (2022) put housing affordability at the core of their paper, but only explored this through the lens of design and building costs. Affordability is assessed at the project level, and only case studies where affordability was a core value were selected. The authors do a good job to exploring the role of design and building costs, but do not explore how affordability is managed over time. As their research only takes co-housing projects with a focus on affordability into account, it is also difficult to assess if co-housing *in general* is more affordable, or if design and building costs are naturally lower in co-housing projects. Yet, the authors do recognise that building and design costs are not the only factors contributing to affordability.

Archer (2022) and Bossuyt (2020) take a more structural approach to filling in this research gap, both focusing on tenure structure in relationship to affordability. By questioning *who owns what*, they seek to understand how different ownership structures affect rental prices. Both authors stress the need for mechanisms that ensure decommodification over time, to ensure affordability for current and future residents. Specifically, tenure structures whereby an association holds ownership rights, or resident-owner structures with incentives from both sides to keep rents down, seem to be succeed in keeping housing affordable. Bossuyt takes tenure as a point of departure, and later connects this to affordability and accessibility, and focuses on a variety of collaborative housing. Archer starts with affordability, and combines this with land acquisition and ownership structures, but mostly focusses on CLTs and cooperatives in the UK.

In their conclusions, each of the three papers above points out that their research effort is only part of the overall explanation of what makes co-housing affordable, and that their conclusions are limited by their social, economic, and political contexts. This project builds upon the structural and theoretical aspirations of the papers above. It attempts to

build a framework that combines and elaborates on all potential dimensions and factors that affect or cause affordability. It also follows the research need hinted at in Archer's conclusion, of exploring and disentangling structures that cause affordability in different geographical contexts. The thesis does this by exploring the full framework in the case of Swedish co-housing. Hence the research questions *How and when does co-housing have the potential to become affordable?*

Methodology

A methodology is a crucial tool that assists researchers in moving from their initial research inquiry and purpose to precise steps and a strategic plan of action. In other words, as explained by Hastings (2021, p. 1), the methodology section of a paper addresses the question: "how do I proceed with answering my research question?". This section clarifies to readers the steps taken by the researcher and provides transparency to the research process. A well-defined methodology demonstrates that the research is sound, rigorous, and, in some cases, replicable (Xiao & Watson, 2019).

As introduced before, the thesis tries to answer the following question: *How and when does co-housing have the potential to become affordable?* The paper tries to answer the question in two ways. First, through developing an analytical framework, a synthesis out of concepts found in the literature study. Second, through exploratory fieldwork of that framework in the empirical context of co-housing in Sweden. The methods are informed through qualitative methods, underpinned by the critical realist philosophy of science.

With its deep ontological world view and structural ways of inquiry, critical realism as a philosophy of science offers a rich toolbox for scientific research in the social sciences (Hastings, 2021). It does not necessarily point the researcher in a strict path regarding methods to be used, but rather has an objective that unites the philosophical approach. The objective to discover a truth in complex social phenomenon (Sayer, 1992). Through abstraction of objects, the researcher tries to uncover mechanisms that bring hidden structures to the surface, that we experience as phenomenon in our daily life. Questions of how, what, where and when in relation to causal relationship are at the core of its philosophy. The thesis works with a critical realist underpinning for the following two reasons.

First, Critical Realism is exceptionally strong in exploring causal relationships (Archer, 2022; Hastings, 2021; Sayer, 1992). The question at the core of this thesis is what mechanisms cause co-housing to be affordable when? Relationships between questions of what causes events to take place and what produces change are core questions asked by critical realist inspired scholars (Sayer, 1992). Structures and characteristics can still exist without always exposing themselves. An example of this

given by Sayer: just because an unemployed person does not work now, does not mean that he cannot work in general. Specific characteristics show themselves in different contexts. For my research this is especially important; in what contexts/scenarios is co-housing affordable? And what characteristic makes it affordable in that case? The temporal dimension is here of importance as well. To compare Sayers example in relation to housing: Just because a co-housing project is (relatively) affordable now, does not mean that it is affordable in the future. It is important to disentangle certain causal effects from one another in a temporal dimension, in order to understand all small factors that in the end come to the surface as (un-)affordable housing. Exploring these causal relationships, is a key research practice of this philosophical tradition; and attention to the structural characteristics related to a specific study area is a key avenue to knowledge (Hastings, 2021; Sayer, 1992). How and when certain outcomes become apparent are called mechanisms. Through mechanisms, the more abstract structural forces of our society show themselves in the witnessable dimension (Archer, 2022). By exploring and uncovering what mechanism is triggered in what situation, we can get a better understanding of the causal relations, in this case, between co-housing and affordability.

The second reason for why this paper finds inspiration in the tradition of Critical Realism, is related to the fact that it recognises both the importance and existence of the material/physical and social nature of our world (Lawson, 2013). Housing studies have traditionally been imbedded in a classical understanding of property rights (Bossuyt, 2022), and have long only been focussed on just material aspects. However, in regular housing studies, and especially in co-housing, social structures play a crucial role too in understanding their functioning. Taking a structural approach like this, is rare in the field of co-housing. The notable exceptions are Archer (2022), Bossuyt (2022) Bengtsson (2000) and Sørvoll & Bengtsson (2018). The philosophical approach of this paper is profoundly inspired by Archer (2022), and shares the awareness that co-housing is very hard to abstract from its institutional and geographical context. As in, it is hard to see it in isolated form from its surroundings. As both inside and outside social relations shape their reality immensely. Some processes that shape affordability in the current day have been going on for many years, and are hard to account for in this research. This means that it is important to “also demand accepting that some causal processes will remain hidden or little understood” (Archer, 2022, p. 8).

The first approach to answering the research question will be explored in a theoretical context, through a synthesis of concepts identified in the literature. Through combining all the relevant previous work in one overarching framework, it aims to have a complete understanding of *what causes* affordability from a theoretical point of view. The analytical framework brings these separate accounts of affordability in conversation with each other, and build further on a full understanding.

The second part of the paper focusses on exploring that framework in the context of co-housing projects in Sweden. This is more empirical in nature, and will be preliminary analysed through 3 case studies. The aim is to empirically reflect on the model built in the previous section, and hence contribute further to theory building by going back and forth between the theoretical and empirical. Case studies allow the researcher to explore how affordability shows itself in a select number of Swedish co-housing projects, and identify how the mechanisms and results develop themselves. It does not try to give a full account on how affordable Swedish co-housing is in general. It also does not start on the assumption that Swedish co-housing is affordable per se.

The three case studies consist of resident interviews and desk research. Interviews are rich in exploratory power and also have the possibility to add further points to the research conducted (Flowerdew & Martin, 2005). However, the author is aware of the subjective nature of interviews, and the lack of ability to properly take the temporal dimension in mind. Hence, the case studies are supported by desk research. This takes matters such as policy documents, other academic material about the case studies, and other relevant document such as statues in account. The case studies are due to time and resources restricted to a very exploratory state. They are meant to help the author reflect on the theoretical model, but are hard to see as a full empirical study of affordability in Swedish co-housing. The operationalisation section of the thesis elaborates more precise on how theoretical concepts are translated into measurable phenomenon.

Sweden is chosen as a geographical demarcation in order to make the research manageable and as the researcher is most familiar with the Swedish context around co-housing. Several Swedish co-housing projects were contacted with differences in geographical context, tenure structure and scale in mind. Kollektivhus NU, a Swedish

umbrella and activists organisation regarding collective housing, was a great help in finding different co-housing projects.

Statistics about rent prices and housing situations as a whole have been acquired from the Swedish statistical office. (*Statistics Sweden, 2023*) and although there is a lot of data available, it is hard to acquire exact data about neighbourhoods in specific cities. Rent prices are then compared to national and regional averages, though they may not accurately portrait rent for their specific context.

Due to the limited time and recourses in this project, a pragmatic approach had to be added too. Due to financial restrains, it was not possible to physically visit the projects, and due to time constraints, only a limited number of interviews could be conducted. In the end, only residents were interviewed, and not for example property managers or architects of the projects. The interviews and desk research were conducted mostly in English, due to the limited ability of the researcher to speak Swedish. This could potentially lead to some information being overlooked, and the residents not being able to express themselves in their native language during the interviews.

Theoretical framework

The research question of *How and when does co-housing have the potential to be affordable?* is imbedded in larger problems in society. Why do we ‘need’ co-housing in the first place? And why is it interesting that affordability is potentially one of its characteristics? This section of the thesis aims to embed the research in broader debates, literature and theories around co-housing, housing, and urban relations in social space as a whole. The theoretical framework is the basis from which new knowledge and insights are constructed, and elaborates on the significance and need of this research to be conducted (Grant & Osanloo, 2014). It strengthens the build-up of the thesis by using established, coherent explanations of certain criteria and relationships. The section elaborates on how the issue is understood, and what definitions are used. First, it introduces the reader to the right to the city framework, and how that impacts the thesis’ understanding of affordability. Second, it discusses the theoretical understanding of affordability in housing studies, and the projects definition of co-housing.

Affordability, housing and the Right to the city

Almost every country in Europe suffers from a crisis in affordable housing, and also the Swedish housing market has become increasingly inaccessible (Hansen et al., 2015). Since the 1980s there has been a vast decline in social housing schemes, and rent and housing prices have drastically gone up in comparison to household incomes (Pittini, 2023).

These problems are in the literature around (critical) urbanism and housing generally attributed to the rise of neo-liberalism (Slater, 2021; Thompson, 2020). Urban policies of neo-liberalism focus on competition and commodification of space. Housing then, is allocated and distributed through market mechanisms as core mode of organisation. Housing markets have become increasingly more privatised, dealing with housing as a commodity, thus being subjected to speculation, and as a result, pricing around housing has moved towards exchange value over use value (Aalbers & Gibb, 2014).

Unaffordable and inaccessible housing translate into a barrier to participate and govern over urban life. The lost agency over our living environment and commodified spaces are themes that play a crucial role in the Right to the City literature, originated by Henri Lefebvre (Lefebvre, 1967, 2003). Capitalist relations and the commodification alienate and deny inhabitants to exercise democratic power over the creation of their own living spaces (Purcell, 2002). The right to the city, then, means the right *not* to be alienated from everyday life, and to be allowed to co-produce space. The right to the city is both a critique of and moral claim against the privatisation and commodification of housing and urban space more widely speaking. And although housing is not the only realm in which alienation takes place, it does hold a central position in urban space (Aalbers & Gibb, 2014).

Many forms of grassroots movements around housing are inspired by the concept and slogan of the right to the city, where a believe that cities should be for people and not for profit plays a crucial role (Aalbers & Gibb, 2014). In the co-housing movement, notions to the right to the city are dominant too. Many co-housing spaces have risen out of crises (Bresson & Denèfle, 2015), and a general discontent with the orthodox way of how housing is organised. Core values of co-housing initiatives focus on democracy, solidarity and sharing, and have the potential to accommodate non-capitalist interactions. Co-housing, although currently limited in its transformative power, is a way to give people agency over shaping and governing their own environment, and thus has radical potential.

The scholarship of housing tends to use the right to the city framework in a more concrete way (Aalbers & Gibb, 2014). However, the usage of the right to the city does come with an inherent radical notion. The concrete dimension that for example maybe focusses on realising more affordable housing, is tied to deeper, more abstract assumptions. The abstract dimension hosts the struggle against capitalist appropriation of space. Using the right to the city framework then comes with an inherent anti-capitalist sentiment. Using only the concrete dimension and focussing on minor improvements, may erode its radical transformative power. The usage of the right to the city framework is a conscious step towards a ‘urban revolution’.

Using the right to the city framework, the question of *why* regarding affordable housing becomes tied to a larger struggle in fighting alienation of capitalist space. The academic

debate of this paper may take place in the concrete dimension, it does see the realisation of affordable (co-)housing as a stepping stone towards the more abstract dimensions of regaining agency over our urban environment. Affordability is then understood as a tool, rather than an end goal in itself. The framework created below can be seen as an attempt to operationalise the more abstract concept of the right to the city.

Co-housing as theoretical concept

As noted in the literature review, co-housing is a broad concept that is part of a larger category of collaborative housing, encompassing various types of dwelling. While all these types of housing share a common emphasis on collective self-management, the specifics of what is managed collectively and when can vary widely. This complexity presents a challenge when attempting to study the phenomenon and develop overarching theories. The purpose of this section is to expound upon the project's particular understanding of co-housing, in order to provide greater clarity and precision to the conclusions drawn in the thesis.

The concept and application of co-housing used in this project finds its roots in the Scandinavian tradition of shared living arrangements, which originated in Sweden and Denmark during the 1960s. At its core, this definition emphasizes co-living, where private apartment units are combined with shared facilities and spaces. This thesis largely relies on the interpretation of co-housing put forward by Beck, who defines it as “sharing common areas, making decisions in non-hierarchical processes, living and interacting socially, and doing things together” (2020, p.6), based on her conceptualization of Danish co-housing. This definition differs from other papers that focus on affordability in collaborative housing (Archer, 2022; Thompson, 2020), which focus on community land trusts and housing cooperatives where collective management is an important factor, but shared spaces are often absent.

This project builds and expands on the spatial framework put forward by Becks (Beck, 2020) that understanding co-housing through four spatial dimensions. In addition to physical and social space, co-housing involves shared values and visions as well as

organizing, financing, and decision-making processes. This multidimensional approach recognizes that space is not merely a given geometry but is continuously produced through socio-spatial relations that are intertwined with the physical dimension. By using this relational view of space, we can understand how it is constituted through social, economic, and cultural meanings that shape how we produce, practice, and structure our environment. Thus, space is not just physical but also includes relational, organizational, and value-oriented dimensions. Specifically, the term "open spaces" in co-housing implies the opening up of areas for sharing between residents illustrating how space is not just a physical entity, but is also socially constructed and continually negotiated.

Although this paper recognises the strength of Beck's framework and multidimensional approach, it does want to expand on this by focussing more on outside relations. The analytical framework further elaborates on the importance of the institutional context, influencing internal processes in co-housing spaces.

Affordability in housing studies

Affordability is a 'hot' topic in general housing studies in both Europe, the United States, and even Asian countries. Markets are over pressured as a result of privatisation, urbanisation and general population growth. It has increasingly been more of a focus for policy makers and academics alike. Affordability, then, is a critical concept in the field of housing, as it pertains to the ability of households to access and maintain decent housing and quality of life, without incurring excessive financial burdens. There are various ways to conceptualize and measure affordability, with no single definition or methodology that is universally accepted in academic literature. Generally, the literature focusses much on *how* to measure affordability, rather than on *how* to create affordability.

One common approach to measuring affordability is through the use of the housing cost-to-income ratio, which compares the cost of housing (e.g., rent or mortgage payments) to the household's income. For example, if a household's monthly rent is €1,000 and their monthly income is €3,000, their housing cost-to-income ratio would be 33.3%. While this method is useful for comparing housing affordability across different households in a quick matter, it does not account for other factors such as transportation costs, utilities,

and other living expenses, or for the quality of housing. Generally, however, statistics like this don't uncover the full picture, and hide more acute problems for sub groups (Archer, 2022), as these ratios generally focus on average income statistics, which are inaccurate for lower income households.

Policy makers tend to stress the '30% mark', meaning that households should spend no more than 30 percent on their income on housing related costs (Pittini, 2023). For example, in the UK only, around 40% percent of households pay more than that mark already. But scholars are stressing on a much wider interpretation of what affordability means, and how to measure it (Mulliner & Maliene, 2011). Although the addition of quality and sustainability criteria makes it increasingly harder to directly compare and accurately measure housing affordability as such (Brysch & Czischke, 2022).

The field of co-housing as a whole does not take a clear stance on how it defines affordability, but aspects that are seen under a wider umbrella of what affordability can entail are often mentioned in the literature. This broader definition, as put forward by Mulliner & Maliene (2011), includes sustainability & durability, quality of life, proximity to amenities, and community aspects such as safety. This paper then sees affordability in this wider view, recognising that co-housing has a lot of potential when it comes to 'worth' that comes out of co-living. And as many papers in the co-housing literature stress, sustainability is often a core driver value of co-housing projects (Lang et al., 2020).

The operationalisation section of the thesis elaborates more on how affordability is measured in the empirical research section.

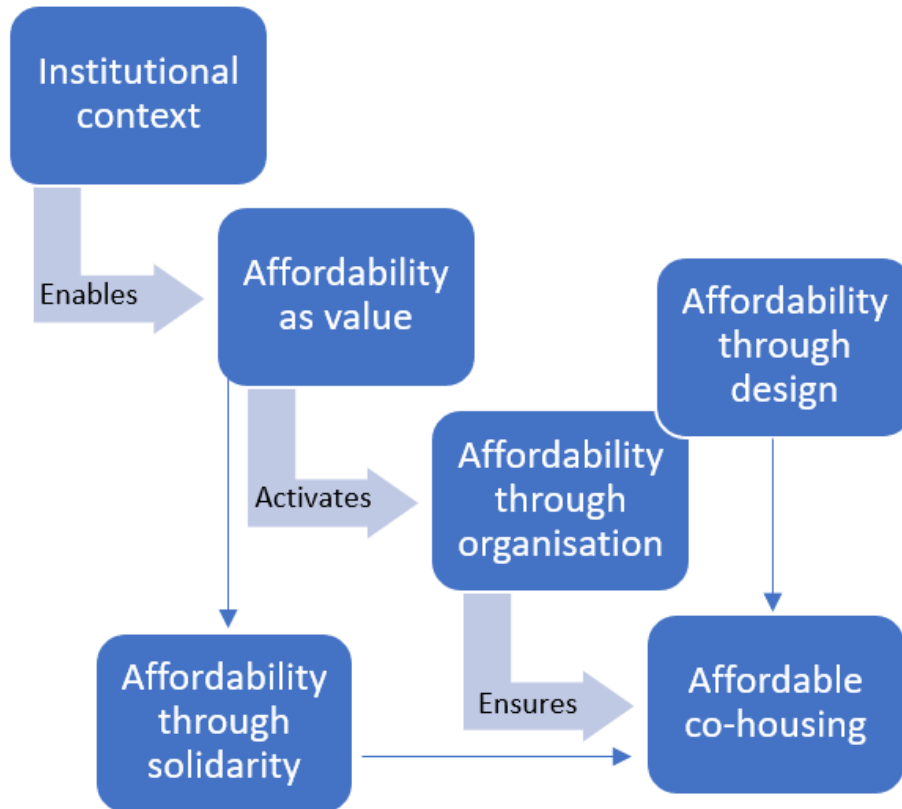
Analytical framework – Theorising affordability in co-housing

This paper endeavours to propose a theoretical explanation for the relationship between affordability and co-housing. Drawing from an extensive review of the literature and guided by a theoretical framework rooted in Beck's perspective on co-housing, a comprehensive analytical framework is formulated (see figure 1). This analytical framework serves as a valuable instrument for researchers to deconstruct affordability, enabling a focused analysis of the underlying mechanisms involved and their interrelationships.

The framework consists of the following elements:

- **The Institutional and geographical context** sets the stage for every co-housing project. Institutional and geographical context heavily influence land acquisition, access to funding and financial schemes, and government support, which are outside factors that influence internal affairs significantly.
- **Affordability as value** serves as a base to inform and stimulate action in the other dimensions.
- **Affordability through the organisational dimension**, is affordability that stems mostly from the tenure & governance structure of the co-housing project. This pillar is mostly based on the theoretical efforts of Bossuyt (2020) and Archer (2022).
- **Affordability through the physical dimension**, is affordability created to collective design processes, reduced building costs and minimum housing standards. Based on the framework developed by Brysch & Czischke (2022).
- **Affordability through the relational dimension** is based on affordability created through internal solidarity, often emphasised in co-housing, based on sharing spaces, meals and goods.
- **Affordable co-housing** is the potential outcome of how the previous interact with each other

Figure 1. The Analytical framework



Institutional context

The institutional context and the outside world play crucial roles in influencing a co-housing project (Laine et al., 2020), including its affordability. This section deals with how external factors may influence internal dynamics of a co-housing project. And how they set the stage for action within the framework. Elaborating on the operation in wider housing and land markets, government influence and matters such as financial and legal institutions, it explains how the institutional context deals the cards for actors within the co-housing to act upon. The institutional context limits the possible ranges of action for a co-housing group (Archer, 2022).

Every co-housing project is embedded in the wider property market. The state and dynamics of that market heavily influence general market prices and affordability, also of land acquisition. If a housing market is suffering from high demand and escalating prices, it can pose affordability challenges for co-housing developments as well, certainly if they are not decoupled from those market mechanisms. And even if the project aims to have a non-profit ethos or affordability incentive, land usually still has to be acquired through that same property market. Access to land generally poses a great threat to the feasibility of co-housing projects (Laine et al., 2020). Vice versa, if the property market is more relaxed, it enables the co-housing group to access cheaper land/property, making affordability more in reach, without the actors actively *making* it more affordable.

Financial models and institutions are not tailored towards crediting collaborate group projects such as co-housing. Due to group risk and tight financial regulation, it is hard for co-housing groups to access funding to collectively. If financial institutions do not want to grant them a loan at favourable interest rates, they might need the help of a third party to take on such a loan, and rent out the co-house project to the co-housing group. The third party may however do not share values of affordability. A government actor can also act as such a third party.

Government bodies and support can significantly affect the feasibility and affordability of a co-housing project. (Local) governments who have a positive attitude towards co-housing can help in overcoming obstacles such as difficulty in accessing financial resources and land. By for example lowering group risks, co-housing projects can access lower interest rates, and provide community facilities and infrastructure. In some cases, government entities may identify surplus land or brownfield sites for affordable housing initiatives, including co-housing projects. By providing access to such land at lower costs or through long-term leases, governments can enable affordable co-housing development. Government and municipality developed and owned co-housing also offers opportunity to keep co-housing projects decoupled from market mechanisms.

If the institutional context works in favour of affordability, it enables actors (co-housing groups) to further act upon their value of affordability. If, however, co-housing groups are restricted from accessing financial funds, land and do not get any government support

in realising their goal, it is highly unlikely that they are able to realise affordable co-housing, despite their intention to.

Affordability as value

Co-housing as a housing form is very vision and value based (Beck, 2020). Many projects come in to being out of a desire of having an alternative to orthodox housing forms. Projects are based on values on how you want to live together, and therefore form the centre of which the rest of the co-house is shaped and created, and are important for the following reasons.

Firstly, co-housing is a collective living arrangement where residents share common spaces and decision-making processes. Therefore, having shared values is crucial for ensuring that residents can live together harmoniously and make decisions that benefit the community as a whole. Without shared values, conflicts can arise over issues such as how to use common spaces or how to allocate resources.

Secondly, values play a key role in shaping the social and cultural aspects of co-housing. Co-housing communities often have a strong sense of community and shared purpose, which is driven by a set of shared values. These values can include things like sustainability, social justice, and affordability. By living in a community that shares these values, residents can feel a sense of belonging and connection to something larger than themselves, or achieve a goal that was not possible to reach on their own.

Thirdly, values can help to shape the physical design of co-housing communities. For example, a community that values sustainability may prioritize energy-efficient buildings and shared resources such as gardens and composting facilities. Similarly, a community that values social interaction may design common spaces that facilitate socializing and collaboration. Hence a co-housing project that takes affordability as a core value, will probably also incorporate that further in their design process (see physical dimension).

Overall, values are a fundamental aspect of co-housing, helping to shape the social, cultural, and physical aspects of these communities. By fostering shared values, co-housing communities can create a sense of belonging and purpose, while also ensuring

that residents can live together harmoniously and make decisions that benefit the community as a whole.

Affordability can also be a value that co-housing is built out of, and as mentioned above, can ensure and motivate actions to be taken in other dimensions in order to preserve this. By naming it a core value, it is likely that the group as a whole takes action to make, or keep the co-housing project affordable. It is therefore not necessarily a mechanism of its own, but rather a driver of the mechanisms named below. It is put at the second base of the framework, as it informs and influences all outcomes later on in the model.

Organisational Dimension

The organisational dimension is the intuitional blueprint of the internal structure of a co-housing project. Its core component is tenure, which distributes control, exclusion and power over the co-housing space. As it determines who owns what, it significantly influences who and how price levels are set. Tenure is, then, a set of relations between property and people. The organisational dimension can be seen as a mediating variable for the effects of co-housing, and hence affordability as well (Bossuyt, 2022). Tenure for example also determines whether or not the co-housing project is exposed to market mechanisms or not. Like the concept of co-housing itself, tenure and the legal forms of organisation around co-housing is very diverse and complex.

Bossuyt (2022) identifies three ideal types of property regimes, and connects them to how they may influence affordability. They revolve around four specific rights, namely the right of commissioning (the right to build or change the physical lay-out of the property), management (the right to decide over how the building is used in its operational phase), exclusion (the right to determine who has access and possession rights), and finally income (the right to transfer collective choice rights to other parties in exchange for money, this includes lease and sale of housing units). This is then combined with who owns these rights. They can be held either by individuals (private), by a group of individuals (common), or by an external party.

Commissioning is strongly tied with the previous section regarding the physical dimension of co-housing. Management can be linked to social relations within the co-housing and are discussed in the next section. Exclusion is maybe the least disputed point as in almost all co-housing types it is usually a collective decision who gets to be a member/move in. The income dimension is however most influential in a direct way to affordability in co-housing.

The income rights determine if the co-housing units are allowed to be sold or leased on the market and who gets to capitalise on that. If the income rights are held personally, and there is no 'limit' on selling or renting, the owner of the income rights may sell or rent out the unit for profit, threatening its affordability potential. In these set ups the resident usually owns their own apartment unit. Individual income rights have high risks of leading to speculation (Bossuyt, 2022; Larsen, 2019), capitalising on the exchange value of their unit.

If the income rights are held in common, for example through a housing cooperative or association, the residents are their own landlord. It often works through the construct that the association 'owns' the building, and residents pay rent to the association. In this sense there might be more motivation to keep the rents down, as they themselves benefit from that. If the income rights are held by an external party, it is important that the external party has a non-profit interest. The building can for example be owned either by a private developer or a municipal housing cooperation. In the case of a private developer, there is a high risk that they do have a profit incentive, renting out the house at market rates, threatening affordability. If the rights are held by a non-profit party, such as a municipal housing organisation, the co-housing project can stay decoupled from market mechanisms.

The organisational dimension is then also the mechanism that ensures that for example the affordability that is worked towards in the physical dimension is safeguarded. Linking it back to the theoretical framework, the organisational dimension can enable the co-housing to be a decommodified space, emphasising use value over exchange value. Affordability may only be achieved when a non-profit ethos is combined with commonly or externally held income rights, legally anchored for a long term. Hence, the organisational dimension is seen as the biggest component of the framework. The

organisational dimension legally anchors the affordability value into the day to day functioning of the co-housing project, and ensures that affordability is assured over a temporal dimension.

However, not every tenure option is always within reach for a co-housing group to choose from. Linking it back to the institutional context, due to restriction to land and financial recourses, co-housing associations/groups cannot always be their own landlord, even if they desire so.

Relational Dimension

The relational dimension is maybe one of the most unique aspects of co-living, and often stressed and applauded in the academic scholarship around it. Living together socially is both good to counter social exclusion, and offers potential for more affordable living, based on sharing and internal solidarity.

Internal solidarity and sharing are two key elements that can contribute to affordability in co-housing. By sharing resources, co-housing communities can reduce the cost of living for each individual household. For example, sharing a common kitchen, laundry facilities, or tool library can reduce the need for each household to purchase and maintain their own equipment, lowering overall costs. Co-housing in Scandinavia is originated around sharing kitchens and meals, to reduce time and money spend in the kitchen (Vestbro, 1992), and still in many co-houses today, sharing meals together is at the heart of collective living.

Additionally, internal solidarity can help to create a support network for residents, reducing the need for outside services and expenses. For example, if a resident is ill, other members of the community can provide support and care, reducing the need for expensive medical services or outside help. Residents of co-housing projects tend to be resourceful (Laine et al., 2020), and through collective maintenance can help reduce living costs.

This dimension can exist 'on its own', as the sharing of spaces, meals and goods can be done almost regardless the institutional context and tenure structure. However, the relational dimension and internal solidarity usually do not exist because it makes living

more affordable, but because it fosters a sense of community. The affordability value is then not necessarily the main driver behind this dimension.

Physical dimension

In co-housing projects, building costs and design costs can have a significant impact on affordability (Brysch & Czischke, 2022). Keeping these costs low, and organising the design process in a collaborate way can increase the affordability of the project as a whole. The three main factors that the authors identified reduced building and design costs were a) the adoption of a common or standardised concept, b) departing from a needs-based approach, and tailoring the housing unit specific to what the resident needs, and c) redefinition of minimum housing standards.

The adoption of a common concept or ‘blueprint’ causes a reduction of potential design costs as only one unit needs to be modelled. It is easy to then duplicate this design for the rest of the departments. Building costs can be reduced by bulk buying of the same goods, as they can be used for every unit in the co-housing project

The needs-based approach stems from the fact that if residents are involved in designing their own homes, they can specifically design what is needed for them. All the space is specifically tailored to their needs, and no space or money is allocated to redundant or non-used matters. It also increases the agency that a resident can have over their own living space.

The redefinition of minimum standards causes individual living spaces to be smaller in size, and maybe also finished or equipped to a lower standard, with having more shared spaces that offer those facilities instead. Individual floor plans become smaller and leaving some spaces unfinished, leading to lower building costs.

Designing and building with a focus on durability and suitability can also reduce costs of living. Long term maintenance and operational costs are important to consider. Incorporating sustainability features such as energy and heating systems can reduce utility costs for residents over time too.

The physical dimension generally first comes into mind when thinking of what potential shared living has in the reduction of costs. It can for example also often be found in grey literature, and seems a logical outcome. However, just because a project is realised for a lower price, does not mean that the actual resident ends up with more affordable housing. The point of *keeping* co-housing affordable after its realisation is heavily linked into the tenure structure, and the organisational dimension discussed above.

Theoretical summary

This study delves into the dynamics of affordability within the realm of co-housing, examining the conditions under which it is established. The central motivation for prioritizing affordability in this project lies in the pursuit of the right to the city. Affordable housing serves as a means to empower residents in asserting greater agency over their living environments. In this context, affordability encompasses the ability to access and sustain housing and a high standard of living at a fair cost, embracing a broad understanding within the scope of this paper. Affordability is not solely measured by the threshold of housing costs being less than 35% of a household's income but also encompasses the capacity to access a certain quality of life, within a secure neighbourhood, in a sustainable and enduring manner. Co-housing, as conceptualized through Beck's framework (2020), is not confined to a physical space alone but encompasses a relational space, highlighting that co-housing is a way of life among its residents. This paper specifically focuses on co-housing arrangements that incorporate shared spaces.

Drawing upon this theoretical comprehension, a framework is devised to elucidate the causal connections involved in the creation of affordability. The capacity of actors to establish affordable housing is shaped by the institutional context, which exerts significant influence over factors like funding accessibility, land availability, and legal boundaries. When these factors align favourably, it empowers actors to manifest their commitment to realizing affordable co-housing. This commitment may be rooted in various dimensions, namely organizational, physical, or relational. Among these

dimensions, the organizational aspect holds greater prominence as it encompasses tenure rights and the allocation of ownership. The right to generate income determines who can benefit from the co-housing project, hence emphasizing the importance of a non-profit ethos. Concerning the organizational dimension, Bossuyt's (2022) understanding of tenure in co-housing predominantly informs the focus. On the other hand, the relational dimension pertains to affordability fostered through internal solidarity and sharing. However, it should be noted that this aspect is not strictly a manifestation of affordability but rather an expression of community. Furthermore, building upon the framework established by Brysch and Czischke (2022), the physical dimension concentrates on affordability achieved through design. The organizational dimension plays a pivotal role in ensuring that these reduced production costs are effectively maintained over time.

Operationalisation – Measuring affordability methods

In order to operationalize the theoretical concepts of the analytical framework within an empirical context, a dedicated section addressing the operationalization of these concepts becomes necessary. This section serves to guide the reader through the specific steps undertaken by the researcher and enhances transparency in the fieldwork process. It builds upon the methods elucidated in the methodology section, ensuring a coherent and comprehensible translation of theoretical constructs into measurable phenomena.

Before one can say something about the mechanisms behind eventual affordability, one first needs to determine if something *is* affordable. As mentioned before, this thesis adopts a wide definition of affordability, where matters such as quality of life, amenities and sustainability are also taken into account. This increases the difficulty in measuring the affordability of a particular co-housing project. The goal is not necessarily to compare the co-housing cases with one another, but to assess if it is affordable relative to its context and its residents. Affordability is then measured in three ways:

1. Affordability compared to income. Using the standard 35% demarcation, a ratio between income and housing costs is measured. This paper will compare it both

to the average income of the region/country, and the minimum wage standard. This intends to create a clear vision for *whom* it is affordable. This is done mostly through desk research.

2. Affordability compared to neighbourhood prices. Rental prices/housing costs are set compared to those of similar units in the same city/neighbourhood. This is especially helpful in understanding if it is a more affordable option than similar housing stock in the region. Housing can however still be unaffordable despite being priced cheaper than neighbouring properties. This is mostly done through desk research.
3. Affordability as assessed by residents. This section focuses on the wider definition of affordability, and explores what residents get back for their money. What other services and qualities come with living in a co-house? This takes a more subjective stand, and is done through interviews.

All prices are based on a 1-bedroom apartment. Statistics are obtained through the national statistical office of Sweden (*Statistics Sweden, 2023*), and through inquiries about the specific co-houses. These statistics are limited in that they often represent a region or country as a whole, and are not neighbourhood specific. It is also difficult to compare property sizes. Residents are also asked to compare their current living situation with that of a 'normal' house. Would they get similar things for the same price compared to co-living?

Features of the institutional context are obtained both through desk research and resident interviews. Through looking at trends in wider property markets, government schemes and how financial institutions interact with co-housing, an overview of the institutional context is sketched. Residents are asked to describe their neighbourhood, and how their co-house interacts with that. Residents are also asked about their relations with the (local) government.

The value dimension is mostly explored through interviews. Residents are asked if their co-house has affordability as a core value, and how important affordability is to them personally. Interviewees are also requested to define what affordability means to them.

Statutes and websites of co-housing projects are examined to see if affordability is mentioned as a value.

Institutional dimensions are researched both through desk research and interviews. The four rights linked to tenure (commission, management, exclusion, income) are used as pillars to define the organisational mode of the co-house around. Through analysing statutes, documents, and inquiring residents about their form of organisation, a more complete picture of the community can be achieved.

The physical dimension was assessed primarily through desk-based research, as most residents were not involved in the realisation and building phase of their co-house. It would have been useful to interview the actual people involved in the building process, such as architects and property managers. Due to time constraints, this was unfortunately not possible. Brysch & Czischke (2022) do, however, have an extensive empirical section exploring this.

Relational dimensions are only researched through interviews. Residents are asked what is shared among them, and how this influences them economically. It is also asked if affordability plays a role in motivating people to share.

Case study of Swedish co-housing projects

This section is an empirical study of three co-housing projects in Sweden: Tunnan (Borås), Rudbeckia (Uppsala) and Stacken (Gothenburg). First, the section briefly talks about the housing market in Sweden as a whole, including an introduction to co-housing in Sweden, to then move on to the case studies respectively. The case studies have an introduction about the co-housing projects as a whole, before moving to a specific analysis on affordability.

The Swedish housing market has become increasingly inaccessible over the past twenty years. This in contrast to the efforts of the Swedish state in the 20th century, labelling housing as a core right for its inhabitants, and a core responsibility of the socio-democratic state. Sweden was a leading European example in how to socially and collectively organise housing. Rental prices were collectively bargained, and there was an abundance of (affordable) housing available through housing cooperatives and other social housing schemes. Rental prices remained largely the same over time (Hansen et al., 2015). However, since the late 90s, housing prices, rent and household debt has risen significantly. The market shows clear signs of financialisation, moving from a use value to an exchange value of housing. This issue is particularly pressing in urban areas like Stockholm and Gothenburg. Compared to other countries, Sweden still has a fairly large rental and cooperative sector.

Co-housing has a long rooted tradition, dating back to initiatives of sharing kitchens in the early 1900s (Blomberg & Kärnekull, 2019; Vestbro, 1992; Vestbro & Horelli, 2012). The early on projects focussed on convenience. Having a shared kitchen and shared kitchen staff, would mean reduced prices on household staff overall, and did not share the philosophy of shared living per se. Similar initiatives throughout the 30s,40s and 50s focussed on having a shared kitchen with kitchen personal, sometimes resembling a restaurant. Only in the 1970s and 1980s saw the rise to the version of co-housing that we know now; ideals of shared living and self-management. Co-housing in Sweden therefore increasingly focussed on shared spaces and sharing meals, in contrast to other European countries. Swedish co-housing also has a significantly higher number of rental projects compared to other countries (Blomberg & Kärnekull, 2019). Motivations for co-housing

projects relate to ideals of co-habitation and self-organisation, away from state organised housing. Affordability is rarely mentioned as a driving factor behind the motivation of co-housing projects.

Rudbeckia

Rudbeckia is a newly realised co-housing project in the suburbs of Uppsala. The project was finished in 2021, having 42 apartments that host roughly 70 residents of a variety of age groups. Rudbeckia was an initiative from a co-housing group, the municipality of Uppsala, and was eventually built and is still managed by Svea Fastigheter Bostad AB. This is a private developer that acts as landlord. Besides that, the co-house has an association, of which the house meetings are its highest organ. A board executes the vision laid out by the house meeting on a day-to-day basis, being supported by several working groups. The project shares 300m² of common area, including an industrial kitchen, gym, living room, guest room, office, workshop, rooftop terrace and kids play room. Joint activities include having shared meals and parties, of which most is non-compulsory. The co-house is situated in a newly developed neighbourhood on the outskirts of Uppsala. The idea behind the neighbourhood is to be innovative and sustainable. The municipality promotes green ways of transport and housing, and tries to give priority to more 'alternative' forms of housing.

Affordability in Rudbeckia

When in conversation with the residents, the interviewees found their homes to not be affordable at all. Comparing rent prices shows that a 1-bedroom apartment located outside the city centre of Uppsala costs about 6700 sek per month on average, in contrast to a 1-bedroom apartment in Rudbeckia costing 10000 sek. Residents did stress that they get a lot for this in return, the rent for example also includes access to facilities such as a shared electric bike and a cargo bike, but that these benefits are not always visible. The co-housing residents do have the possibility to eat shared meals for 20kr a person.

An average household in Sweden has a monthly disposable income of about 33000 sek (*Housing Expenditures as a Percentage of Disposable Income 2021*, 2021), this would come down to household income to rent ratio of about 30%, classifying as ‘affordable’ according to policy paper standards. However, this figure hides many things. A household consisting of a single person with one income has an average disposable income of 22000 sek, almost half that of the household average, spiking up the rent to income ratio to a staggering 45%, making it not affordable at all.

Mechanisms influencing affordability at Rudbeckia

Affordability and sustainability were originally part of the values of the initiating group, but these were pushed out by the private developer; realising a completely concrete building rented out above market rates. The interviewees mentioned that they found affordable housing to be important to them individually, but this was not embedded in the institutional framework of the house. One resident quoted “People do not live here because they want to live cheap, they live here because they want to live as a community”. The property manager Svea Fastigheter Bostad AB does not cherish a non-profit ethos.

The property manager holds the rights of commissioning and income rights. Determining the physical appearance of the building, and is allowed to capitalise on the rents paid by the residents. There is also no act of collective rent bargaining, leaving the residents with no control whatsoever over the rents charged. The only power that the residents have is the right to exclusion (determining whom gets to move into the house) and the right of management (determining the day-to-day affairs of how the house is used). Within the management rights residents have a few tools to keep the rent down. They collectively clean the house, something that otherwise would have been done through staff hiring by the property manager. Now Svea Fastigheter Bostad AB pays the house to do this. This money is mostly invested in shared activities such as meals.

Rudbeckia does have access to many shared spaces, amenities, and meals. Residents recognised that this did marginally reduce their expenses at the end of the month, although these expenses usually do not come from their housing costs budget. It was also hard to see the value of all the shared facilities, and that some facilities such as the shared bikes

were not intensely used. One resident even mentioned that due to high rent pressure, they were unable to part take in many of the collective activities due to having to work more in order to afford rent, not being able to benefit at all from collective activities.

Stacken

Stacken is a co-housing project located in the suburbs of Gothenburg. The project planning started in 1969, but was eventually realised in 1980. It was born out of the co-housing boom in Sweden in the 1970s, with ideals of self-organisation and collective living in mind. The building is eight storeys high, hosting 27 apartments of various sizes. Besides that, the house has many shared living spaces, such as a kitchen, dining hall, several recreational spaces, a children's room (former nurse/day care), sauna and shared garden. Besides co-living, there is a strong focus on sustainable living, realised for a price that is affordable for everyone (*Stacken Kollektivhus*, 2021). The house was originally built and owned by an external party Göteborgshem, a municipal housing organisation. However, in the year 2000 the residents formed an association that bought the house of them when Göteborgshem wanted to sell the property. The highest organ is the house meeting, supported by a board and several working group that each resident is compulsory to work at least 2 hours a week on.

Affordability in Stacken

Stacken is able to realise significantly lower rents than compared to similar places in Gothenburg. A two bed room apartment costs 6400 sek a month excluding utilities, this in comparison to an average around 9000 sek a month in other suburbs of Gothenburg. Comparing this to the average household income of Västra Götaland (the county that Gothenburg is situated), Stacken has a disposable income/rent rate of 20%, which is rather affordable. Certainly, considering that Gothenburg is next to Stockholm one of the tensest housing markets in Sweden.

The only side note to this affordability is that residents are required to work 2 hours a week, or a total of 10 hours a month in service to the house. Some residents regarded this

as work that you otherwise might have to pay for, or hours that you have to work less. This could for example reduce your possible income, or would if translated into paid hours, make the rent significantly more. Residents did mention that you get a lot of things in return for this rent and work in the sense of community spirit, although it does not significantly affect them economically.

Mechanisms influencing affordability at Stacken.

Unlike Rudbeckia, Stacken has a more outspoken view on realising social sustainable housing affordable for all. Both as an organisation and as tenants individually a lot of effort is put in keeping rents as low as possible. With the tenants being their own landlord, there is a non-profit ethos and direct incentive to keep housing affordable. Due to renovations and high energy prices, Stacken experienced a recent rent increase, something that the residents really took at heart, fearing the affordability status of the project.

The association holds the rights to commissioning, management, exclusion and income. Meaning there is full resident control over the co-house, including its rent prices. As the association holds the rights to income, and not the residents individually, the affordability can be ensured by refraining from marketisation.

Doing joint compulsory work on the house in the form of a working group allows costs of organisation and maintenance to be kept low as well. It is hard to see the direct impact on this on the financial situation, but can definitely be categorised as a form of internal solidarity. This can be added to the relational dimension, that marginally contributes to lower costs regarding food and purchases of tools and appliances.

Tunnan

Tunnan is a co-housing project located in Borås, western Sweden. The project is established in a flat that was originally built in the 70s, but was transformed into its current collective form in 1986. It has 27 apartments, with approximately 45 inhabitants of all

age groups. The co-house is also born out of the collective boom of the 1980s, and was originated by a group of residents, with the help of Borås municipality. Collective living and self-management are at the core of their values. The house shares a café and dining space, a sauna and outdoor green areas. It is located on the outskirts of Borås, close to nature and green spaces. The co-housing project takes a pro-active role in the community and neighbourhood as a whole. The building is still owned by AB bostäder, the municipal housing organisation, but is managed on a daily basis by the association. Through house meetings they govern and manage the spaces, with the support of several working groups. Although the building is owned by the municipality, residents take an active role in maintaining the physical aspect of the building as well.

Affordability in Tunnan

Residents of Tunnan find their housing to be affordable and most of all price worth. A 1-bedroom apartment costs around 6000kr in comparison to the average rent in Borås of around 6800kr for a 1-bed. This is however only the rent that a resident pays to the municipality, and does not include the fee that is paid to the association for maintenance. An average disposable income to rent ratio comes in to about 20%, even with lower average incomes of for example individual households, this figure is still well under 35%. The meals and coffees offered in the café are also cheaper than for example going out for a drink/dinner. Similar to Stacken, the resident is expected to contribute work to the house in the form of a workgroup. Minor fixes such as drains, floors, or general maintenance is done by the association themselves. AB bostäder is only responsible for large maintenance, mostly related to the exterior, such as the roof and walls. So yes, Tunnan is regarded more affordable than similar housing units on a regular market, but that is mostly due to the association and residents putting in a lot of effort themselves. The association collectively bargains their rent with the municipality, and recent rent increases for example were significantly lower than other similar housing stock owned by the municipality.

Mechanisms influencing affordability at Tunnan

Tunnan does not necessarily have affordability as a core value. Residents mention that they appreciate that the rent is low and that they do see this as a benefit, but that was not one of the main reasons that they moved in. Motivations of living together is what truly makes the house unique.

AB Bostäder owns the building, but as a municipal housing provider does not have a profit incentive. AB bostäder hold the right to income and commissioning, but this is exercised in cooperation with the association, and through this residents still have some degree of power over these two dimensions. The right of management and exclusion are held exclusively by the association. Due to the income rights being decoupled from market mechanisms, Tunnan is able to keep the rents low.

The relational dimension is what makes Tunnan a more affordable co-housing space as well. Through the sharing of meals, tools and appliances, marginal economic benefits are regained, however, the financial benefits are not the main motivators behind these activities. The collective effort of maintaining the building, allows Tunnan to reduce the rent that is asked by the provider. This does of course require labour to put in from the resident side.

In contrast to Rudbeckia and Stacken, the Borås housing market is less tense. It is generally easier to find affordable housing in the area. This means decreased competition over land, and less incentive to capitalise on rents.

Discussion & Reflection

This paper has attempted to theorise affordability as a desired outcome of co-housing. *How and when does co-housing have the potential to become affordable?* as a question does not focus on whether co-housing is in itself affordable, but when and how mechanisms create affordable co-housing as an outcome. This paper cannot answer the question if co-housing is in itself more affordable. The above case studies and the theorisation behind it show that co-housing is not *necessarily* more affordable, but does in some cases have the potential to be so. Affordability is not naturally given, but is something that needs to be actively worked towards, and is heavily dependent the environment that it is situated in.

This thesis aims to answer this question through the development of a theoretical framework, and through applying that framework in the empirical context of Swedish co-housing. The theoretical framework is constructed out of the existing literature on co-housing, and the empirical case studies were executed through desk research and interviews.

The thesis aims are to theorise affordability in co-housing studies, and linking this to larger urban processes, in doing so, the thesis intends to contribute to more structural research in the field of co-housing. The thesis works towards this aim through the construction of a analytical framework, embedded in the question of the right to the city. The framework and affordability question is further explored through case studies in Swedish co-housing projects.

The objective of this discussion section is to establish connections between the research findings, the analytical framework utilized, the initial research question, and the overarching theoretical framework of affordability in which it is situated. It highlights the key theoretical implications derived from the thesis, reflecting on relevant prior research and emphasizing the real-world significance of the findings. Furthermore, the section acknowledges the limitations of the paper and offers potential directions for future research, thereby facilitating the advancement of knowledge in this field.

The analytical framework devised for this study takes the form of a flow-chart, illustrating the interplay and interrelationships among various dimensions that influence affordability in co-housing. These dimensions encompass the institutional context, affordability as a core value, the organizational dimension, the relational dimension, and the physical dimension. By mapping out these interconnected elements, the framework provides a comprehensive understanding of how these dimensions collectively shape the affordability dynamics within co-housing.

It starts from the institutional context that the co-housing project is embedded in. Through desk research and interviews, the thesis portrays the environment that impacts the co-housing project. This research stresses the importance of the institutional dimension in shaping the agency of actors to realise affordable housing. The outside world is not always taken into account in co-housing research, with a large focus being on internal interaction and processes. This while outside mechanisms and processes heavily influence course of actions for co-housing projects, certainly in the early development stages. It is not that co-housing groups do not want to realise affordable housing, but sometimes are not able to, with co-housing groups struggling to access funds and land for their projects. The (local) government can play a big role as enabler for this, helping co-housing groups overcome these obstacles(Laine et al., 2020). The case studies demonstrate this by the fact that all of them were facilitated by the government in acquiring land. In the case of Tunnan and Stacken, the local government also acted as landlord over these co-houses. However, not all co-housing projects get supported like this, and are sometimes forced to engage with non-government private parties to help realise their co-housing project, potentially threatening the affordability value. The case study of Rudbeckia was a good example of this. The original development group was very set on realising affordable, sustainable housing. These values were eventually rejected by the property manager who built and owned the building. The co-house that got realised in the end being a big concrete, and expensive building. This was due to the co-housing group not being able to finance the build themselves, and the local government not stepping up to eventually realise the build.

This however does not indicate that we are all ‘victims’ of our institutional context, but portrays an opportunity for government and financial institutions to realise the key role that they play in the realisation of more affordable co-housing. Local governments can

act as a mediator in helping co-housing groups access land, and can be a non-profit external party to manage the property. Enabling co-housing to access funds allows them to own and manage their own property, actively working towards affordable housing and good quality of living. Outcomes that are deemed favourable in today's housing market.

Affordability as a value then was also not always found back in the community values of the co-housing projects. The communal living aspect was always valued much higher. The house being potentially more affordable was mostly seen as a welcome bonus. Interestingly, all interviewed individuals did indicate that affordability was very important to them individually, but somehow this was not always transferred to a group value. But as also demonstrated by other case studies in relation to affordability, it is much more likely that the project is actually affordable if it is clearly stated as a community value (Brysch & Czischke, 2022; Chatterton, 2014), it is not necessarily a direct causal effect or mechanisms, like later dimensions discussed, but can be a motivator to take action in those further dimensions.

The organisational dimension stands at the very core of realising housing affordability. The findings of this paper confirm what was said in the discussion chapter of Bossuyt's paper (2022), and shows how important tenure structure is in ensuring affordable co-housing on the long term. However, the way that tenure is distributed (who owns what), is not simply a matter of choice. It is often the institutional context as discussed above to determine who is able to 'own' the co-house, and most importantly its right to income. Commonly held income rights, or income rights held by a third party with a non-profit incentive are then the key in realising affordable housing in the long run. This conclusion generally builds up on the literature confirming affordability in cooperative tenure structures (Archer, 2022), under which one can also count community land trusts, the tenure form that is often discussed in collaborative housing papers (Lang et al., 2020). Decommmodification stands at its heart. It would be an interesting question to explore if regular decommodified housing is more affordable than decommodified co-housing.

The physical dimension has hardly played a role in this research in causing affordable housing. Only points of collective maintenance on the physical structure of the building were sometimes mentioned in the interviews as a way of pressing down housing costs. This does not necessarily mean that the findings of this paper go against that of Brysch &

Czischke (2022), in that building costs can play a role in realising affordable co-housing. This paper argues that in affordability as a whole, in the long term, these influences may be marginal, certainly if one can capitalise on the co-housing project realised. The research design also did not focus so much on capturing this dimension, as if for example it did not talk to people that were involved in the actual building and designing processes of the co-housing project, meaning that this dimension could have been uncovered much more.

The relational dimension does not play a large part in directly lowering housing related expenses, but does play a big role in reinforcing the community of the co-house. Affordability was not necessarily the incentive for these actions and activities. The interviewees much stressed that the process of sharing spaces, meals and time with one another is what made this form of living so valuable and special for them. It was hard to calculate costs that might be saved through internal solidarity and sharing, but it does have the potential to contribute to the wider definition of affordability. It is the relational dimension of co-housing that can offer a better quality of life to its residents compared to normal housing. Sharing and co-living is at the core of this paper's definition of co-housing. Without this dimension, the research would have been similar in logic to normal or co-operative forms of housing. It is however difficult to realise affordable living just through this dimension.

The outcome of affordable co-housing has been measured in a broad sense, although household income to housing expenditure ratios have been taken into account too. Asking the residents about how they understood affordability matched well with the definition used in the paper. Residents found it important that affordability takes lower-income households into account as well, realising what is affordable for some is not affordable for others. Residents would often stress what they would get a lot in return for their price paid, besides just the physical space of their home, such as access to all the shared facilities, and a great support network of their neighbours. Due to not very precise statistics no hard conclusions about affordability can be drawn from the case studies, certainly if we are talking about affordability in Swedish co-housing as a whole. Through the combination of the residents' reflection and rough comparison to neighbourhood prices, affordability can be measured in a relational sense, but it is of vital importance to ask for *whom* it is affordable in relation to *what*. More statistical research in actually

comparing housing prices and income levels of co-housing projects to regular housing situations could be a very interesting potential follow up on this research, although statistical numbers can hide particular marginalised groups, and is not particularly strong in uncovering causal relationships (Archer, 2022).

First, the main theoretical implication of this paper is to show that affordability is not a naturally given outcome or effect of co-housing. Rather, it is something that actively needs to be worked towards. Yes, co-housing has the potential to be affordable, but scholars in the field need to realise how precarious that can be. The realisation of this is incredibly important if we want to bring about more affordable co-housing in the future. This allows us to be more conscious in taking steps to ensure that affordability. Many papers mention how co-housing is mostly inhabited by middle or upper-class households (Bresson & Denèfle, 2015), and that many co-housing projects are not very diverse. If we want to allow people of all incomes and classes to access this unique type of living, that has so much potential regarding quality of life, and agency over one's living environment, making sure that it is affordable is a crucial step. If we acknowledge that there is a crisis in affordable and social housing, which prevents people from accessing their basic human rights, and alienates them from (urban) space, it is crucial that we take an active step in countering this. If scholars and policy makers have realised that co-housing is a way of achieving social, and sustainable living (Bossuyt, 2022), then it must be a priority set by them to keep it affordable and accessible.

Second, the paper clearly sets the concept of a co-house in its wider institutional framework. While previous research has mostly focussed on the specific and internal workings of co-housing (Archer, 2022), this paper shows how much influence outside mechanisms and factors can be in shaping internal processes and outcomes of co-housing. And as mentioned before, it is equally important for policy makers and (local) governments to realise the power that they have over co-housing projects.

Third, although structural research into affordability outcomes of co-housing is novel, the outcome of what makes co-housing affordable is not necessarily that novel. It stresses to keep income rights in tenure structures away from market mechanisms. Critical housing scholarship too stresses to keep housing away from market mechanisms and commodification. We need to move towards the use value of housing rather than to

exchange value. In the fight for more affordable housing in general, it is so important to push policy makers towards decommodification of housing. Questions of tenure in *who owns what* are crucial in working towards a solution in battling the current affordability crisis (Slater, 2021, p. 190).

The findings of this paper, despite the structural efforts, are still limited to the Scandinavian or Swedish understanding of co-housing. The research could really benefit from wider and more in-depth case studies in other countries. This is particularly useful to elaborate on the interaction between the institutional context and the internal working of co-housings. The paper has only scratched the surface in general in exploring co-housing dynamics in relation to institutional frameworks. It recognises that factors in the institutional context influence tenure structures, but it is still somewhat unclear what institutional characteristics allow best for a ideal type of tenure structure in co-housing. Generally, the policy recommendations made in the discussion are merely pointing in a certain direction, but are not specific in how decommodification can best be achieved.

The case studies in this paper were generally of exploratory nature. Due to time and resource restriction, only a limited number of people could be interviewed, and none of the projects were visited by the researcher, potentially missing out on a more nuanced and contextualised understanding of the co-housing. Only residents were interviewed, while for example stakeholders in local governments or external property managers could also have added more depth and insight into the workings of local institutions and the housing market.

The paper discusses affordability as a tool in fighting in the struggle against alienation of space, under the theoretical umbrella of the right to the city. It only makes preliminary connections between the effects of co-housing, and its radical potential to give inhabitants more agency over their living environments. Through its way of management and decision making, co-housing has a lot of potential beyond the affordability dimension in empowering residents in 'the right to the city', and should be picked up by critical scholars as an interesting tool in the struggle over capitalist space.

Conclusion

Co-housing is not necessarily a more affordable way of housing, but does have the potential to be, an important realisation in the fight for affordable housing in today's housing crises. This paper has explored the causes and conditions for co-housing to be affordable, through developing an analytical framework and through exploratory research of Swedish co-housing cases. Co-housing has particularly a lot of potential when linked to a broader definition of affordability, that focusses on quality of life, amenities and sustainability besides a fair household expenditure to housing costs ratio. The thesis stresses the importance of the institutional context in enabling actors to realise affordable housing, whereby difficulty in access to land and funding can hinder co-housing groups from acting on their affordability values. The organisational dimension is the core mechanism in ensuring affordable housing on the long term, whereby a non-profit ethos and commonly owned income rights is the ideal tenure type. Internal solidarity through sharing can slightly reduce housing expenditures, but mostly positively impacts community aspects of co-living. The physical aspects around building and design cost have played a marginal role in the findings of this paper regarding affordability. Recognising the affordability potential can enable co-housing to be a tool for residents to gain more agency over shaping their living environments. Affordability in co-housing is not naturally given, but has to be actively worked towards, and can in this sense ultimately contribute to more affordable housing.

Acknowledgements

This thesis expands on the efforts of the CO-HOPE project, a trans-disciplinary research project that researches the development and dynamics of Co-housing in different European contexts, and specifically pandemic experiences of co-housing residents. I am grateful to have been a research intern to this project over the course of several months in 2022. My own reflections and notions on co-housing in an academic context have been inspired by this project. The thesis partly builds upon theoretical and methodological practices and assumptions of CO-HOPE project (see The CO-HOPE team, edited by Gizem Aksumer, Ruth Höpler, Maryam Khatibi, 2023)

References

- Aalbers, M. B., & Gibb, K. (2014). Housing and the right to the city: Introduction to the special issue. *International Journal of Housing Policy*, *14*(3), 207–213.
<https://doi.org/10.1080/14616718.2014.936179>
- Archer, T. (2022). The mechanics of housing collectivism: How forms and functions affect affordability. *Housing Studies*, *37*(1), 73–102.
- Beck, A. F. (2020). What Is Co-Housing? Developing a Conceptual Framework from the Studies of Danish Intergenerational Co-Housing. *Housing, Theory and Society*, *37*(1), 40–64. <https://doi.org/10.1080/14036096.2019.1633398>
- Bengtsson, B. (2000). Solving the Tenants? Dilemma: Collective Action and Norms of Co-operation in Housing. *Housing, Theory and Society*, *17*(4), 175–187.
<https://doi.org/10.1080/140360900300108618>
- Blomberg, I., & Kärnekull, K. (2019). Do-it-yourself: The stony road to cohousing in Sweden. *Built Environment*, *45*(3), 280–295.
- Bossuyt, D. (2022). Who Owns Collaborative Housing? A Conceptual Typology of Property Regimes. *Housing, Theory and Society*, *39*(2), 200–216.
<https://doi.org/10.1080/14036096.2021.1888788>
- Bresson, S., & Denèfle, S. (2015). Diversity of self-managed co-housing initiatives in France. *Urban Research & Practice*, *8*(1), 5–16.
<https://doi.org/10.1080/17535069.2015.1011423>
- Brysch, S. L., & Czischke, D. (2022). Affordability through design: The role of building costs in collaborative housing. *Housing Studies*, *37*(10), 1800–1820.
<https://doi.org/10.1080/02673037.2021.2009778>
- Chatterton, P. (2014). *Low Impact Living: A Field Guide to Ecological, Affordable Community Building*. Routledge.

- Czischke, D. (2018). Collaborative housing and housing providers: Towards an analytical framework of multi-stakeholder collaboration in housing co-production. *International Journal of Housing Policy*, 18(1), 55–81.
- Czischke, D., Carriou, C., & Lang, R. (2020). Collaborative housing in Europe: Conceptualizing the field. In *Housing, Theory and Society* (Vol. 37, Issue 1, pp. 1–9). Taylor & Francis.
- Flowerdew, R., & Martin, D. (2005). *Methods in human geography: A guide for students doing a research project*. Pearson Education.
- Freeman, L., & Schuetz, J. (2017). Producing Affordable Housing in Rising Markets: What Works? *Cityscape*, 19(1), 217–236.
- Hansen, A. L., Larsen, H. G., Grydehoj, A., & Clark, E. (2015). *Financialisation of the built environment in Stockholm and Copenhagen*.
- Hastings, C. (2021). A critical realist methodology in empirical research: Foundations, process, and payoffs. *Journal of Critical Realism*, 20(5), 458–473.
- Housing expenditures as a percentage of disposable income 2021*. (2021). Statistiska Centralbyrån. <https://www.scb.se/en/finding-statistics/statistics-by-subject-area/household-finances/household-expenditures/housing-costs/pong/tables-and-graphs/housing-expenditures-as-a-percentage-of-disposable-income-residual-income--and-number-of-households-by-tenure-and-type-of-household-2021/>
- <https://www.stacken.org>. (2021). <https://www.stacken.org>
- Laine, M., Helamaa, A., Kuoppa, J., & Alatalo, E. (2020). Bricolage in collaborative housing in Finland: Combining resources for alternative housing solutions. *Housing, Theory and Society*, 37(1), 101–117.
- Lang, R., Carriou, C., & Czischke, D. (2020). Collaborative housing research (1990–2017): A systematic review and thematic analysis of the field. *Housing, Theory and Society*, 37(1), 10–39.

- Lang, R., & Stoeger, H. (2018). The role of the local institutional context in understanding collaborative housing models: Empirical evidence from Austria. *International Journal of Housing Policy*, 18(1), 35–54. <https://doi.org/10.1080/19491247.2016.1265265>
- Larsen, H. G. (2019). Three phases of Danish cohousing: Tenure and the development of an alternative housing form. *Housing Studies*, 34(8), 1349–1371.
- Lawson, J. (2013). *Critical realism and housing research*. Routledge.
- Lefebvre, H. (1967). Le droit à la ville. *L'Homme et La Société*, 6(1), 29–35.
- Lefebvre, H. (2003). *The Urban Revolution*. U of Minnesota Press.
- Mulliner, E., & Maliene, V. (2011). *Criteria for sustainable housing affordability* (D. Cygas & K. D. Froehner, Eds.; pp. 966–973). Vilnius technical university. <http://leidykla.vgtu.lt/conferences/Enviro2011/Abstracts/4/166.html>
- Pittini, A. (2023). *Housing affordability in the EU: Current situation and recent trends*.
- Purcell, M. (2002). Excavating Lefebvre: The right to the city and its urban politics of the inhabitant. *GeoJournal*, 58(2), 99–108.
- Sayer, A. (1992). *Method in Social Science: A Realist Approach, Second Edition*. Routledge.
- Slater, T. (2021). *Shaking Up the City: Ignorance, Inequality, and the Urban Question*.
- 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.
- Statistics Sweden. (2023). Statistiska Centralbyrån. <https://www.scb.se/en/>
- The CO-HOPE team, edited by Gizem Aksumer, Ruth Höpler, Maryam Khatibi. (2023). *Internal Report on the Conceptual & Theoretical Framework & the Data Collection Tools of the CO-HOPE Project – tested in Rompemoldes, Seville-Spain 23rd November 2022*. Horizon 2020, JPI Urban Europe, CO-HOPE.
- Thompson, M. (2020). From Co-Ops to Community Land Trusts: Tracing the Historical Evolution and Policy Mobilities of Collaborative Housing Movements. *Housing, Theory and Society*, 37(1), 82–100. <https://doi.org/10.1080/14036096.2018.1517822>

- Tummers, L. (2015). Introduction to the special issue: Towards a long-term perspective of self-managed collaborative housing initiatives. *Urban Research & Practice*, 8(1), 1–4.
<https://doi.org/10.1080/17535069.2015.1011421>
- Tummers, L. (2016). 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>
- Vestbro, D. U. (1992). From central kitchen to community cooperation: Development of collective housing in Sweden. *Open House International*, 17(2), 30–38.
- 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>
- Williams, J. (2005). Sun, surf and sustainable housing—Cohousing, the Californian experience. *International Planning Studies*, 10(2), 145–177.
<https://doi.org/10.1080/13563470500258824>

Interview guide – MA Thesis

Affordability in Co-housing

READ THIS TO INTERVIEWEES BEFORE START

First of all, thank you so much for helping me out with this project. The interview will last no longer than **30 minutes**. The interview will focus on affordability, and how you as a resident view that in your particular co-housing estate. The aim of my research is to see how we can make housing in general more affordable, and in what way co-housing can contribute to that.

The questions mostly ask about how you organise things in your co-housing. Some questions relate to your personal financial situation. Not all questions may apply to you, and you are always allowed not to answer a question. I am aware that English is probably not your first language, don't worry, you are always allowed to say something in Swedish, which I can later on translate.

Are you ready to start? Do you have any questions?

I will **audio record** the session in order for me to transcribe it. In the final research product, you will be anonymised, and the audio files will be deleted. If you like, I can send the final paper to you.

Research question: What potential does co-housing have to contribute to affordable housing?

Sub question: How do residents of co-housing projects in Sweden reflect on affordability in their co-housing project?

1. Introduce yourself and your co-housing
 - a. With how many people do you live?
 - b. Can you describe your own apartment?
 - c. How long have you been living in the project?
 - d. In what neighbourhood/city is the project located in?

2. Affordability – residents’ perspective
 - a. Do you regard your housing situation to be affordable?
 - i. Why (not)?
 - b. How would you define affordability?
 - c. How much % of your income do you roughly spend on housing?
 - d. Is affordability an important value within the project?
 - e. Imagine if you would live in a normal house with approximately the same amount of space and amenities, would you likely pay more or less?
 - f. Do people of different income levels live in your co-housing?

3. Building costs
 - a. Were you involved in the designing and building of the project?
 - b. If **yes**, did designing and building the project together reduce costs?
 - i. By sharing an architect
 - ii. By duplicating the same design
 - c. Did you use cheap materials?

4. Institutional dimension
 - a. How is the co-housing organised tenure structure wise?
 - i. E.g. do you rent? Buy?
 - ii. Cooperative?
 - iii. Who owns the project?
 - iv. Can you sell your apartment on the regular housing market?
 - v. Who owns the land?
 - b. Are there mechanisms in place to keep the co-housing affordable for future generations?
 - c. Is it hard to find affordable housing in your neighbourhood/city in general?
 - d. Did or do you receive any government support?
 - i. As individual
 - ii. As co-house

5. Social relations & Solidarity
 - a. What kind of things do you share in the house?
 - b. Do you share meals together?
 - c. Does this reduce your expenses in any way?

6. Finishing up
 - a. Do you have anything you would like to say to me?
 - b. Have I missed something important?
 - c. Any last questions?