## SHARING IS CARING

How to Design a Sharing Community

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COLLECTIVE | HOUSING | SHARING | COLLABORATIVE | SUSTAINABLE

#### ABSTRACT

Cohousing has again become a popular concept for those who want to live in a more sustainable community. But since the types of cohousing built today are relatively conventional more options are required. Today we also need to relate to the current situation with global warming and the need to cut down on resource use. In this context it is interesting to investigate and develop the cohousing concept, embracing a sharing community to meet the demands of more sustainable ways of residing. The work can help to shed light on the need for a new focus in the design work with residences and hopefully support the path to a more sustainable thinking.

The purpose of this study is to examine cohousing and to design a cohousing, where you can choose what you want to share and how much should be shared within a community at various levels. I have chosen to call this concept for a "sharing community". The aim is to create a hybrid between the collective and the conventional housing. The target group are those who want to live in a community but not in the current situation seek out a traditional cohousing. The purpose is also to investigate how the residential design can relate to dimensions of social sustainability for the residential community and for the individual resident. The thesis is based on a mixed approach of theoretical studies, studies of residential needs and demands, a questionnaire and research by design. Questions considered crucial for the work are social sustainability, shared use, sustainable living and sharing economy. For the method research by design the exploratory sketching process plays a big role in this thesis.

The result is a design layout of multi family housing where new ways of sharing and joint use will be presented. This work may help to shed light on the need for a new focus in the design work force housing, and hopefully support the path to a more sustainable thinking in terms of residential development. KOLLEKTIV | BOSTAD | DELANDE | SAMUTNYTTJANDE | HÅLLBARHET

#### SAMMANFATTNING

Klimatfrågor och resursförbrukning är aktuella ämnen som i högsta grad berör allas vårt sätt att leva och bo. De bostäder som byggs idag är ofta designade för att uppfylla vissa krav på ekologisk och ekonomisk hållbarhet, men den sociala hållbarheten riskerar många gånger att bli eftersatt. Det är inte heller övertygande om byggnaden är hållbar i sin design, om inte dess innehålle ger förutsättningar för att leva ett hållbart liv. Många individer vill både bo och leva mer hållbart och därför krävs fler alternativ än de som finns tillgängliga idag. Kollektivhuset har åter blivit ett populärt koncept för de som vill bo i en gemenskap där det finns möjlighet att både dela rum och saker. Men eftersom de typer av kollektiva bostäder som byggs idag är relativt konventionell behövs fler alternativ. Idag måste vi också att relatera till den nuvarande situationen med den globala uppvärmningen och behovet att skära ned på resursanvändning. I detta sammanhang är det intressant att undersöka och utveckla bostadskoncept, som omfattar delandegemenskapen, för att möta de krav som ställs på ett mer hållbart sätt att bo. Arbetet kan bidra till att belysa behovet av ett nytt fokus i designarbetet med bostäder och förhoppningsvis stödja vägen till ett mer hållbart tänkande.

Syftet med denna studie är att undersöka kollektivhus och att utforma en gemensam bostad, där du kan välja vad du vill dela och hur mycket som ska delas inom en gemenskap på olika nivåer. Vissa saker är möjligt att dela med hela gemenskapen medan andra saker bör delas med färre hushåll eller hållas helt privat. Jag har valtatt kalla detta koncept för "delandegemenskap". Syftet är att skapa en hybrid mellan det kollektiva och den konventionella bostaden. Målgruppen är de som vill leva i ett samhälle, men inte i dagsläget söker sig till ett traditionellt kollektivhus. Syftet är också att undersöka hur bostadsdesig kan relatera till olika dimensioner av social hållbarhet, både i boendemiljön och för den enskilde individen.

Examensarbetet är baserat på ett blandat tillvägagångssätt av teoretiska studier, studier av bostadsbehov, ett frågeformulär och metoden forskning genom design. Frågor som anses avgörande för arbetet är social, ekologisk och ekonomisk hållbarhet, samutnyttjande, hållbar livsstil och kollaborativ konsumtion. För metoden forskning genom design spelar en utforskande skissprocess stor roll i detta examensarbete.

Resultatet är en design av ett flerfamiljshus där nya sätt att dela och samutnyttja kommer att presenteras. Detta arbete kan bidra till att belysa behovet av ett nytt fokus i designarbetet med bostäder, och förhoppningsvis stödja vägen till ett mer hållbart tänkane i termer av bostadsutveckling. Med tanke på klimathotet och en accelererande konsumtion och resursförbrukning i världen, anses ämnet vara mycket viktigt att utveckla ytterligare.

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I. INTRODUCTION

#### THE AUTHOR

Hanna Östlund started her studies at Architecture at Chalmers Univeristy of Technology in 2012. After her bachelor she did the MPARC studio Future visions for healthcare, housing and work.

"For me architecture is a perfect combination of design, technical solutions, social responsibilities and environmental ethics."



#### PART I. CONCEPT

#### I. PURPOSE

The purpose of this study is to examine cohousing and to design a collective housing, where you can choose what you want to share and how much should be shared within a community at various levels. I have chosen to call this concept a "sharing community". The aim is to create a hybrid between the collective and the conventional housing.

The homes built today are often designed to meet certain standards of ecological and economic sustainability, but social sustainability often risks to become neglected. Nor is it convincing that the building itself is sustainable in its design, if not the building contents provide the tools to live a sustainable life. Many individuals want to live and dwell more sustainably, and therefore require more options than those available today.

Cohousing has again become a popular concept for those who want to live in a community where there is opportunity to both share a room and objects. But since the types of collective housing built today are relatively conventional more options are required. Today we also need to relate to the current situation with global warming and the need to cut down on resource use. In this context it is interesting to investigate and develop the cohousing concept, embracing a sharing community to meet the demands of more sustainable ways of residing. The work can help to shed light on the need for a new focus in the design work with residences and hopefully support the path to a more sustainable thinking when considering ways of residing and residential floor plan design.

#### II. BACKGROUND

I have lived in two different cohouses myself, and I have experience both pros and cons. In my case we lived 6-7 people in a villa in south of Sweden with separate bedrooms and shared living room, kitchen, bathroom and garden. I lived there for one year and then I moved to an apartment in Gothenburg where we lived 3-4 people together for almost three years with separate bedrooms shared livin groom, kitchen, bathroom and balcony.

This conventional concept of cohousing offers a great opportunity for cohousing when you are young or single but is maybe not equally suitable for families or single parents etc. The other regular form of cohousing with big apartment house and common areas in the ground floor is although being build today, but my belief is that more people would like to live in some kind of cohousing if there were various options. My strong belief is also that we need to share both space and objects within our own households and not just have shared spaces outside our apartments. Therefore the wish for both privacy and association, ownership and sharing are the core in this thesis.

#### **II. MAIN QUESTIONS**

HOW to design a hybrid of conventional living and cohousing with different levels of both privacy and sharing?

HOW can the residential design support dimensions of social sustainability for the residential community and for the individual resident?

#### III. KEYWORDS

#### COLLECTIVE

- a group of people who live together in some kind of dwelling or residence. (p.20)

#### COHOUSING

- an intentional community of private homes clustered around shared space. (p.20)

SHARING - the joint use of a resource or space

SHARED USE - use of several actors, use to-gether. (p.25)

#### COLLABORATIVE CONSUMPTION

- various arrangements to rent, share or borrow things rather than to own them. (p. 25)

#### SHARING COMMUNITY

- people living in a community whit a joint use of a resource or space. (p.49)

#### SUSTAINABLE LIVING

- a lifestyle that attempts to reduce an individual's or society's use of the Earth's natural resources and personal resources. (p.21)

#### SOCIAL SUSTAINABILITY

-a community that is equitable, diverse, connected and democratic and provids a good quality of life. (p.22, 45)

#### ENVIRONMENTAL SUSTAINABILITY

- the capacity of the biosphere to meet the needs of the present generation, without hindering future generations from being able to meet their needs. (p.24)

FLEXIBILITY - willingness to change or compromise

#### GENERAL ROOMS

- rooms that are functionally independent, flexible and of equal size and shape. The sizes of a general room allows various use. (p. 45)

#### PART II. METHOD

#### I. MIXED-METHOD APPROACH

The thesis is based on a mixed approach of theoretical studies, studies of residential needs and demands, a questionnaire and research by design. In my research, I study both literature and existing examples while I have a parallel sketching process.

By analyzing examples of existing cohousing projects, questions about what should be shared and how the sharing affects the design of the property, can be developed in my housing project. The issue of social sustainability will be studied based on the parameters of flexibility, privacy and meetings both in the private residence in the housing unit with common exterior rooms. The survey is intended to give a general idea of what can be shared and what a sharing community might look like.

#### II. THEORY

My literary references are mainly books, articles and papers about cohousing and sustainability concepts. I use literature to build a theoretical background regarding the origin and use of collective dwellings throuh out history. The literature also provides support in my design when it comes to how and what can be shared. I have also studied reference projects and made a closer analysis of two of them. The reference projects I analyze are mainly based on the plans and how the conditions for socializing and sharing looks. My key points in the analysis is shared use, flexibility and privacy. I also study the apartments by architectural qualities in terms of flow, meeting, light and sharing.

#### III. DELIMITATIONS

For the cohousing question I concentrate on the Swedish context. Focus for the design work is the every-day functions of the dwelling and how these can be organized in cohousing situations. The design work is non contextual, meaning that there is no specific plot for the project. The focus is instead aimed towards spatial design as a general quality and how it can be organized to provide qualitative conditions for cohousing considering social dimensions and spatial esthetics and functionality. I will also focus on the social and ecological questions regarding sustainability and not the economic.

## THE YOUTH COMMUNES New Way of Living Confronts the U.S.

## II. RESEARCH

#### PART I. CONTEXT

#### THE UTOPIA

The ideals of a collective way of living were described already in the beginning of the first half of the 19th century by both the French utopian Charles Fourier and the English socialist Robert Owen (Vestbro, 1979). The first cohousing projects is closely related to the utopian socialism in France during that time and France was, unlike England which was the most industrialized country, the most modern country in the social and political sense. In France there was a background of the Enlightenment and the French Revolution that gave conditions, particularly in the middle class, to see the social problems and formulate options. The Enlightenment had a strong belief that man and society were shaped by external conditions. To the extent that these condition were changeable was also man and society were changeable. (Caldenby, 1992).

The characteristic features of the early cohousing that was established was that they where detached and "isolated" units with a a large cohesive internal building structure. In some ways their structure can be compared with a monastery or a prison. Critics argue that this structures provides social fragmentation, spatial hierarchy and separation of groups (Caldenby, 1992). Anyhow some of the idéas were realized in USA and supporters of Fourier and Owen founded hundreds of communities based on common production and consumption (Vestbro, 1979).

#### COHOUSING IN SWEDEN

In Sweden the first cohousing Hemgården Central

Kitchen was founded in 1906 in central Stockholm. It was built not as a result of great ideals but mainly for practical reasons when there was a shortage of servants among the middle class. The so called family hotel provided the middle class people with a residence where they could get collective services. Hemgården was not followed by any similar facilities in Sweden but with the labor movement in the 1930's the discussion about cohousing was raised again (Vestbro, 1979). In Sweden the cohousing in the 1930's was presented in the spirit of functionalism as a general solution and not for special categories. In the collective, a new type of family would be living where the wife worked, spouses lived as equals and children were taken care of by society (Vestrbro, 1979).

In the late 1970's the smaller version of cohousing became more popular. Cohousing in the 70's differed from the 30's. Service was replaced with the working community and the community became smaller and denser. It also became more important with solidarity and equality. And at the same time community activists began to talk about resource management and consumption. There was also a strong belief that the small community would ease everyday life and that the community would not only operate as accommodation but it could also contribute to the local area (Caldenby, Walldén, 1984).

The cohousing gave, by its physical form possibilities to informal social contacts but gave also ability for seclusion. It was a intermediate between the family and the large society but without the desire to distinguish themselves from society (Caldenby, 1992).



#### PART II. SUSTAINABILITY

Sustainable development has been defined in many ways, but the most frequently quoted definition is from Our Common Future, also known as the Brundtland Report . The report is a document which defined the meaning of the term Sustainable Development and was is written by the World Commission on Environment and Development (Brundtland Commission) on behalf of the United Nations and was released the in 1987. The Brundtland commission is an organization independent of the UN to focus on environmental and developmental problems and solution (www.unece.org).

The Brundtland report says that "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." It contains two key concepts. The first is the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given. The second is the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs (www. iisd.org).

#### I. DEFINITIONS

#### SOCIAL SUSTAINABILITY

Social sustainability can be defined as a quality of societies. It signifies the nature-society relationships, mediated by work, as well as relationships within the society. According to INSS (Integrated Network for Social Sustainability) social sustainability is given, if work within a society and the related institutional arrangements satisfy an extended set of human needs. It needs to be shaped in a way that nature and its reproductive capabilities are preserved over a long period of time and the normative claims of social justice, human dignity and participation are fulfilled (www.nae.edu/INSS). The sharing of resources and the community brings social benefits as being close to friends and neighbors. The ability of neighbors to meet and cooperate is a necessary for creating thriving communities. The cohousing enables not only people to live a more environmentaly sustainable life but also to live in a strong support system close to other people (McCamant, Durrette, 2011).

In my project the social sustainability is a very important aspect and is presented in several ways. The shared responsibility and sharing of both rooms and things contribute to social sustainability as the residents are given the opportunity to both receive and give help and share services between households. Social sustainability also arises when the building allows spontaneous meetings to take place between neighbors. My belief is that the sense of belonging to a community is a very important aspect for social sustainability.

# MAKE LOVE NOT WAR

YC

NO

S

M

Hippie community, 1966

#### ENVIRONMENTAL SUSTAINABILITY

Environmental or ecological sustainability refers to the capacity of the biosphere to meet the needs of the present generation, without hindering future generations from being able to meet their needs (www.iisd. org). This means using our natural resources wisely in the short-term so that these resources are available in the long-term. A major cause of failure to achieve sustainability has been a modern factor to work against rather than with nature, to dominate rather than to co-opt. Disregard for nature and natural systems follows from a mind-set that sees human achievement as limited only by human will and imagination (Lemons, 1998). My opinion is that we need to accept that we are part of nature and if we exploit its resources in an irresponsible way, it will ultimately affect the future of both mankind and the planet.

In this project, ecological sustainability is represented in the sharing of things and space. To share things between households is for me a matter of course in a sustainable society. In a sharing community the residents can own things together but also borrow things from each other. The building itself contributes to environmental sustainability as it is flexible in its use and when households share rooms the needs of private living space hopefully is reduced. Even material and building structure can contribute to more sustainable environment. However, it is nothing I will present in detail in this project.

#### II. COLLABORATIVE LIFESTYLES

#### CONSUMPTION BEHAVIOURS

Consumption has accelerated during the past century. Production per inhabitant in the wealthiest countries have increased by an average of two percent per year during the 1900's. Consumption has doubled every 35 years. In Sweden, every generation had almost twice as high standard of living as their parents and three to four times as high as their grandparents when they were the same age (Johansson, 2007). At the same time, the income gap since the 90's in Sweden has grown faster and more than in any other Western country, according to OECD (The Organization for Economic Cooperation and Development) (svd.se).

Our productive economy demands us to make consumption a way of living and to keep the economy rolling. Things needs to be consumed, burned up, worn out and replaced. A big part of the problem is that many of our consumer behaviors have become so habitual that we no longer are aware of our impact. Psychologist call this consumer 'lock-in' because habits, routines, social norms and cultural values locks us into unsustainable behaviors and make it difficult to make deliberate choices about what to buy or not (Botsman, Rogers, 2010).

#### COLLABORAIVTE CONSUMPTION / SHARED USE

We are teaching children how to share toys nicely but for adults the concept of sharing often becomes loaded. In our society we share parks, roads and public spaces but we often have a resistance to sharing our personal possessions. Words like cooperative and collectives are loaded with stigmas and sometimes unfortunate associations (Botsman, Rogers, 2010). Fortunately, from my point of view, it seems like more people become aware of the importance of conserving the earth's resources. As people become a more informed consumer they can make conscious choices in everyday life.

It is not just physical objects like bikes and cars that can be shared or swapped. Spaces, interests, skills, money and services can usefully be shared in a community, in what is called collaborative lifestyles. The core of collaborative consumption seeam to be four critical underlaying principles: critical mass, idling capacity, belief in the common and trust between strangers (Botsman, Rogers, 2010).

The first principle, critical mass, is a sociological term used to describe the existence of enough momentum in a system to make it become self-sustaining. The system will be successful only if the users are satisfied by the choice and the convenience available to them.

The second term is the idling capacity and it refers to the unused potential of an item when it is not used. For example a power drill that in average is used between six and thirteen minutes in its entire lifetime. And yet most of the households have bought their own power drill. The heart of collaborative consumption is the reckoning of how we can take this idling capacity and redistribute it elsewhere. Idling capacity is not just related to physical items, it can also include skills, space and commodities as electricity.

The third principle is the belief in the common, which is a new paradigm for creating value and organizing a society of shared interests. Collaborative consumption is tied to how these principles are being applied to other parts of life. The more people who participate in common program such as bike sharing the better the system works for everybody. Every person who uses Collaborative consumption creates value for another user even if that was not the intention from start.

The last principle is the trust between strangers. Collaborative consumption often require us to trust someone we don't know to varying degrees. If people trusts their neighbors and people in the community, most of the time the trust is strengthened and not broken over time (Botsman, Rogers, 2010).

To share things and services is the public buildings' main reasons. The traditional cohouses consist of larger common premises and functions outside the apartments. This often involves workshops, kitchen and garden. My opinion is that we should share even on a more private level. It is not sustainable to live in a cohousing where each household is fully equipped and the sharing and social interactions only occurs in the premises on a predetermined floor. In this project I want to bring sharing to a more private level, but at the same time ensure that there are opportunities for privacy. Therefore, the sharing should be possible in different levels where the building provides opportunities to share both with everyone and with fewer.

#### PART IV. SURVEY

An survey regarding cohousing and sharing was sent out via social medias and was anonymously answered by 100 people. The results of the survey act as a supplementary guide in the analysis and design work. It would be useful to know the age and gender and social background of the respondents, but in this case

Would you like to live in a collecitve?
(With 2 or more people who are not family.)



2. Would you like to live in a cohousing? (A building with smaller apartments and common areas such as kitchen and lounges?)



3. Would you like to live in a sharing community with people you know? (Where you have a private residence but some rooms/features/things is shared with another household you know?)



4. Would you like to live in a sharing community where some things are shared with another household you don't know?



that part fell out. My estimate is that there were people between the age of 25-35 who responded to the survey. Gender and social background are difficult to estimate, but I assume that it's equal parts men and women and that it is people raised in Sweden with relatively good economy.





### 6. Which parts of the home would you NOT like to share with others?



7. What objets in your home would you like to share with others?



## 8. What object are most important to own (i.e. not to share with others) ?



#### QUICK ANALYSIS

What can be inferred from the survey is that the interest in living in a traditional collective is quite low. The more distinct the question is formulated that the cohousing in question provides both privacy and sharing the more it seems to be an interest in this housing form. It also seams evident that there are many both 9. What would be the most important aspect for you to become part of a collective or a sharing community? \*

#### SOCIAL ASPECTS (49%) ENVIRONMENTAL ASPECTS (23%) SHARING RESPINSIBILITIES (19%) SHARING THINGS (9%)

\*Here the economical part unforturnatly fell away and it is obviously an important aspect to keep in mind in further evaluations of the survey.

10. How many other households (not individuals) would you like included in the collective / sharing community?



spaces and goods that people are willing to share. But the answers are not entirely clear which suggests that there needs to be an opportunity for individuals to be able to control what is shared in the Community and which features the common rooms should have. It can also bee seen that there is a bigger interest in smaller communities than bigger compositions.

## III. REFERENCE PROJECTS & ANALYSIS

#### PART I. REFERENCE PROJECTS

In this part, I present four examples of cohousing; Markeliushuset, Villa Norra Ängby, Stacken and Sofielund. All built during different eras and with some different purposes and design. They should help to understand cohousing development and show examples of different types of cohouing. Differences and similarities between the different concepts can also be studied and give inspiration for my own design process. Two of these reference projects, Stacken and Sofielund, I have chosen to analyze closer in terms of shared use, flexibility and privacy. I also study the apartment's architectural qualities in terms of flow, meeting, light and sharing.

#### I. JOHAN ERIKSSONSGATAN, 1935

In 1935 the architect Sven Markelius designed a cohousing in central Stockholm called Kollektivhuset John Erikssonsgatan. It was built in the functionalist spirit and the idea was that the new type of family with working spouses would live here. The building consisted of 54 apartments, most of which were one bedroom apartments. On the ground floor there was a kitchen (1) and a restaurant (2) with dumbwaiters up to the apartments (3), a day nursery (4-6) and a two stores (7-8). In the basement was a laundry and on the roof was a sun teracce. The idea was that the apartment were suppose to be small and affordable to make it possible for low-paid people to move in. It proved to be unrealistic and it was mostly intellectuals who came to live there. When staff costs rose, it was finally no longer economically viable to operate public housing with employees and it was a gradual dismantling of the collective. Although Markeliushuset was designed rather for service than for the social aspects, the cohousing was a well functioning community for many decades. Today the cohousing is liquidated and the house is a restaurated building with condominiums (Vestbro, 1979).



Apartment floor





#### II. CO-VILLA NORRA ÄNGBY, 1988

In Norra Ängby west of Stockholm two covillas were built in 1988 in by initiative of the City of Stockholm. It was the City of Stockholm who, through Småstugebyrån initiated, designed and led the construction. Every one that stood in Stockholm's housing queue for cohousing got an offer to be part of the new construction. I came in contact with one of the residents, Eva Söderlind, through a friend when I searched around to find examples of cohousing where they share space and objects in a smaller community. The co-villa consists of two semi-detached houses on each 190 sq.m. with 5 apartment. The houses are joined together by a a villa of about 125 sq.m which is the common part with joint entrances, living room, kitchen, laundry, carpentry, and sauna. At most, there lived 22 people in the villa and today there are 12 accommodations. All members are active on the board and they look after the maintenance of the property on working days and on a schedule.

#### INTERVIEW - EVA SÖDERLIND

Eva Söderlind has lived in the covilla since it was built and she aslo took part in the construction. Each household built their own apartment, and when they moved in, they built the common parts and laid out the garden. They had less than a year to get to know their prospective neighbors before construction started, and they met a few times to talk about expectations, layouts etc.

Eva's reason to move here was that she wanted to stay in a cohousing, get closer to neighbors, sharing tasks and easily socialize with others. Personally, she would like to have more community such as cooking but the interest is not as big as before. "We had more joint activities before when most of us had children who played together. One can also say that the exploitation of the common living room grows exponentially with the number of children in the house". According to Eva the best part of the cohousing is the size, the neighbors who have become her friends, the security, that they help each other and that it's easy to get for example babysitting.

Eva's children who grew up in the covilla puts it this way: "You go out in the common part if you want to meet people. If you want to be in peace you go into your room and shut the door." Eva explains that there are a lot of open doors in the house and it's easy to slide into each other or just take part of others everyday life from a distance.



#### III. STACKEN COHOUSING, 1980

#### BACKGROUND

In 1969 residential houses was built in the Gothenburg suburb Bergsjön, but the housing market was saturated, and in the mid 70's many apartments were left empty. The owners of the houses, Göteborgshem (today Poseidon) suggested that one house could be converted into a cohousing, and in 1980 the first tenants moved in. In year 2000 the company that owned Stacken sold it, and the residents then formed a cooperative tenancy that bought the house and now the residents take care of Stacken on their own. (Caldenby, Walldén, 1984)

#### THE BUILDING

Stacken cohousing consists of one eight story house with 35 fully equipped apartments and several common areas. The common areas are located in the ground floor and on the 5th floor. In the ground floor is a laundry room (1), wood workshop (2), photo lab (3), music room (4), a sauna (5) and a local that can be used as a café (6). On the 5th floor is a communal kitchen (7) and dining hall (8), and a playroom (9). The playroom was originally a day care center for residents' children and can now be used for meetings and private gatherings. On the 5th floor there is also(10) and a handcraft workshop (11) (Caldenby, Walldén, 1984).





#### THE APARTMENTS

In Stacken there are 35 apartments in varying sizes. There are all from studio apartments to 7 rooms and kitchen. Most apartments are 3 rooms and kitchen on about 70-80 sq.m. The apartments are fully equipped with kitchen and bath and private balcony. The bedrooms are of generous size and living areas are large and bright with natural light from two directions. The fact that the house is being remodeled, means that the apartments can not be assessed on the basis that they are optimally designed to live collectively in. But at the same time, both the quality and deficiencies in the apartment plans give me direction in my own projects.

#### SHARED USE

The cohousing is designed so that the common areas are centered in the house and it is clear where to expect the community and sharing. The reason for placing dining room and nursery on the 5th floor and not on the ground floor was partly due to the limitations of the supporting walls of the existing building. But there was also a desire that the residents could move in stairwell (Caldenby, Walldén, 1984). In the apartment plan there is no indication that the residents are expected to share more than common premises. There is no natural meeting place in the stairwell except on the ground floor and no common storage area for cleaning supplies, etc.

Because of conflicts regarding if there would be meat or nor at the meny, the dining room is not in use at this moment. The dining room is often one of the main elements of a cohousing and many times it is the room that enables everyday communion and exchange between residents. Without a dining room, it is important that there are other opportunities to get together and eat. For exemple, it can be cooking teams or other groups that on joint initiativ get together to share meals.

#### PRIVACY AND COMMUNITY

In the apartments, the livingroom is, in most case placed in the back which means that the more private parts must be passed to get there. In Stacken are good opportunities for both privacy and interaction. The fact that the common and private spaces are clearly separated may not need to be a problem. But in this case I think it is missing between-zones where residents naturally meet and not just passing through.

#### FLEXIBILITY

Although the apartments are large, there is little opportunity for change and flexibility within them. Rooms have a relatively given function and it is clear what is going to be used for what. The bedrooms can possibly be used flexibly as they are quite big. But the shape limits the possibility of varied furnishing and makes the function of the rooms relatively predetermined. The living rooms on the other hand are more flexible because of the size and could easily be separated into two rooms.


#### IV. SOFIELUND COHOUSING, 2014

#### BACKGROUND

Sofielunds Cohousing is located in the area Sofielund in Malmö. The architect was Kanozi Architects and the house was completed in December 2014 on initiative by KIM (Kollektivhus I Malmö). On Sofielund's homepage the idea of cohousing is described "to break the traditional type of apartment house, and instead develop new types of houses that invites contact with the neighbors, and the neighborhood of various kinds" (www.sofielundskollektivhus.se).

An association (cooperative tenancy compound) has been formed to operate the house, and the members take joint decisions about the building's operation and maintenance. The accommodation can organize and participate in social activities according to each one's interests. The cohousing also provides opportunities to facilitate everyday life in different ways, for example through the exchange of services (www.sofielundskollektivhus.se).

I have been interested in Sofielund since it was built because it is one of the few newly built cohousing with a strong vision of sharing and socializing. I got in touch with Anna Kaijser, a former tenant through a friend.

#### THE BUILDING

Sofielund cohousing consists of one five story house and a three story back yard collective house. The house has 45 apartments, from studios to 6 room apartments and also a smaller cohouse in the yard. In addition to their own fully equipped apartment the residents has access to common areas such as kitchen (1) and dining room (2), laundry (3), children's room (4), TV /living room (5), media room (6), workshops (7), guest apartment, yoga room, sauna, courtyard (8) and a large roof terrace (www.sofielundskollektivhus. se).

#### THE APARTMENTS

The apartments in Sofielund are quite small and are planned to be flexible and user-friendly. The work surface in the kitchen is small and furnishing possibilities are limited, because the entrance to the apartment is located with direct access to the kitchen. This is not an optimal situation for entrances considering the Swedish climate and it gives the apartments a feeling that it is a temporary accommodation rather than permanent. In the larger 3-5 bedroom apartment the plan works better, the more private rooms are located after the common areas. But here the entrance situation is a problem as well since there is no proper hall.



Apartment 61,8 sqm 1:200



Ground floor 1:300



#### SHARED USE

The common areas are located on the ground floor of the house in connection to the common courtyard. In the apartment plan there is no indication that the residents are expected to share more than common premises. There is no common storage area for cleaning supplies, etc. The exterior balcony on the other hand provides a shared space directly outside the apartments and here you meet your neighbors and can in a natural and spontaneous way too meet and exchange services or socialize.

#### PRIVACY AND COMMUNITY

As well as in Stacken it is clear where to expect the community and sharing. But there is more of a gradient of the private and common because of the exterior balcony. This is a zone that is less defined in terms of private and public and can be used by all the residents.

#### FELXIBILITY

The spacious living rooms are supposed to be separated into two rooms, depending on the life situation. It's the same principle for the studios and 2- 3 room apartment. The larger flats are more predetermined because of the fixed walls. The idea of resilience is good but I question that kind of flexibility since it requires a relatively large effort by the tenant him/ herself. The rooms that are created can be questioned from the point of sound, light, size and availability. There will be small and difficult furnished rooms with little room for flexibility in terms of use and spatial qualities. Depending on whether the wall is up or not, the rooms will be either too small or too large.

#### INTERVIEW- ANNA KAIJSER

Anna Kaijser lived in Sofielunds cohousing for almost two years. Earlier she lived in smaller collectives and was attracted by the idea of a larger cohousing where you have your own apartment and can choose how much to interact with the community. She got engaged in the association KIM (Kollektivhus I Malmö) in 2009 and moved in at Sofielund when it was built in 2014.

Anna liked the fact that there were so many different kinds of common spaces in the house and that they were well used. If a room was not to fill the purpose it was supposed to from the beginning, it could easily turn into something else. The example was the yoga room that was not used because such activities usually were held in the large living room. Someone then placed a loom there and turned the yoga room into a small craft studio. She thinks the best parts of Sofielund was that you got both privacy and community. "It was nice having your own apartment but at the same time you had close contact with the neighbors and could take part in the activities organized in the house."

Anna thinks that it takes quite a commitment to stay in this type of collaborative housing which made it difficult when she began a weekly commuting. "It is expected of you that you should be involved. First, in the common detailed cooking groups and cleaning but you are also expected to go to the meetings and be engaged in the community".



#### SUMMARY SOFIELUND

+

Light from two directions Flexible functions of the common areas Meeting places via exterior corridors

Entrance directly into the kitchen No built condition for sharing between households Either too big or too small rooms No convincing flexibility in the apartments

#### V. CONCLUSION

Although Stacken and Sofielund have many similarities like common areas in a given floor plan, common yard etc. they differ in many other ways. While Stacken has generous apartments with clearly defined rooms Sofielund has small apartments with a greater opportunity to influence room sizes. Both Stacken and Sofielund give the residents conditions to live a social life within the community but also limits the interaction between the apartments when they are clearly separated from each other. In Sofielund the exterior balconies function as a meeting place for neighbors, but it has its limits not least because of the Swedish climate. None of the houses enforces sharing on a more private level. According to me there is, in both cases, a lack of zones to meet in between the most private and the large common areas. I also would like to see a design that both encourages and partly forcing the residents to share more private levels.

# PART II. ANALYSIS OF HOW TO DESIGN A SHARING COMMUNITY

After making inquiries about cohousing, sustainable lifestyles, interviewing residents in the collectives, completing the survey and analyzing two existing cohousing projectscloser, I can now move on to my own design work. The most important aspects, based on both the negative and positive parts of my analysis, I will use as a framework in my design.

## I. WHAT TO SHARE

Since the common room is the very essence of the concept of cohousing it is obvious that the common areas should not, by definition be questioned. However, it is questionable how and why some rooms are shared and how they are designed. The common kitchen is usually one of the most important parts in a cohousing. But looking to the survey, the kitchen is not the function most people want to share. It seems to be more important with the hobby room, playroom and common areas like the living room and TV room. But is is also clear that it is not a unified answer and the more flexible the functions are the more people can get attracted by the concept of cohousing.

Since many people seem to be positive to share things in smaller communities and live together with people you already know, it is important that the accommodation is designed to make this possible. Therefore, the house should be designed so that the sharing can be at different levels and with a various number of people. The more something is used, the fewer people can share it i.e. the items idling capacity (Botsman, Rogers, 2010). Workshop, hobby room and laundry room which are quite rarely used can usefully be shared by the whole group. Playroom, TV room, living room, balcony and dining area are used more often and should be shared with less people. Kitchen, bed room and bathroom are used even more frequently and should tentatively be kept private and shared only within the people of the same household.

According to the survey, people are willing to share both the household and cleaning products as well as tools. Relatively many are also open to sharing things like toys and TV. This requiers other spaces than the traditional common areas in (most often) the ground floor of the cohouse.

# II. HOW TO SHARE

When public housing is meant to be a sustainable way of living, economically, socially and ecologically, the design of the house should allow, and to some extent enforce sharing even within the household. The premises being shared in a traditional cohousing is many times "luxury" and the type of room or functions that the individual tenant would not have had access to if it were not for the collective. It's a great opportunity to be able to share that kind of spaces but the sharing must also apply to everyday things to be totally sustainable. The apartments of the sharing community should therefore be designed in a natural and simple way to make it not only possible but also necessary to share between the neighbors.

#### SOCIAL SUSTAINABILITY

To achieve social sustainability requires, in my opinion, different levels of privat and interaction within the house. It should be possible to live in a cohousing without always having to get involved in social life, but there will also be many places where there may be a natural interaction between the residents. Social sustainability can be achieved if the residents share both space and things on a relatively private level. However, residents must themselves be able to control to their own participation. By taking the sharing to a more private level than what it is in Sofielund and Stacken, the community may deepen on a more personal level. By allowing, for example, two households share a common room they have the ability to determine what is shared and how the distribution of things and responsibilities should be. I believe that collective responsibility and the sense of belonging is important for social sustainability and that a good cohousing design can contribute to create that feeling.

#### GENERAL ROOM

General rooms are functionally independent and flexible. The rooms are of equal size and shape, and have often the same materials and details. A common measure of a general room is  $3.6 \times 3.6$  meters. This measure allows the room to act as either bedrooms, living room, office, etc. Being able to determine one's own home is an important quality. With general room types future changes are easy to make. Generally useful rooms is a prerequisite to suit the requirements from the many different family constellations (Nylander, 1999). The disadvantage of generally designed rooms is that they are often quite large, which of course is a problem when you want to build as space-efficiently as possible. But the benefits are given and with a flexible use this type of room is suitable in a cohousing. Firstly the rooms can be used for different things, and while there, except for the location of the room, no clear hierarchy between the rooms, which means that their inhabitants can live on equal terms.

# III. PROJECT

# PART I. DESIGN PROCESS

In my design process, I have mainly focused on sharing, flexibility, private and common and the opportunity for residents to be involved in control of all of these. When it comes to sharing and community I want to show the different levels of these but I have chosen to focus primarily on the more private level where few households share a room and things on a quite personal level. This is because it is what differentiates my sharing community from the more conventional cohouses. It is also in my opinion an important issue because I believe that for a cohousing to be sustainable, it is not enough to share facilities like workshop and hobby room but sharing must also be more at the individual level.

I have chosen to work on a slab block and I will present the sharing at different levels within the house. Since the apartment is my primary focus, I will start to present it and then I will present the rest of the house. The concept will also be usable in other types of buildings such as semi-detached houses, apartment blocks or villas.



#### I. LEVELS OF SHARING

In my house design, I have an ambition that there should be the opportunity to share on many different levels. There should be possible to share some premises with all of the residents, but it must also be a design that predetermines the sharing to take place on a more private level. Things that are rarely used are suitable to be shared among many people while things used often or daily can be divided between two households. The sharing that is presented in these charts represent both objects and space.

Hand in hand with the different levels of sharing is the aspect of also privacy and participation in the community. The different levels of sharing also enables the residents to take part in the social activities in different ways. The following charts show the idea with the different levels of sharing and social interaction within the building.

Level 1. Sharing between *two* households.

Level 2. Sharing between *four or more* households.

Level 3. Sharing between *all* households.

sharing

#### LEVEL 1.



#### LEVEL 2.









LEVEL 1.

ROOMS

Living room/ play room/ dining room/ offiece/ hobby room/ TV -room OBJECTS

Often use (for example vaccum cleaner)

Storage Balcony



OBJECTS Sporadic use (for example drilling machine)



LEVEL 3. ROOMS

Exterior balcony

Entrance hall Laundry Workshop Hobby room Bicycle room

#### **OBJECTS**

Rare use (for example bigger tools)

Backyard/ garden

#### II. SKETCHING PROCESS

In my sketching process I take my starting point in a common room shared by two apartments. Here the idea is that the two households are sharing both space and objects, but how it is shared and what is shared will be entirely up to them. The apartments themselves will be fully equipped with kitchen and bathroom. The other rooms must be of a size that allows them to be used flexibly in many different ways. From my reference projects I also take with me thoughts about the entrance hall, light, sound and what is private and common.



- A. 3 room and kitchen, 75 sq. m.
- B. 2 room and kitchen, 60 sq. m.
- C. 1 common room, 22 sq. m.
- D. Common storage, 5 sq. m.
- E. Exterior balcony

I. In my first sketch the two apartments of different size with a common room are accessed from the hallways. A common storage connects the apartments and allows the residents share many practical things. The two larger roms are of the same size and shape and can therefore be used both as living room and bedroom. The smaller room in the larger apartment is not of a general size and is hard to use in a more free way. Another downside in this layout is that the common room will not be integrated in the residence and there is no opportunity to open up between the two apartments. The advantage is that the apartments are very private but since the aim is to encourage the sharing on a more private level this proposal has to be developed further.

II. This plan is similar to the first sketch, but in this plan both the common and private storage is larger. The same problem remains with the common room as it is secluded from the rest of the apartment. All the rooms are also dead ends which make them less flexible. Qualities I miss in this proposal is for example the ability to open up the common room to the apartments to make a stronger connection between the households. I would also like to bring more light and openness in to the apartment and make more openings to the rooms so it will be possible to move around in different ways.

III. In this layout I have applied some of the qualities I missed in my previous layouts. In this plan the common room is extended and has boecome larger, which makes it possible to create two rooms. The apartments are of equal size and the small room is replaced with a bigger common room. In this case you have a private apartment with kitchen and two

rooms, but in practice you have four rooms when the common rooms are used as the residents decide themselves. The downside is that the common storage in the apartment is removed and placed outside with access from the exterior balcony. It's one bedroom that don't get's the quality of being able to open up in two directions. The shape of the house is not convincing and it needs to be developed further.



- A. 3 room and kitchen, 71 sq. m.
- B. 2 room and kitchen, 58 sq. m.
- C. 1 common room, 18 sq. m.
- D. Common storage, 6 sq. m.



- A. 2 room and kitchen, 55 sq. m.
- B. 2 room and kitchen, 55 sq. m.
- C. 2 common rooms, 14+14 sq. m.
- D. Common storage, 6 sq. m.

## 1II. FINAL APARTMENT PLAN 1:100



Two apartments with a common dining room and TV room.

- A. 2 room and kitchen, 57 sq. m.
- B. 2 room and kitchen, 57 sq. m.
- C. 2 common room, 14+14 sq. m.
- D. Exterior balcony



#### COMMON ROOMS

The two common rooms are the same size and can be opened up both between each other and towards the apartments and out to the exterior balcony. They can also easily be closed and form two separate rooms that can belong to the common or be used by only one household. The general size and shape enables them to be adapted to the needs of the user and they can be used as for example living room, play room, TV room, dining room, bedroom, guest room or office.

#### GENERAL ROOMS

All rooms have similar size, shape and qualities that allows them to be used on the basis of the tenants' needs. The rooms can be used as well as a bedroom as living room or kitchen. The rooms have two windows each and can therefore be divided by putting up a thin wall.

#### SLIDING DOORS

Between the private apartment and the common rooms are thick walls and sturdy sliding doors that can be locked only from the apartment. This means that when the doors are closed, the apartments will be completely private. When it is time for common activities the walls can be opened up and the two apartments will be totally linked together via the common rooms.

#### COMMON STORAGE

One common room has two built-in cabinets that are meant to serve as storage for common cleaning products and frequently used household items. Other things that might be shared in these rooms are toys, books, games, TV, various appliances, sewing machines, etc. All depending on what those who live there choose to share.

#### GENEROUS HALLWAY

As it is expected to live many different types of family constellations in this sharing community is essential with a welcoming and generous entrance that not gets crowded or where you have to step over things. As the parcel shelf and storage spaces are separated from the passage this is not a dirty surface that must be crossed to reach the kitchen and get further into the apartment through the hall.

#### EXTERIOR BALCONY

The exterior balconies serves as entrance hall of the individual apartments but also as a common entrance balcony. They provide the conditions for opening up the large sliding doors into the common room and create a large room with a diffuse boundary between outside and inside. The balconies have also a good view of the hypothetical yard and also between the different floors. It is also an good economical solution when many apartments can share the same elevator and staircase.

# PART II. SHARED USE

#### I. TIMELINE 1:200

This figures showas how the apartments can be used over time. In this example two families can stay in the same apartments for a long time even when the family situation is changing.

2020. Family A & B has now small children. Family A has two kids and family B has one. They use the common rooms as TV room and playroom.



2036. The oldest kids in family A and B are moving out and the shared rooms are again used as TV and dining room.





2030. The kids in family A are to old to share room so one of them gets one of the shared rooms. The other room is then used as a common TV-room



2040. The last kid is moving out and family A rents out one room to a student. The shared room is now used as a TV room and a dining room. The families alos desides to share one more room as an office.

#### II. FLEXIBLITY 1:200



Here are examples of how the apartments and the common rooms can be used flexibly. Depending on how the sliding doors are used, different types of room constellations can appear.

A. One bedroom and kitchen. Shared livingroom.

B. Four bedroom and kitchen. Shared livingroom.



A. Separate apartment with two rooms and kitchen. Shared balcony.

B. Two rooms with shared kitchen, entre ance and bathroom.

C. Two rooms with shared kitchen, entreance and bathroom.

A big collective with six bedrooms, one common kitchen, two common rooms and two shared bathrooms. A corridore is created by putting up flexible walls.



A. Two rooms with shared kitchen, livingroom, entrance and bathroom. Shared balcony.

B. Two rooms with shared kitchen, livingroom, entrance and bathroom. Shared balcony.



#### III. COMMON AREAS

#### GROUND FLOOR 1:300

The common areas of the house is on the ground floor and is facing toward the intended backyard. The premises are shared by all residents (level 3) and includes feature that is not used daily and which you can not possess yourself when you live in an apartment. That's premises and things thus suitable to share with many such as workshop, utility, laundry and hobby room. It is also economically and environmentally sustainable to share these premises. My house consist of 20 apartments and I have adapted the sizes of the common areas thereafter.

The two entrances are generous and act as a meeting place for residents. Here is the opportunity for inter

action between all the residents of the house. The reason I do not have a common kitchen and living area, which is often found in cohouses, is that it is supposed to take place at level 1, between the two apartments. Another reason is that the residents should not have to engage in joint cooking and such things that often are a prerequisite for being able to live collectively. Here the residents still, on a daily basis have the opportunity for common cooking and dining but in the apartments instead. It is partly this aspect that makes this sharing community a hybrid between the conventional dwelling and traditional cohousing.



#### FLOOR PLAN 1:300

The common areas of the normal plan is partly the stairwell and is clearly shared by all. On each floor there is a storage shared by the apartments on that floor. Here they can store things they share in between all four apartments or used it as storage for e.g. strollers. On each floor there is also a covered balcony or loggia which can be used by all residents at that floor. It is a good complement to the exterior balconies that are open and which are also placed in the other direction. The exterior balconies work as common balconies and even if they are open to everyone in the house in practice it will be the households that share a balcony that use it. Only one apartment needs to be passed to reach the apartment entrances furthest out.



LEVELS OF PRIVACY 1:300



# IV. ARCHITECTURAL QUALITIES

1. DIAGONAL SIGHT LINES



2. SIGHT LINES





3. SIGHT LINES

4. DAYLIGHT

#### 5. NO DEAD ENDS

All rooms can be reached from at least two directions which means that no room will be a dead end. This makes the floor plan more useful based on the residents own needs and make the apartment more mutable.



#### 6. SOUND

The fact that the common rooms are located in the center means that it is possible to place At least one bedroom in a quiet location.





#### 7. PRIVACY

With the placement of the entrance comes the opportunity to pass into the home undisturbed, even if social activities takes place in the kitchen and in the common rooms.



#### 8. STORAGE

Because all the storage is placed in the passageway at the hall, all the walls in the rooms are free to rearrange the furniture. This provides great flexibility in the use of the rooms.

# PART IV. DESIGN EXAMPLES

# I. SHARING SPACE

#### SECTION 1:200

The sections show how an example of a slab block would look like based on the relationship between outdoors and indoors, as well as light and function of the common rooms in the apartments.





#### SECTION 1:100



#### II. INSIDE / OUTSIDE

#### SECTION 1:200

Since the large sliding doors can be fully opened up, the exterior balcony becomes part of the apartment and the relationship between inside and outside is less defined. Light floods into the common rooms as they have large windows on both ends. The section shows how the common rooms can be used differently by being opened or closed towards each other, the rooms inside the apartment or towards the balcony.





#### SECTION 1:100



#### III. BACK YARD 1:400

This is an example of how my apartment building could look like in a neighborhood environment. Since I don't have a real location of my project, this is just a hypothetical example. In this example the slab block is facing a common back yard. The yard is an important meeting place and in this type of cohousing it feels like a given part to also share. The exterior balcony is facing south.



# IV. FACADE 1:300





# CONCLUSION & REFLECTION

#### CONCLUSION

In my project, I have shown how it is possible to design a hybrid of conventional living and cohousing with different levels of both privacy and sharing. The qualities of sharing and living I have presented are drawn from both the literature and the reference projects. The sharing takes places at various levels and the design supports the interaction between the residents. Within the design the residents also get forced to share on a quite personal level, but there is great freedom in how to use the common spaces and what to share within them.

The design supports dimensions of social sustainability for the residential community and for the individual resident by making it possible to interact on various levels. The sharing community I have designed gives people the opportunity to live both a private and a rich social life. The social aspect is important when it comes to the sharing of space and it is not just objects and space that will be shared but also services, favors and common help with kids, household etc. The sense of belonging and the strong connection to the neighbors makes this sharing community a great place for social sustainability.

In my opinion this type of cohousing is a good supplement to the conventional cohousing and dwelling. It gives people freedom to chose what to share and how to interact but it makes the residents live a more sustainable life both environmentally and socially.

#### REFLECTION

Obviously there are some limitations in my design. Not least when it comes to technical solutions regarding for example fire. I have payed relatively little attention to these issues and questions concerning who will pay for the common areas may be worth reflecting on. My thought is that since the common rooms in the apartments are of the same size, they can be shared equal when it comes to cost. When other variants occur and the sharing is of a different form, it will be up to the residents to solve these issues.

It would also be interesting to have worked more with the common areas on the gound floor and placing the building into a real context. This is something that can be developed further on.

In terms of affordability the aim is that all types of social classes should afford to stay in the sharing community. Unfortunately, we know that new a produced house always include a high cost. The house should therefor be designed and built at the lowest possible cost. Here, for example, the exterior balconies and the relatively small common space in the ground floor can be good options. The price is also affected by the fact that the apartments are quite spacious, not least because of the general room sizes. However, this is a quality that is advantageous in cases where the flats should be used flexibly and in cases where they are used as smaller collectives. Hopefully, the prices can be reasonable in relation to the living space and the shared spaces the residents gets access to. But I am also aware that the accommodation will may be not be affordable for some the social classes that I would like to see living here; the low income, students etc. This is an very important issue to discuss further.

Regarding the social sustainability the project offers great possibilities for people to live in community. The different levels of interaction between neighbors can hopefully contribute to a safe and inclusive housing environment. The building can also contribute to the community and sharing in its local context. The common areas of the ground floor can be shared with other houses, and open up a community among neighbors in the local area.

But the design is just a tool that gives people the possibilities, the community it self has to decide how and when the different spaces should be used. In this project the conditions are set for the residents themselves to be able to create the community that the design aims. Hopefully, the design is clear enough, yet flexible enough for the residents to form a socially, economically and ecologically sustainable sharing community.



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#### INTERVIEWS AND CORRESPONDENCE:

Eva Söderlind (Resident at Kollektivvillan) E-mail (2016-09-05)

Anna Kaijser (Former redidents at Sofielunds Kollektivhus) Telephone (2016-09-09)

#### IMAGES

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Fig. 3 [p. 23] Hippies protests (21 March 1966) http://blog.ac-rouen.fr/lyc-jeanne-d-arc-english-reading-shop/files/fxj231667\_2.jpg

Fig. 4 [p. 30] Average floor plan, Markeliushuset (Stockholm 1935) http://www.samenhuizen.net/ cohousingdk/images/I.2%20figuren/26.jpg [2016-09-06]

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