Eindhoven University of Technology

MASTER

The window and beyond

public and private space in a diverse and densified world

Dolfsma, A.M.

Award date:
2018

Link to publication

the window and beyond

public and private space
in a diverse and densified world

Andrea Dolfsma

ABSTRACT

The graduation studio 'Densified Living' focused on the city of Innsbruck as a predestined project location. This city was chosen because its number of inhabitants grows rapidly while the city reached its extension borders. As the city is wedged between mountains to the north and the south it now needs to densify within its borders. In itself this is not an impossible task, the municipality already has formulated its densification strategies for the next years. The key issue is which densification strategy is the best for Innsbruck and why.

Currently, Innsbruck's densification strategy consists of adding residential high-rises between existing building blocks or, more often, in green parks. These often monotonous developments with a solely residential function do not generate any urban life, they do not make a city. Here it gets crucial. Innsbruck's growth is almost completely caused by immigration. And in today's Europe it is more important than ever that we invest in an inclusive multicultural society. People can only overcome their fear of the unknown by means of social contact with others. And that's why we need urbanity, a prosperous public city life, more than ever. This thesis therefore tries to find an answer to the question: *how can densification in Innsbruck stimulate social interaction between a diverse residential community whilst ensuring private comfort?* This answer will be supported by literature research, interviews with architects and locals, observations, analyses and the final designing.

The project location that this thesis focusses on is the Siebenkapellenareal in the city district Dreiheiligen-Schlachthof. It reflects all the problems the city of Innsbruck has. The area is being and will be filled with high-rises in green parks, without any diversity in functions. There is no urban life at the location and the ages-long empty Siebenkapellen is slowly becoming a ruin.

For this location I propose a new densification strategy which features horizontal instead of vertical density to make more contact between public and private space. I further follow the guides Jane Jacobs set in her book The Death and Life of Great American Cities and designed a diversity in routes through the area, as well as a diversity in functions and housing both a dense as a diverse amount of people. The chapel will be remodelled in a multifunctional exhibition space and become the hotspot of the new area. These measures will be able to generate urbanity and facilitate social interaction in the formal and informal public realm.

To further encourage social interaction I paid extra attention to the design of the gradations between public, communal and private space. The route a visitor would walk through the area has been designed in such a way that the view continuously changes and that the different functions and materialisations provide an alternating series of atmospheres, from very public to more communal

spaces.

Four different buildings have been elaborated upon in the design phase: the Siebenkapellen, art museum and two residential buildings. The Siebenkapellen has been treated a ruin in order that it would become an eye-catcher in its surroundings. When inside it, one has the feeling of being outside due to the abundance of daylight, openings in the facade and green in side the building. The design of the museum has been based on five different architectural elements present in the Siebenkapellen; the staircase, plinth, column, ornament and side chapel. By means of height differences and strategically positioned windows, the visitor is being lead through the museum.

After these places destined for more formal public contact, the places for informal public contact have been designed. Several communal spaces have been designed, inside as well as outside. All the time it is guaranteed that one can choose freely whether to share a certain spot or to stay apart from each other on different terraces.

The thesis then continues with an idea on how densified living should look like. The archetype of the Tyrolean stube is a massive inspiration to this concept because it is efficient, flexible and comfortable and forms a private refuge in a densified world. However, social contact is not generated by means of staying in ones own apartment.

To further focus on the relationship between public and private and the role multiculturalism plays in this I proposed three different types of apartments. All these apartments are organised by means of the principles of one of the cultures that is most present in Innsbruck, namely Western Europe, the Middle East and North Africa. Every apartment has a different layout but also a specifically different connection between the public and the private space. These specialised connections do not just ensure private comfort, as the research question is asking

Albrecht Dürer, *Innsbruck von Norden*, 1495-1497

for, but they also stimulate social contacts as now residents can socialize with the outside world in the way they are most comfortable with.

The answer to the research question can be formulated as follows. In order to stimulate social interaction, densification methods in Innsbruck can best focus on horizontal density, at the same time implementing a lot of diversity in the area (diverse routes, buildings, functions, etc.). In addition to this, as Innsbruck will become a migrant city more and more, it is necessary to make sure every resident, whatever there background, feels at home in their house. To be able to connect to the outside in the way they like best can help them to come in contact with others. Then this would help to come closer to a successful and inclusive multicultural Innsbruck•

PREFACE

It is dinner time. Outside, rain is pouring down from the sky. The wind is howling round about and pulls on the light canvas. We are inside, a family of eight crammed in a folding trailer designed for half that amount. As nothing should touch the canvas to prevent it from leaking, we shuffle to the middle of the tent, plates filled with food on our laps. Whilst sitting close together, no one argues as usual; everyone is content when their bellies are filled and their feet kept warm.

Growing up in a family with five younger sisters and brothers below me, densified living has become a normality. I have got used to it and adapted myself to the continuous presence of others. I was raised to not care to much about privacy, but I do value my time alone. Either by means of traveling the imaginary world of books - shutting out all sounds and hustle - or by closing my eyes and sleep. The only place where I could physically be alone was the toilet downstairs. But still, after a few minutes, someone with high need would start knocking impatiently on the door.

This relationship between the outside world, the communal or family space and the individual's privacy stands central to my take on the concept of densified living.

Living to me is always connected to a certain area, a place in the world, providing the individual with a 'sense of place', a sense of belonging. It is this belonging that I wanted to express in my architectural design concerning forms and materiality. This would fail however when the relation between the private and public wouldn't have been designed sensibly. Especially when this relation is densified, because then it becomes even more tricky. My research and design project is the quest for a sensible answer to this dramatic dialogue between public, communal and private space in the multicultural society of a densified Innsbruck.

Andrea Dolfsma
september 28, 2018

READING GUIDE

The graduation studio 'Densified Living' consisted of two consecutive parts. The first months were filled with a joint research into the way different cities around the world deal with densification and a general research into the city of Innsbruck. This research is represented in a separate research book. It shows the analysis of 11 cities (6 global world cities, and 5 European cities that experience limitation in their expansion), including Innsbruck, on demographics, population density and the way this influenced the urban tissue and type of building densities of both high- and low income areas. The book also shows an in-depth research of Innsbruck's history, demographics, culture, densification strategies and architectural typologies.

After the joint research the graduation studio continued with individual projects, all based on a personal chosen location in Innsbruck. This thesis shows my own research and project design and is divided into six parts.

Part One describes my personal view on densification in Innsbruck, my research topic and my views on density and diversity. These views were partly formed during the period of joint research, but further developed by our analysis of the city, literature research, my experiences during our stay in the city and the talks with Innsbruck's architects and officials.

Part Two zooms in on the location I chose for my project. It consists of an analysis of the area and the distillation of starting points for the design process.

Part Three deals with the actual design of the outside public realm and shows the design of urban tissue, how the different buildings relate to each other and how they are materialised.

Part Four focuses on the design of the inside public space - in this case the transformed Siebenkapellen and a museum - and its connection to the outside public space.

Part Five shows the design of the inside private space - in this case the residential apartments - and the concepts leading up to it, as well as the details resulting from it.

Part Six is a bonus chapter that zooms in on two particular interesting details about the relation between public and private space. This part is then followed by a conclusion and reflection. •

CONTENTS

Collage of the streets and people in the village of Hall in Tirol

The following excerpts are taken from Jane Jacobs' The Death and Life of Great American Cities, page 55-72. They form the key to the understanding of my research and design direction.

Reformers have long observed city people loitering on busy corners, hanging around in candy stores and bars and drinking soda pop on stoops, and have passed a judgment, the gist of which is: "This is deplorable! If these people had decent homes and a more private or bosky outdoor place, they wouldn't be on the street!"

This judgment represents a profound misunderstanding of cities. It makes no more sense than to drop in at a testimonial banquet in a hotel and conclude that if these people had wives who could cook, they would give their parties at home.

The point of both the testimonial banquet and the social life of city sidewalks is precisely that they are public. They bring together people who do not know each other in an intimate, private social fashion and in most cases do not care to know each other in that fashion.

Nobody can keep open house in a great city. Nobody wants to. And yet if interesting, useful and significant contacts among the people of cities are confined to acquaintanceships suitable for private life, the city becomes stultified. Cities are full of people with whom, from your viewpoint, or mine, or any other individual's, a certain degree of contact is useful or enjoyable; but you do not want them in your hair. And they do no not want you in theirs either.

In speaking about city sidewalk safety, I mentioned how necessary it is that there should be, in the brains behind the eyes on the street, an almost unconscious assumption of general street support when the chips are down - when a citizen has to choose, for instance, whether he will take responsibility, or abdicate it, in combating barbarism or protecting strangers. There is a short word for this assumption of support: trust. The trust of a city street is formed over time from many, many little public sidewalk contacts. It grows out of people stopping by at the bar for a beer, getting advice from the grocer and giving advice to the newsstand man, comparing opinions with other customers at the bakery and nodding hello to the two boys drinking pop on the stoop, eying the girls while waiting to be called for dinner, admonishing the children, hearing about a job from the hardware man and borrowing a dollar from the druggist, admiring the new babies and sympathizing over the way a coat faded. Customs vary: in some neighborhoods people compare notes on their dogs; in others they compare notes on their landlords.

Most of it is ostensibly utterly trivial but the sum is not trivial at all. The sum of such casual, public contact at a local level - most of it fortuitous, most of it associated with errands, all of it metered by the person concerned and not thrust upon him by anyone - is a feeling for the public identity of people, a web of public respect and trust, and a resource in time of personal or neighborhood need.

The absence of this trust is a disaster to a city street. Its cultivation cannot be institutionalized. And above all, *it implies no private commitments.*

[...]

To understand such problems - to understand why drinking pop on the stoop differs from drinking pop in the gamer room, and why getting advice from the grocer or the bartender differs from getting advice from either your next-door neighbor or from an institutional lady who may be hand-in-glove with an institutional landlord - we must look into the matter of city privacy.

Privacy is precious in cities. It is indispensible. Perhaps it is precious and indispensable everywhere, but most places you cannot get it. In small settlements everyone knows your affairs. In the city everyone does not - only those you choose to tell will know much about you. This is one of the attributes of cities that is precious to most city people, whether their incomes are high or their incomes are low, whether they are white or colored, whether they are old inhabitants or new, and it is a gift of great-city life deeply cherished and jealously guarded.

[...]

When an area of a city lacks a sidewalk life, the people of the place must enlarge their private lives if they are to have anything approaching equivalent contact with their neighbors. They must settle for some form of "togetherness," in which more is shared with one another than in the life of the sidewalks, or else they must settle for lack of contact. Inevitably the outcome is one or the other; it has to be; and either has distressing results.

[...]

Sidewalk public contact and sidewalk public safety, taken together, bear directly on our country's most serious social problem - segregation and racial discrimination.

I do not mean to imply that a city's planning and design, or its types of streets and street life, can automatically overcome segregation and discrimination. Too many other kinds of effort are also required to right these injustices.

But I do mean to say that to build and to rebuild big cities whose sidewalks are unsafe and whose people must settle for sharing much or nothing, *can* make it *much harder* for American cities to overcome discrimination no matter how much effort is expended.

[...]

The tolerance, the room for great differences among neighbors - differences that often go far deeper than differences in color - which are possible and normal in intensely urban life, but which are so foreign to suburbs and pseudosuburbs, are possible and normal only when streets of great cities have built-in equipment allowing strangers to dwell in peace together on civilized but essentially dignified and reserved terms. •

PART ONE

Research on density and diversity
in Innsbruck

Innsbruck is a green city which seems not to be able to choose between being a village or a city. Anonymous apartment buildings are situated in green parks, like mountain huts in the Alps, hardly stimulating any urban life.

INTRODUCTION TO INNSBRUCK AND ITS CHALLENGES

Die Berge sind immer mit dabei - Innsbruck is a city like no other, closely surrounded by the hills and mountains in the south and north. The steep Nordkette is its city wall, the river Inn its moat. The city lays quietly protected in the green valley of the Inn, proud of its Tyrolean identity, shielded from the threatening outside world.

Innsbruck's geographical location has been determinative for its existence, its growth and its identity. (Forcher, 2008) Because of its strategic position on the crossing of trading routes from east to west (the Inn valley) and north to south (the Brenner pass), it is only logical that a market was built on the north bank of the Inn in 1160, followed by a bridge (*brücke*) over that same river 20 years later. Hence the name *Innsbruck*. The city soon flourished from trade and travellers and Innsbruck's golden age reached its peak in the mid 15th century when it housed the residence of the Habsburg monarchy. Despite that, Innsbruck stayed a small city within green gardens, fields and meadows until about 1840. From then on Innsbruck has grown rapidly under the influences of industrialisation, tourism, investments and the knowledge industry. (Forcher, 2008)

This identity of a small city, a village maybe, embedded in the romantic pastures and formidable mountains of the Tyrolean Heimatland, has not changed. The Tyroleans always have been a rural people and that is reflected in Innsbruck's

culture. The ever present mountains around the city protect that identity:

> "Wo immer man sich in Innsbruck befindet, wie städtisch immer die Stadt sein mag: die Berge sind mit dabei - ragend, dräuend, schirmend, mauernd, wie man's auffassen mag, vor allem aber: überall."[2]

Mountains never move, but the city changes. In that sense the mountains slowly start to become not just a protecting shield but also an insur*mount*able problem. They limit the city's expansion and force it to originate new ideas of housing its increasing number of residents - a grow of 30% is expected in the next 50 years.

Undeniable this will slowly change certain aspects of Innsbruck's identity, but that does not have to be a bad thing. Which elements of this suburban identity could work in the future and which should be abandoned in order to create a successful city is something I will address in the following.

INNSBRUCK'S CHALLENGES

Innsbruck's population growth is mainly caused by immigration from Germany and other European countries, but increasingly also from northern Africa and the Middle East. This creates a diverse society in Innsbruck, both regarding age and cultural background of residents. Although the current Austrian government is quite right-wing and populist, the municipality of Innsbruck does not agree with them on topics like immigration and wants to advocate a multicultural society. However, this is not yet represented well in Innsbruck's urban development. Different income groups are still quite segregated when it comes to housing developments. The municipality would like to change this and local architects agree that Innsbruck is ready for more mixed-up and experimental housing.[2]

It is my personal belief that in order to stimulate the development of a multi-cultural society it is important that people of different age and cultural background meet each other and interact in their daily life. Because only this social interaction can overcome prejudice and stimulate cross-cultural fertilisation.[3] As the The writers of *The Intercultural City* argue: 'we should interact more with each other

1. Hans Weigel in: Forcher, M. (2008). Die Geschichte der Stadt Innsbruck. The quote translates as: "Wherever one finds himself in Innsbruck, how urban the city may be, the mountains are always there - transcendent, threatening, protecting, enclosing, however you take it, but above all: everywhere."
2. Based on interviews with Wolfgang Andexlinger, head of the city planning department in Innsbruck, and Innsbruck's architects Rainer Köberl, Martin Mutschlechner, Hanno Schlögl and Arno Ritter (AUT).
3. According to a recent enquiry by the government of Tirol, more than 50% of respondents indicated that they met refugees with mixed feelings. However, respondents that had frequent contact with refugees had a more positive feeling towards them.

because we live side by side. Only then will we foster empathy by learning more of each other and reduce the distrust between people.'

The growing of Innsbruck comes with a need to densify the existing urban tissue, as the city is limited in its expenditure due to political and geographical boundaries. Current densification strategies mainly focus on replacing existing low-rise housing with high-rise apartments or to built new high-rises in the few empty spots within the city. This causes an interesting situation in Innsbruck.

During my stay in Innsbruck, I noticed that, although there are not that many official public parks, the city is filled with green areas. As soon as one moves out of the centre, one will encounter numerous blocks with inner green courtyards, millions of trees - which can be heard by all the birds that are singing from them - and little parks wherever there is a space left. In those quarters, Innsbruck does not look or feel like a city, but more like a village.

Although the new development of high-rises is highly debated within Innsbruck's architectural and social scene, fact is that residential high-rises situated in green parks are becoming more common for Innsbruck. Residents really value these green spaces. However, there is a problem with this concept. Just as the old Tyrolean mountain houses that stand dispersed over the green mountain areas, these Corbusian high-rise flats in their green parks do not stimulate at all any urban life on their own. There is no transition between private and public, and *sidewalk life* is hardly possible in the *togetherness* of the parks. A patch of green between two residential flats does not automatically become a lively park. To function well, a park needs surroundings that '*generate mutual support from diverse uses*.' Jane Jacobs was one of the first that fought against modern city planning and argued that functions should be mixed, streets frequent and residents densely concentrated. All in all, she fought for diversity in order to create urbanity. (Jacobs, 1961) However, this diversity is something that lacks in many of Innsbruck's neighbourhoods. Large parts of the city are merely residential. Flat after flat, block after block. Residents stay inside, looking at the green from behind their windows. For a small village, where everyone knows each other, this might be liveable.[4] But in a growing city like Innsbruck, where new immigrants come in every year, these flats in an empty park mean the death for city life. *'The dense but boring repetition of residential flats does not make a city.*[5]

Innsbruck is a city that needs a new strategy for densified living. A strategy that will actually bring people together, so that they can built their society, a

---

4. Wolfgang Pöschl from Tatanka Architects noted in an interview on March 8, 2018, that traditional Tyrolean village structures with houses dispersed in the landscape do not generate any qualitative usable public space (e.g. kids can't play outside). Contemporary flats do not give this public space either. Therefore he argues for a more horizontal density.

5. Rainer Köberl in an interview on March 6, 2018.

multicultural Innsbruck. What is needed for this is urbanity: urban life. Innsbruck needs to determine its future as an urban future instead of caressing romantic rural images of the past. Of course, parks and greenery can play a role in this, but not as an *end in itself*, but as a *means* for urban life. •

Austria
Europe
Asia
Africa
America
Other
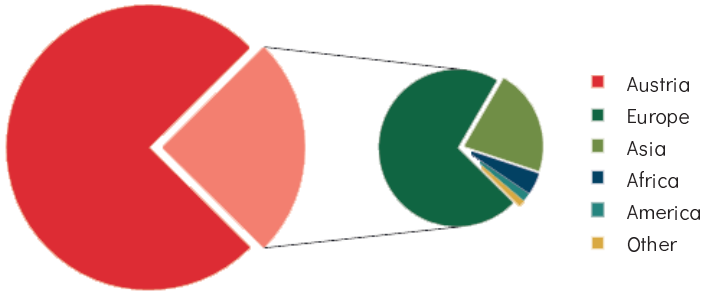
The immigration background of residents in Innsbruck in 2017
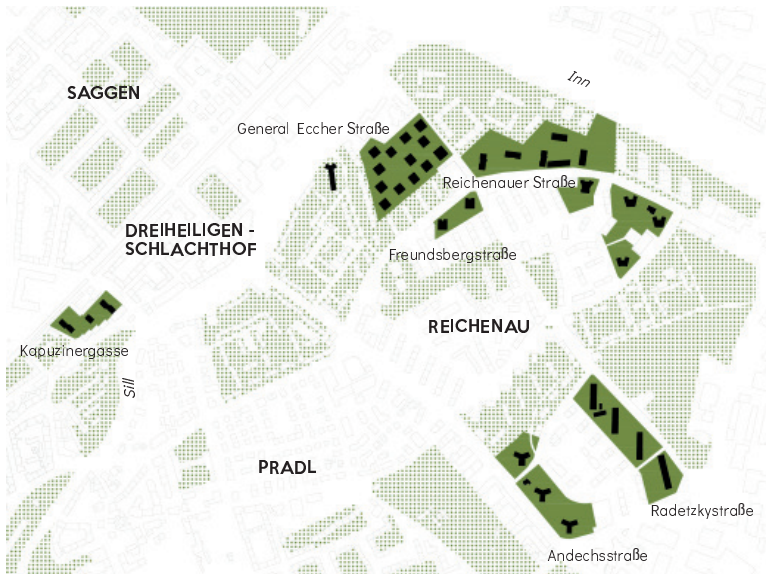
Innsbruck features a lot of green parks, many of which also have residential functions. This map shows part of the city districts Dreiheiligen-Schlachthof and Reichenau in which the residential green areas with high-rise residential buildings have been highlighted. The buildings are created as masses on an empty field and their ground floors hardly ever provide public functions. One must note that in Innsbruck a building is considered as high-rise when it is about higher than 8 floors.

RESEARCH RESEARCH QUESTIONS AND METHODOLOGY

In the previous chapter I wrote about Innsbruck's challenges concerning densification of the city. I wrote that Innsbruck needs more diversity and urbanity to be able to contribute to its future multicultural society. The relation between public and private, which is also strongly present in my definitions, is crucial in this regard. In order to come up with an adequate urban and architectural solution for Innsbruck's current and future problems, I formulated a research question to guide me during the design process.

How can densification in Innsbruck stimulate social interaction between a diverse residential community whilst ensuring private comfort?

The ultimate goal of my research thus is to find a way in which social interaction can be stimulated in order to built a multicultural society. Social interaction is a bit of a vague term and can have many definitions. I want to focus on social interaction between residents in a city neighbourhood. Social interaction does not mean that everyone has to be friends with one another. A city neighbourhood is different from a village neighbourhood.

With social interaction I mean 'informal public life'. It is what Jane Jacobs

calls 'sidewalk contact'. Sidewalks '*bring together people who do not know each other in an intimate, private social fashion and in most cases do not care to know each other in that fashion*.' This casual public contact creates '*a feeling for the public identity of people, a web of public respect and trust, and a resource in time of personal or neighbourhood need. The absence of this trust is a disaster to a city street. Its cultivation cannot be institutionalised. And above all, it implies no private commitments*.' City people value their privacy. But they also wish for '*differing degrees of contact, enjoyment or help from the people around.*' (Jacobs, 1961)

My intuitive assumption is that social interaction has a lot to do with the way a city or building deals with public, private and communal space. I want to dig deeper into this issue and therefore the following sub-questions will help me to formulate an answer to the main research question:
1. How can social interaction between diverse residents be stimulated in the public and semi-public space?
    1.a. How can diversity in use, designed according to Jane Jacobs principles, contribute to this?
2. How should the densified relation between (semi)public and private space be designed in order to stimulate social interaction whilst ensuring private comfort?
3. How should the design of high density private space conform to the cultural demands of residents?

METHODOLOGY
The research will start with the outside/public space (1 and 1a), continue with the residential buildings (2) and finish with the relation between private and public in the light of cultural demands (3).
    To answer the first research question I will make use of three different methods. I will start with literature research. Especially the books *The Death and Life of Great American Cities* by Jane Jacobs and *The Intercultural City* by Phil Wood and Charles Landry I will use to formulate guidelines for my design in the regard of social interaction and diversity in use in the public space. To make the research more specific for Innsbruck I will talk with architects and city planners of Innsbruck on what they think the city needs. Thirdly I will perform a location analysis of the area that I choose as design location to reveal the needs and opportunities of this location, and to think of fitting new functions for the area.
    To formulate an answer on the second question I will use my findings of the literature research, but I will also look into architectural reference projects and analyse how they work and if they succeed in their goal of bringing people together.
    Finally, to answer the third question I will do more literature research on

residential architecture in different cultures, especially focussing on the relation between public and private. This literature research will be complemented with reference projects. To focus on the density in the private space I will also search for reference projects/ideas/architects that can inspire my design.

A design projects includes besides a theoretical part also a huge creative part. Much design decisions will be made during a process of developing ideas, discussing them with others (especially the tutors), reflect on them and then improve the design. However I will always try to base all my design decisions on either carefully considered thoughts of my own, on what experts say in literature or on what reference projects have proven in practice to be right.

With my graduation project I want to contribute to Innsbruck's discussion on high density housing. I want to show that there are other ways than the strategies currently applied. Further more, with my project I want to propose a design for a more urban and more lively Innsbruck. I want to do this by means of density and diversity in both the public and the private space, stimulating social interaction between all residents. This in order that they might help build the future intercultural society of Innsbruck. •

THE FUTURE OF DIVERSITY

Located at the hear of Europe on a crossing of trading routes, Tyrol and Innsbruck have seen many travellers coming and going, and subsequently immigration is a huge part of Tyrolean history. Without the influences from Bavaria in the north and Italy in the south, the bilingual region of Tyrol would not have been what it is now. In the year 2017 the Innsbruck Volkskunstmuseum organised the exhibition 'Hier Zuhause, Migrationsgeschichten aus Tirol'. Director of the exhibition, Wolfgang Meighörner writes that while long ago immigrants would come from neighbouring countries, nowadays and in the young past they come from far away countries with different cultures, often driven by war, famine or unbearable political situations. I think he aptly describes the current situation when he notes that

> Dies erzeugt naturgemäß Spannungen und meist auch einseitige Sichtweisen. Dabei darf nicht vergessen werden, dass auch aus Tirol immer wieder ganze Wellen von Auswanderern in die Welt zogen. Nord- und Südamerika waren Sehnsuchtspunkte für Menschen, denen die Heimat keine Perspektive mehr zu bieten hatte. Auch religiöse Intoleranz führte zu (erzwungenen) Wanderungen. Und in jüngerer Zeit ließ nicht zuletzt die europäische Einigung viele Tirolerinnen und Tiroler anderswo

in Europa ihren Lebensmittelpunkt suchen und finden. (Meighhörner, 2017)

It is in the light of current global developments that I write this chapter. Since 2013 there has been an enormous increase in refugees from the Middle-East and North Africa fleeing war, terrorism, famine and poverty. The reaction to this has been and still is twofold and threatens to form a huge wedge in our societies. At the one hand there are people that welcome immigrants with open arms, at the other hand there are those that are afraid to lose their customs, culture and identity. The current rise of nationalism and the extreme-right under the influence of populism only heats up this debate. In the so-called Trump era the situation might seem hopeless. Yet I want to try to figure out how we could see immigration as a positive thing, as an asset to our society, and which role architecture and urbanism can play in facilitating the multicultural society of the near future. And in this case I will focus on the city of Innsbruck, which is the project location of this graduation studio.

The history of migration in the near past in Tirol starts around 1960-1970 when Austria, like many European countries with a booming economy, was in need of great amounts of workers. The Austrian government made deals with Turkey and Yugoslavia for many guest workers to move to Austria. The government thought that they would return to their home countries eventually, and therefore did not invest in integration of the immigrants. They did not learn the language and lived in their own communities, seperated from the Austrian society. However, they stayed. After 1970 there families came over and although they lived as foreigners in a foreign country, they did stay and built their lives in Austria, Tyrol and Innsbruck. Societal tensions already started to rise and sometimes the government would put a stop to immigration, but it never invested in integration. After the fall of the Berlin wall in 1989 and the end of the iron curtain, another wave of guest workers arrived from Yugoslavia and Turkey, followed by refugees from the Yugoslavian civil wars in 1991. Only since the start of the 21st century the government started to thing about integration, migration politics and the like and developed integration programs and language classes. However, the consequences of their negligent behaviour are still noticeable among the Austrians that do not believe that immigrants will ever be able to integrate. Since 2013 refugees from the war-zones in Syria en Iraq and those fleeing the famine and political situations in North/East Africa arrived in great numbers. Positive measures have been taken to help the immigrants to integrate into society. However, also Austria's government has changed. Populist and racist agitating groups and political parties make use of the situation for their own political ends, they use the past negligence of the government to instigate fear among the population that also this time it will not be possible to let immigrants integrate into Austrian society. (Meighörner, 2017) The

fear among Austrians of the unknown, that there way of life and the country they live in will change forever, reflects many of the thoughts that prevail among large parts of the populations in Europe.

At the one hand I think it is fair to admit that our world will probably change. Societies will become more diverse and we will just have to adapt and to live with it. However, it is not fair to say an integrated multicultural society is not possible. To ignore the needs and wishes of immigrants and to call for your own country being first is not a solution. In the first place because immigrants will keep coming anyway - what would you do if you had no positive perspective on life in your country of origin - and secondly because it ignores the right on a fulfilling life and the pursuit of happiness of others. What you want for yourself, you can not deny to others. We'll just have to get used to living with difference.

Now it is time to start arguing from a more positive perspective. The co-living of people from different cultural backgrounds can foster cross-cultural fertilisation and be a great asset in sense of innovation and cultural life. Of course the intercultural city will look different, with different functions, more different foods in the supermarket and different advertisements, but I think it is good to see those developments as positive things because they show us the richness in cultural diversity that is known around the globe. Moreover, it is only possible to overcome the prejudice we have against others - and which is the cause of most of our fears concerning immigration - by means of getting to know each other. Probably that would solve most of our problems and would enrich is with exiting experiences.

To change the mindset of people and to make them getting along with each other is not something architecture can accomplish. Urbanism and architecture are not the solution for all our societal problems. But they can contribute to a better society. Wood & Landry write:

> We should be not asking ourselves, 'How can we help the different races to get along?', but 'How can we reverse the erosion of our public sphere and regenerate the spaces and institutions that bring us all together across the many factors that might possibly divide us - age, gender, class as well as ethnicity?' (Wood & Landry, 2008)

Currently the public spaces in many modern cities are eroding. They do not full fill their functions as places where people can come together and meet. As I wrote in the first chapter of this part of the thesis, this is also the case in Innsbruck. Of course the city has a lot of public space, but it is not qualitative public space, it is dead and does not generate urban life. Why are these squares, streets and parks so boring, why is nothing happening there? Because there is no diversity. We do need diversity in our public space to generate urban life and to enable the multicultural society of today and of the future by means of bringing people

together. There is one person in particular that wrote a lot about diversity in cities, against the modernist trend of a separation of functions and large housing estates in green parks. That person is Jane Jacobs and her book The Death and Life of Great American Cities provided me with many guides on how diversity in cities can be achieved and urban life can be stimulated. Summarized, the guides that Jane Jacobs proposes are: diversity in routes, diversity in use of buildings, diversity in age of buildings and a dense concentration of people. To this I would like to add the aspect of the multicultural society: a diversity in people. I will shortly explain these guides in this chapter, they will be the starting points and assessment criteria of my design for this graduation studio.
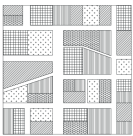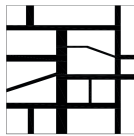
| diversity in use | diversity in routes | diversity in age | dense concentration of people | diversity in people |

The first guideline that ties all the other ones together is the need for mixed primary uses in a neighbourhood. They make sure that different people will visit the streets at different times of the day, but they also generate many possibilities for casual public contact between the visitors and residents of a neighbourhood. It is essential that public places in the city, such as squares and parks, have other functions such as shops and café's around there to make the place attractive and usable. (Jacobs, 1961) Such third places are needed to facilitate social interaction in an informal, public way. Besides from functions that facilitate informal public life, formal institutions are needed too. Museums, libraries or community buildings can organise festivities or group activities that bring people together in a formal way and can thus facilitate contact and conversation between diverse groups of people. (Wood & Landry, 2008)

The second generator of city diversity that Jane Jacobs mentions is the need for short blocks, or the possibility to choose from a diversity of routes through a neighbourhood. This creates a more inclusive neighbourhood where all streets are being used by people to walk through, so that it is viable to start shops and businesses in every street. In contrast to monotonous super-block projects, neighbourhoods with small blocks and frequent streets where things are happening, will attract more visitors and generate more urban life. (Jacobs, 1961)

The value of a district that mingles buildings of different age and condition is that it will support more diverse functions. Small shops often can not pay the necessary rent of brand-new boutiques. Having aged buildings in a district guarantees that also private shop keepers can keep their business running. Such

a district will also attract more people with different incomes, thus creating a more diverse mixed neighbourhood as well. (Jacobs, 1961)

A dense concentration of people is necessary to make a city work. Downtown wouldn't be the same without the large amounts of people spending time there. But concentration is also needed in residential neighbourhoods, which have the same right on city liveliness. Therefore a high density of dwellings is needed in order that this amount of people will also support more diversity in use in their mainly residential neighbourhood. (Jacobs, 1961) How this density should be designed and which amount is desirable, I will discuss in the next chapter.

Finally, just as a dense concentration of people is an asset for city liveliness, so is a diversity in people. Cultural diversity enriches the experience of cities, the cultural live and the lives of individuals. We should fight segregation between population groups of cities because this creates misunderstandings and alienation. and does not built an inclusive society. However, when diverse groups of people live together in a neighbourhood that also does not mean that everyone becomes friends immediately. That's neither the goal nor the quality of city life in which people value their privacy and casual public contact with others. A mixed neighbourhood however does provide more opportunities for chance encounters with others and thus more opportunities for interracial contact. (Wood & Landry, 2008) According to the architects in Innsbruck there is still a lot of social segregation in the city and they advocate for more mixed housing developments. In part five and six of this thesis I will continue on this topic and propose solutions for a well designed mixed housing development that welcomes a diverse group of residents.

A future of diversity is not something that we can choose for. A diversity in people living in great cities will come inevitably. What we can do however is to set our fears for the unknown aside, and to welcome this diversity as an asset for great city life. It is important that we create diversity in our urban tissue - instead of more monotonous mono-functional residential neighbourhoods - in order that all this diversity of peoples can create city liveliness and built on the future of the multicultural society together. Martin Luther King had the dream of an inclusive society and I share that dream. I hope that one day our cities will be like the new Jerusalem where residents of every nation, tribe, people and language live together in harmony. It is my hope also that this thesis can contribute to the discussion on how density and diversity can contribute to urban life and an inclusive multicultural society. •
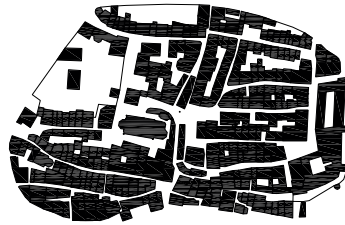
THE FUTURE OF DENSITY

QUALITATIVE PUBLIC SPACE

As has been put forward in both the introduction to Innsbruck and the location analysis, the densification method of building residential high-rise in a green park does not generate urbanity neither does it stimulate social contact between resident. One solution could be to add more diversity in functions and to redesign the high-rise to accommodate more communal services where residents can meet. However, I would like to enter another approach of dealing with density, namely switching from a vertical density - where masses stand in free space, to a horizontal density, where space is cut out in the mass of the city.

From local examples of horizontal density like the Altstadt of Innsbruck and the nearby village Hall in Tirol, I believe that horizontal density can greatly add to the creation of urbanity. In contrast to vertical density, horizontal density allows: (1) more connections between outside public and inside private space; (2) less overview, more interesting vista's and surprising routes; (3) a feeling of human scale and (4) a dense concentration of people on the streets and therefore more opportunities to meet. It was Wolfgang Pöschl from Tatanka Architects who proposed to visit the village of Hall in Tirol and suggested that horizontal density might be the solution to create more qualitative public space - space where
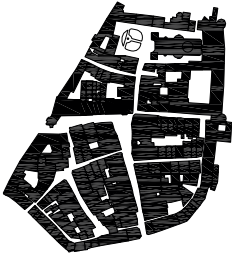
Innsbruck's Altstadt, scale 1:10000   Hall in Tirol, scale 1:10000

children can play safely. In one of his writings Pöschl states:

> Wünschenswerte gemeinsame Außenräume (über die Verkehrsflächen hinaus) müssen klar definiert und räumlich gefasst werden; ihre Benützung muss informell möglich sein (und kann ohne die üblichen Spielgeräte auskommen). (Pöschl, 2008)

These directions mainly give qualitative guidelines. For a more numerical background to support the design I would like to refer to Jane Jacobs' *The Death and Life of Great American Cities*. In the chapter on the need for concentration she describes the ideal amount of dwellings in a city area and the ideal amount of ground coverage.
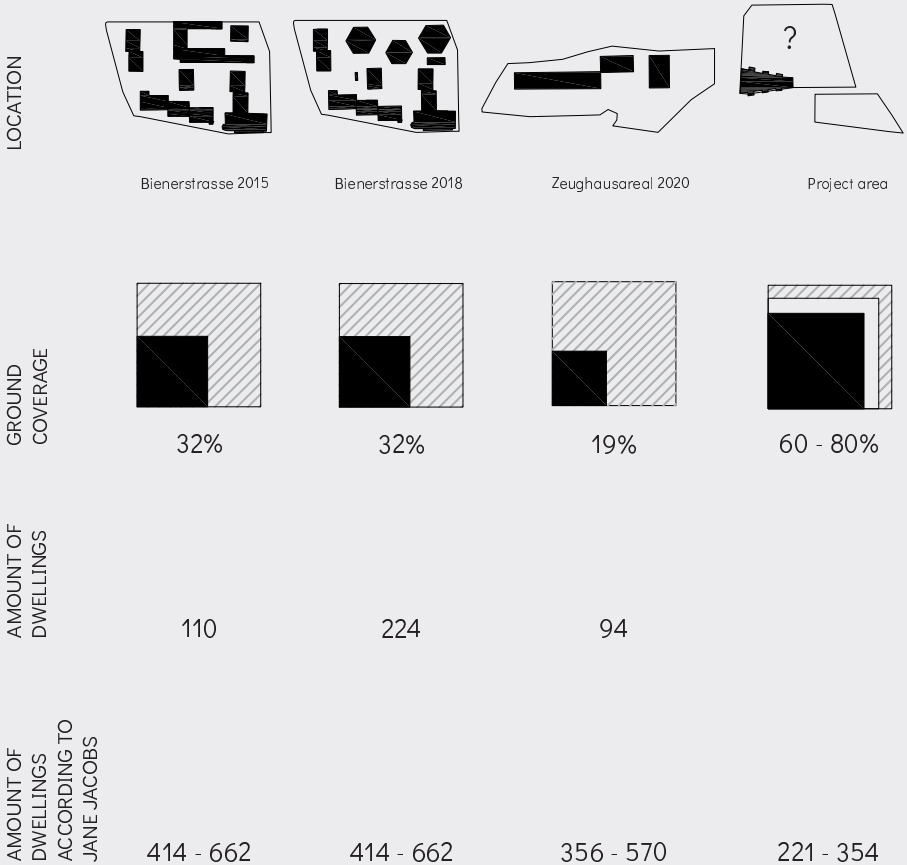
The ideal amount of dwellings must at the one hand be high enough to produce enough city liveliness, safety, convenience and interest to out-rule the innate city problems that come with high densities. At the other hand this ideal should stay below the point were diversity is repressed instead of stimulated as standardisation will than be necessary to accommodate that high amount of dwellings on the land. Jacobs then points to the ideal example of Greenwich Village, New York. It has an average of 125 - 200 dwellings per acre in a great variety without standardisation, which is possible due to a ground coverage of 60 - 80%. (Jacobs, 1961)

In short, horizontal density has more assets than the ones previously mentioned; above all it allows to combine a high population density with diversity in size and functions of buildings, some of the main ingredients for a lively city.

> People concentrated in cities are the source of immense vitality and they represent a great and exuberant richness of differences and possibilities. (Jacobs, 1961)

> The presence of great numbers of people gathered together in cities should be enjoyed as an asset and their presence celebrated: by raising

ANALYSIS

|	Bienerstrasse 2015	Bienerstrasse 2018	Zeughausareal 2020	Project area
LOCATION				?
GROUND COVERAGE	32%	32%	19%	60 - 80%
AMOUNT OF DWELLINGS	110	224	94	
AMOUNT OF DWELLINGS ACCORDING TO JANE JACOBS	414 - 662	414 - 662	356 - 570	221 - 354

their concentrations where it is needful for flourishing city life, and beyond that by aiming for a visibly lively public street life and for accommodating and encouraging, economically and visually, as much variety as possible. Jacobs, 1961)

To analyse the problems of my location in regard of both the amount of dwellings as the ground coverage, I investigated these factors for the existing situation and the future developments at the area. The results can be seen above.

It is quite clear that according to Jane Jacobs' principles, both the amount of dwellings, as well as the ground coverage is way to low and therefore neither a dense concentration of people, nor a variety in functions, nor any urban life is achieved.

To challenge myself in this design project I set the goal for myself to achieve an amount of 125 - 200 dwellings per acre (which translates to 0.03 - 0.05 dwellings per km^2) and a ground coverage of at least 60 %. To compare with the analysis of the location area on the left; the Altstadt of Innsbruck has a ground coverage of roughly 73% and Hall in Tirol one of about 60%. •
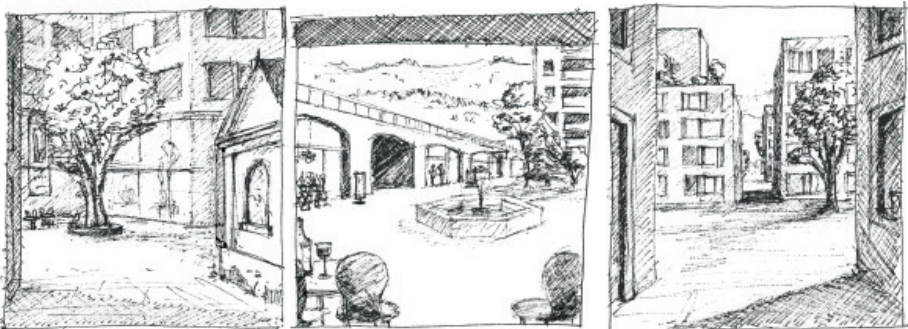
A series of sketches that shows a preview of the final masterplan and how horizontal density would work in the area; turning points, light and shadow and narrow and open space alternate to create interesting routes through the area. The high ground coverage allows for a variety of buildings and plenty of contact between the ground floor private and public.
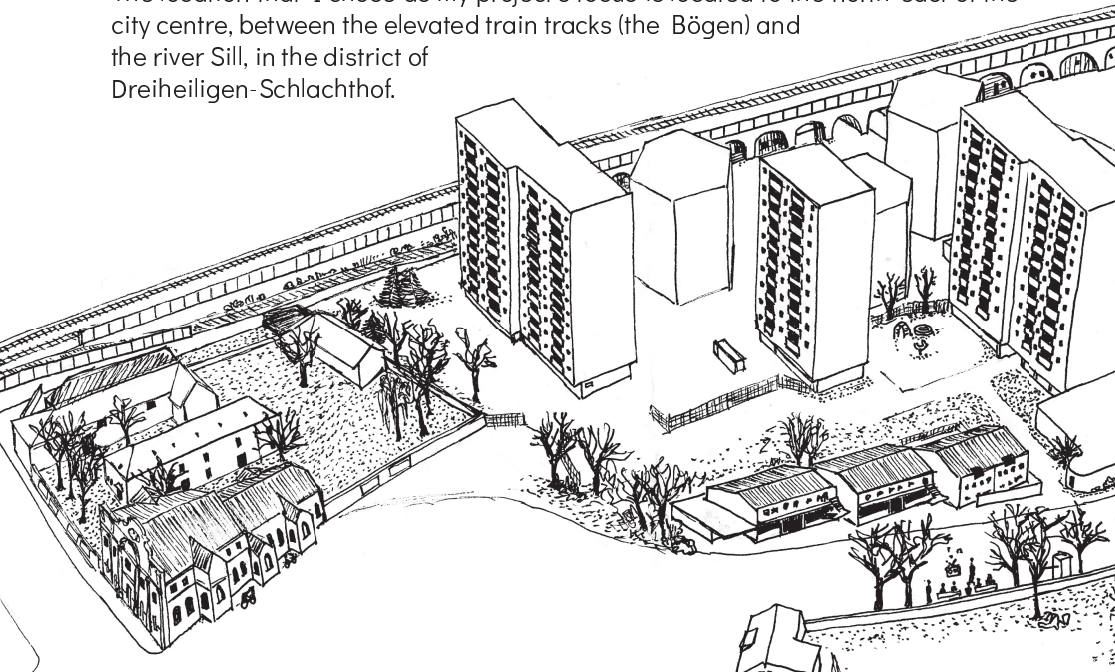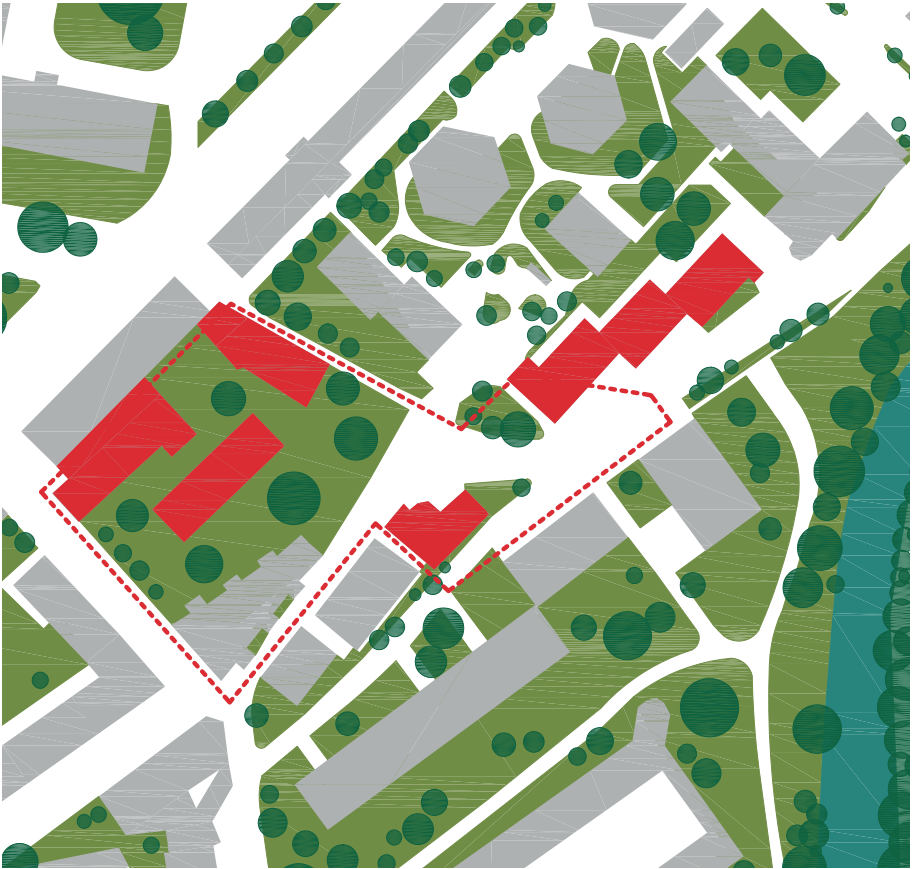
PART TWO

Location inquiry
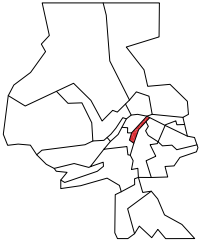
INTRODUCTION TO THE SIEBENKAPELLENAREAL

The location that I chose as my project's focus is located to the north-east of the city centre, between the elevated train tracks (the Bögen) and the river Sill, in the district of Dreiheiligen-Schlachthof.

The project location in its planned future surroundings. The red line indicates my area of focus, the buildings in red will be replaced.

MOTIVATION

I chose this location because according to me it reflects many of the challenges the city has to deal with. The area is very quiet, does not have an urban atmosphere and reflects the contrast between rural and urban dwelling types that is so typical for Innsbruck: there is a large difference between six densely built high-rises at one end of the Kapuzinergasse and an abandoned old church with storage buildings at the other end of the same street. The existing and planned high-rise buildings are situated in green parks, but there is no urban life surrounding them. The population density in Dreiheiligen-Schlachthof is 10,558 p/km^2, and 30.5% of residents has an immigration background. Both numbers are a bit higher than what is average in the city, but they could be raised even more to anticipate on new immigration in the future. •

The Siebenkapellen seen from the Zeughausgasse

The walled Siebenkapellenareal with behind it the modernist high-rise from the 70's, seen from the Zeughausgasse

The Siebenkapellenareal

The Siebenkapellenareal

View from the Kapuzinergasse

View from the Kapuzinergasse to the homeless centre

The homeless centre

New development at the Bienerstrasse

Current state of the park at the Bienerstrasse development

The location seen from the other side of the river Sill

LOCATION ANALYSIS

To gain a better understanding of the challenges and opportunities of the Siebenkapellenareal I performed a location analysis. I used literature, interviews with residents and architects and my own observations to get a thorough insight. I started with research into the district's and location's history to understand why and how it has become the place it is now, paying special attention to the Siebenkapellen. I then continued with an analysis of the connection between the city and the location, followed by an analysis of the present functions, infrastructure and public and private space. Because one new high-rise housing developments is being built at the moment and another one is planned for the future, I also investigated the goal and qualities of these designs so that I could incorporate them in my design strategy as well. I will end this chapter with a conclusion and some starting points for the design that I derived from the analysis.

HISTORY

The city district of Dreiheiligen-Schlachthof is a peculiar fringe-like area. In the south it is clenched between Innsbruck, the Sill and Pradl and to the north it has for a long time been part of the *Saggen*, the meadows surrounding Innsbruck. The district is named after the Dreiheiligenkirche in the south, which dates back to 1613 and the Schlachthofblock in the north, which was one of the first social housing estates in Innsbruck. The district has a long history of military, religious, industrial and residential settlement.
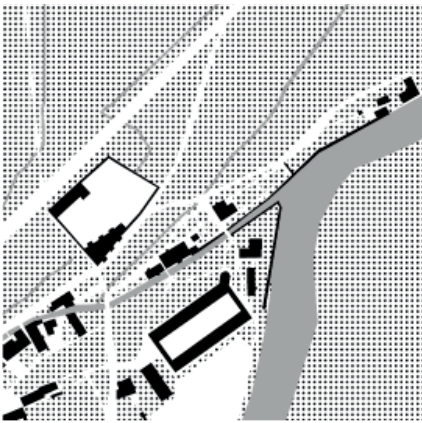
The project area in 1856

The project area in 1930

The project area in 1990

The planned project area for 2020

UNTIL 1856

The character of the Saggen is still clearly visible in mapping until 1856. The infrastructure and housing settlement has grown organically along the *Sill*, the *Kleine Sill* and the many other streams cutting through the grassland. The rivers provided the ideal location for industrial development. From 1453 the presence of a silver smelting plant *(Silbergasse)* and an adjacent coal service *(Kohlstattgasse)* is mentioned. They were accompanied by several mills and a brewery. (Hye, 1995)

During the reign of emperor Maximilian I - Innsbruck's golden age - the Zeughaus was built in 1500 as a weapon arsenal. (Forcher, 2008). Later a weapon factory, barracks and commander buildings were erected in its close surroundings. The Zeughaus still stands today and is in use as the Tyrolean State History Museum.

1856-1930

Due to the many canals and streams that provided hydro-power, Dreiheiligen-Schlachthof was de ideal place for factories, many of which were built between 1814 and 1850. The introduction of the elevated railway line in 1854-1857 provided even more opportunities. The factory to the north of the site was built around 1903 and the Schlachthof further up north around 1910. Over time the area became popular among residents and the small houses for the working class of the Kohlstatt where transformed into a more urban structure with multi-family housing.

Along the Kapuzinergasse, one of the first social housing projects was built. In 1898, the Vinzenz community of St. Jacob initiated the construction of the Vinzenzhäuser, which provided 88 dwellings for a total of 700 residents. That means households of 8 persons on average! (Wikipedia, 2018) Higher class

Jörg Kölderer, *Das Zeughaus*, 1507

Backside of the Vinzenzhäuser. Entrances are located here. The gardens are used to grow food and as playground for a childcare centre.

housing was also built, and example is the multi-family housing by Jacob Norer in the Grillparzerstrasse. The neobaroque architecture of the Gründerzeit is visible in the richly decorated façades, while those of the Vinzenzhaüser are very plain.

In 1925 another massive social housing project was constructed, namely the Schlachthofblock. Designed by Theodor Prachensky it replaced the old slaughterhouse of Innsbruck and provided 183 rental apartments. It became one of the icons of social housing. (Hölz, C. et al, 2017)

Another icon in the neighbourhood is the administration building of the railway company (upper left in the map), which was constructed in 1898. It is among the largest detached buildings in Saggen.

1930-2018

It is in this period that Innsbruck expanded rapidly. All industrial complexes have been replaced by housing blocks, the urban structure of Dreiheiligen has been densified and the village of Pradl been extended. There are more or less four different urban structures present: block structures, free-standing low-rise, dense organic tissues and free-standing high-rise.

The three high-rise flats that were built along the Kapuzinergasse date from 1968, 1969 and 1970. At the sides they have blind grey façades and to the north-east and south-west they have either red, yellow or blue coloured balconies. With dead plinths and surrounded by a green park they were at the time the ideal of modernist living, nowadays they form a scenery without city life.
Later 3 low-rise semi-detached houses were added. One of them houses a homeless centre since 2004.

In the meantime the Siebenkapellen was again used after WWII, but now as office for the telegraph company. Since 1988 it was abandoned, until the present day.

At the moment, the greenery around the Zeughaus is private and not accessible for the public.

2020: FUTURE DEVELOPMENTS

As part of the densification of Innsbruck, the municipality issued a competition to remove the parking garage at the Bienerstrasse and replace it with housing. Development of this project is currently going on after the winning design of Workspace Architekten. Another competition was issued to transform the private green around the Zeughaus into a public park, including more high density housing replacing the existing dwellings. This competition was won by Reitter Architekten and is planned to be constructed in the near future. More information about these developments can be found further onwards in this thesis.

The church building actually is quite deteriorated, as can be seen on the photo's shown at the following pages. The outside facade has been restored a few years ago but the stucco is coming lose already. The interior is crumbling away and lost all of its original splendour. In fact, the church looks more a ruin than a building fit for restoration. According to me, that is something that should be dealt with as it is. We should not rewrite history. Time took its toll on this building and that should be shown. I therefore plea for an architecture that takes the building as it is and shows its scars and defects while at the same time making it fit for human use again. That way, the Siebenkapellen can tell its part Innsbrucks history story and become the icon of the area.
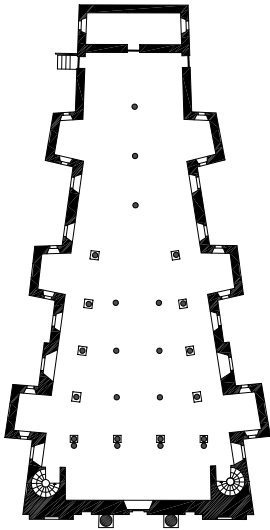
SIEBENKAPELLEN

A remarkable building present in the area is the Siebenkapellen or Heilig-Grabkirche. Its predecessor dates back to 1583 (initiated by duke Ferdinand II) and the current church was erected in 1676, after the first one was destroyed by an earthquake.

The Siebenkapellen - which has seven chapels - was connected to the Kapuziner monastery, by means of the Kapuzinergasse (which still exist today). Along the road seven chapels were built, depicting seven representations of Christ's suffering. (Fingernagel-Grüll, 1994)

The church has an extraordinary floorplan and spatiality. Due to the gradual reduction of its spatial dimensions (the trapezoidal floorplan and the lowering of the vaults) the perspective is exaggerated and the space seems longer than it actually is. This is strengthened by the position of the columns. Due to several restructuring works over time, the floorplan and façade of the church are not the same as they were and lost much of its original qualities. (Fingernagel-Grüll, 1994)

The chapel must have been richly ornamented both on the inside and outside in the past. However, in 1785 the church was secularised after a court decision and since then has not been used for religious purposes anymore. Stripped of all its decoration and valuables, it was transformed into a military powder magazine in 1793, forming one complex with the Zeughaus weapon arsenal and other military functions in the close surroundings. (Fingernagel-Grüll, 1994)

Josef Strickner, Kirche zur VII.ten Kapelle, oder zum H. Grabe, 1801
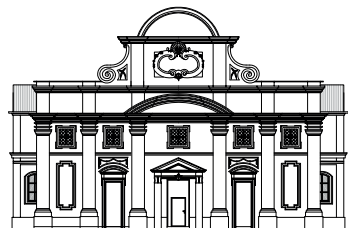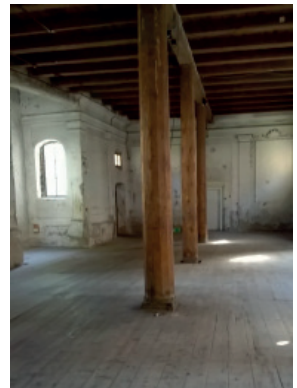
Current floorplan (^) and façade (>) of the Siebenkapellen.

View from the first to the second half, 2009

Interior of the second half, 2015

Interior of the second half, 2015

Interior seen from the entrance, 1994
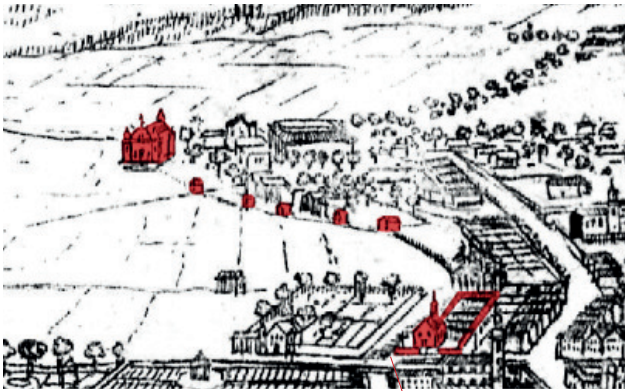

Interior seen from halfway, 1994

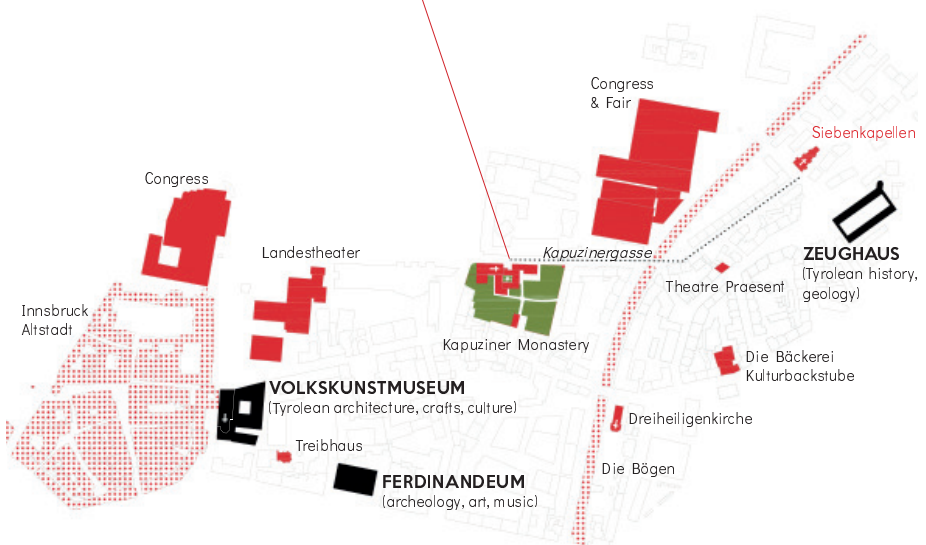Interior along the wall of the first half, 1994

Ornamentation of stucco, 1994

CULTURAL CONNECTIONS

Relations between the project area and the city centre of Innsbruck are quite old. The Siebenkapellen originally was connected to the Kapuziner Monastery via the Kapuzinergasse. The three main museums of Innsbruck (Volkskunstmuseum, Ferdinandeum and Zeughaus) joined forces and offer combined tickets to attract more visitors. There is a variety of cultural facilities in Innsbruck, but the ones in Dreiheiligen-Schlachthof don't attract many visitors, neither do they stimulate much urbanity. Besides, there is more offered in the field of theatre/music/history than visual arts.

The Kapuzinergasse with the chapels along the road, 1780.

Congress & Fair

Siebenkapellen

Congress

Landestheater

Kapuzinergasse

Theatre Praesent

ZEUGHAUS
(Tyrolean history, geology)

Innsbruck Altstadt

Kapuziner Monastery

Die Bäckerei
Kulturbackstube

VOLKSKUNSTMUSEUM
(Tyrolean architecture, crafts, culture)

Dreiheiligenkirche

Treibhaus

Die Bögen

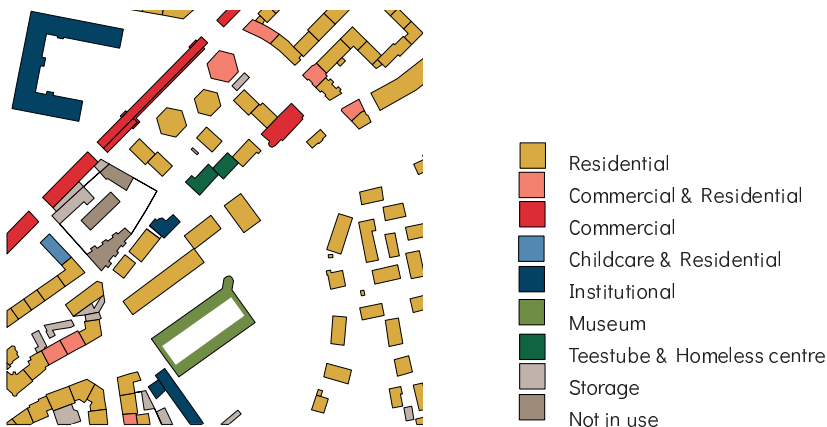**FERDINANDEUM**
(archeology, art, music)

FUNCTIONS

In the colourful map below it seems that the area must be very lively with so many different functions. However, this is not how I experienced it during my visits. The area does have a lot of potential, though. The main function in the area is residential, but, as it is still close to the city centre, there are also other things to find. A few small shops and café's are dispersed to the north and the south of the project area. The M-Preis supermarket (in red) in the north attracts people from the neighbourhood. The red line in the west is the Bögen - a series of shops, café's, clubs and businesses located between the arches of the elevated railway line. They form a backbone of liveliness in the city of Innsbruck. However, all of them are facing west - resulting that to the east the Bögen forms a huge blind wall. However, with the design of a new train station there (see the next page), café's will be designed that open up to both sides of the Bögen.

The dark green building is Innsbruck's homeless centre, where homeless and unemployed can ask for assistance and meet with each other. As it is not very well designed, many homeless linger on the street in front of the centre - a source of irritation to the residents nearby.

The Zeughausmuseum (light green on the map) is located in a very old and interesting building but hardly attracts any visitors - probably due to its somewhat boring exposition and remote location.

The Siebenkapellenareal is empty and deteriorating, walled of from the rest of the neighbourhood. Currently it gives a pessimistic impression, but with its rich history and remarkable architecture, it could become the eye-catcher of the neighbourhood - attracting visitors from all over the city.

Overall, although its current state of boringness, the area has a lot of potential functions that could be redesigned/enlivened to form a lively neighbourhood.

🟨	Residential
🟧	Commercial & Residential
🟥	Commercial
🟦	Childcare & Residential
🟦	Institutional
🟩	Museum
🟩	Teestube & Homeless centre
⬜	Storage
🟫	Not in use

Map with the functions in the planned future of the area.

INFRASTRUCTURE

At the moment, few infrastructural connections are used, probably because there is no activity in the area during the day. It is remarkable that residents take alternative routes to avoid the homeless that linger at the street in front of the homeless centre. The designs for the future residential developments both create more public pedestrian infrastructure in parks. A new train station above the Bögen and a new passage over there connect the area more to the city. The lower half of the Kapuzinergasse will also be transformed in a pedestrian path along the new housing. Altogether there will be more diversity in routes and more people to walk them. However, the walled Siebenkapellenareal still blocks many routes.
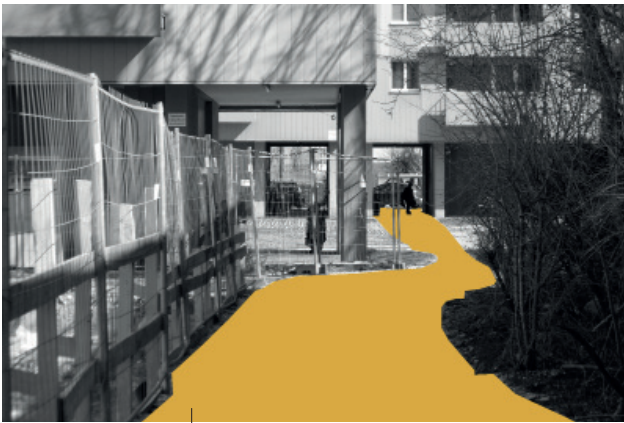
Residents take a path along the current highrise to avoid the homeless in the regular street.

The most used infrastructural connections at the location

The designed infrastructural connections in the future.

PUBLIC AND PRIVATE

There can be found more public than private space at the ground floor of this area - a good or a bad thing? The private space can be divided into the more closed blocks or dwellings with private gardens to the south and open, semi-public blocks or high-rise to the north. In the south, the public space is a bit more defined, to the north, it becomes ambiguous. It is interesting to see that an important public building like the Zeughausmuseum stands on its own in a park, without neighbouring public amenities.

What can also be seen is that public functions like the homeless centre and the Bögen, seem to work more like a barrier than a connector between public spaces at either side of the area. This way, the public park around the Zeughaus is not well connected to the residential park to the north and the new train station. This makes the park quite isolated at might prevent people from visiting it. Another problem of this park is that there are no public functions - except for the museum - surrounding it. There is nothing to do except to sit in the grass - not a very solid basis for a good park.

Other public buildings have been arranged along the main road in the north. At the one hand, this might be practical, at the other hand it leaves the rest of the neighbourhood quite lifeless.

Public (white and gray) and private space (black)

FUTURE DEVELOPMENTS: A CRITICAL REVIEW

Innsbruck's current main densification strategy is to add new high-rise apartment buildings at the outskirts or within the urban tissue of the city. Often those buildings are surrounded by a green park. In the scope of my project area two new high-rise are being built or planned, indicated on the figure below. To the north-west a project of 124 dwellings by Workspace Architects is currently under construction. To the south-east another project is planned of an estimated 108 dwellings designed by Reitter Architects. The first project replaces a garage building, parking area and part of a park. The second project will replace a small office building along the Kapuzinergasse and five houses that are dispersed in the private green around the Zeughaus museum. The projects differ a lot in their approach to urbanity.

The new housing developments are indicated in red.

In an interview on March 23, 2018, with the head of Innsbruck's City Planning, Wolfgang Andexlinger, he talked positively of both projects. According to him, the dense area of flats in the north-west was not a problem as the design would provide a public park for the residents at the opposite side of the street.

The elderly residents living in the current high-rise all agreed that the new housing development is *schrecklich* and *furchtbar*. According to them it is built way to dense: residents will be able to look into each others apartments and the park will be crowded. A younger resident however rather liked the new architecture and did not mind about it's density that much.

Both projects try to design for a diverse society by means of a variety in apartment types and sizes. However, these might still be too expensive for people who normally rent social housing. Except for the shared entrances and hallways, the projects do nothing to stimulate social contact between residents. When it comes to urbanity, the Zeughaus development is a bit disappointing. There are no public functions in the park and there is no direct connection between the apartments and the park that might enliven the space. The Bienerstrasse development on the other hand is a good start, but there good be done way more to stimulate urbanity.

DEVELOPMENT BIENERSTRASSE

- Three high-rise buildings (7, 8 and 9 floors), carefully positioned to allow nice sights from balconies, to prevent cast shadows on other buildings and to avoid north-facing balconies. The apartments are very diverse.
- At the ground floor there is room for a shop at the ground floor facing the Bienerstrasse, storage for bicycles and ateliers, however these have no direct connection to the outside.
- Underground parking.
- A new passage through the Bögen.
- New shops or café's in the Bögen that have windows at either side to create a lively Bögen area at the project location as well.
- Connection to a new train station.
- Bicycle path along the Bögen.
- New design of the park between the high-rises with artificial hills, a playground and extra parking places. (Larcher, 2014)

^ Housing development and a new public park at the Zeughaus area by Reitter Architects
< Housing development Bienerstrasse and design for the Bögen by Workspace Architects

DEVELOPMENT ZEUGHAUS AREA

- A combination of low-rise (3 and 5 floors) and high-rise (11 floors). All apartments have indoor loggia's to provide privacy. The buildings have been raised a little from the ground floor to provide privacy as well. The apartments are very diverse.
- The low-rise housing respects the Zeughausmuseum and the high-rise housing provides with nice views over the Sill and the city.
- There is no direct connection between private and public space.
- Underground parking.
- A new public park replaces the previous private green. However, no public functions are added to the park. (Reitter & Hertl, 2016) •

WHERE DO WE GO FROM HERE STARTING POINTS FOR THE DESIGN; CHALLENGES AND OPPORTUNITIES

To start off, it is quite clear from the location analysis that the area lacks urban life. To generate this should therefore also be the main purpose of the design, in combination with the other goals mentioned in the first part of this thesis. Although the location does not look very inspiring, I think it has a lot of potential.

Take for example the Siebenkapellen. This weird building is part of Innsbruck's heritage and it tells the story of Dreiheiligen-Schlachthof. It's strategic position on a crossing of roads makes it the ideal building to redesign into a hotspot for the neighbourhood. Because of its historic connection to the city and the need for more cultural life in Innsbruck it would be a good idea to give the chapel a new cultural/artistic function. This could work together with the Zeughausmuseum and this way more visitors could be attracted to the project location.

Another (future) asset of the location is the many people that will come to live there due to the new residential developments. This large population will demand more amenities and mixed functions in their neighbourhood, which, in return, will guarantee that people will be present at the streets throughout the day and that urban life is stimulated. As the new developments do not incorporate mixed functions, it will be the task of my design to provide not only the residents of my design but also the residents of the surrounding buildings with a good mix of

functions such as shops, offices, café's and businesses.

A last challenge for my design will be the infrastructural connections. At the moment the new projects are designed as islands on their own and do not connect well. The Siebenkapellenareal and current homeless centre also block possible routes. My design can become the connector of the neighbourhood, with a more diverse network of routes resulting in a more lively and exiting neighbourhood where every street can have something else to offer.

I have good hopes that the Siebenkapellenareal can become a lively new hotspot in Innsbruck and a popular area for people to visit. •

PART THREE

Design of the outside public realm

MASTERPLAN

Many things have led up to this masterplan: literature research on density and diversity, thoughts on Innsbruck and an analysis of the Siebenkapellenareal. In part one I set some guidelines and goals for myself, namely that I would follow Jane Jacobs principles of diversity in use, in routes and in age of buildings and that I would try to reach a ground coverage of 60%-80% and an amount of dwellings between 221-354. When combining this with the location analysis I came up with a program fitting the area and apt to contribute to a diverse neighbourhood.

In part one of this thesis I argued for a horizontal density and a high ground coverage. To this reason I started making the masterplan by just creating a huge infill of the location. To this end I had to remove two buildings, one of which a shabby office, the other a homeless centre. Both functions will get a new and better destination in the program of the masterplan. I than started to cut and mould this mass according to my theoretical guidelines and requirements of the location analysis. This chapter starts with explaining all the design steps that led to the masterplan as it is now. This final masterplan is then discussed and analysed. The program is presented and the chapter concludes with an axonometric view and a detailed view of that part of the masterplan that will be elaborated on in the continuation of this thesis.
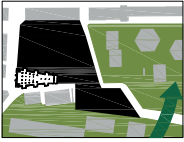
First step in the making of this masterplan was the connection between the two parks at the Zeughausareal and the Bienerstrasse housing development. This connection gives some more air to the dense development and allows for a greater flow of activities.
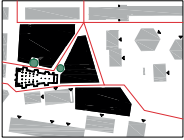
Secondly I made cuts in the mass to allow for a diversity in routes. I elongated the street along the Bögen destined for shops, and I made another connection from the chapel to the train station to allow for a diversity in routes. I also made cuts for two special old trees from the Zeughausareal.
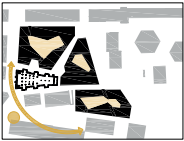

To provide the dwellings in the buildings with sunlight I design courtyards. These have been optimised to the position of the sun and their organic shape contrasts with the more rigid outside of the building mass.
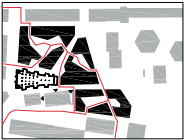

To provide residents with more diversity in routes I interconnected all courtyards with a secondary network of paths and passages. This creates more interesting routes as well, with different views all along.

To create a diversity in functions it is important to think about private (black), communal (gray) and public (light gray) space. I created such an alternation that every street has different functions alongside it, in order that there is activity on the street throughout the day.
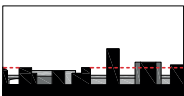
The building volumes have been made higher at the edges of the location area to relate more to the surrounding mid- and high-rise.
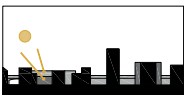
The building volumes are lower towards the courtyards to allow as much sunlight as possible and to create a more friendly and informal environment.

die
Bögen

train
station

Zeughaus
museum

Sill
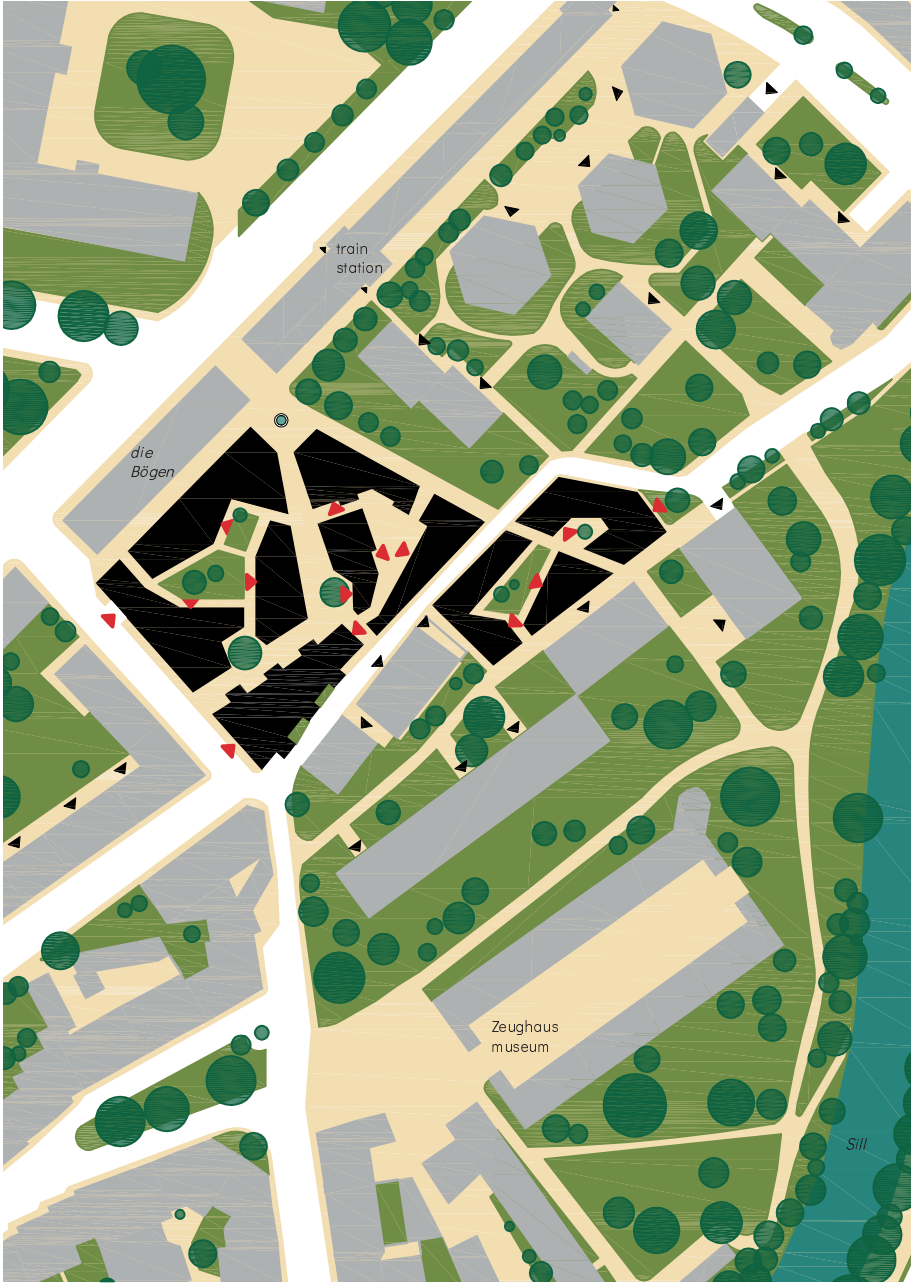
Masterplan of the project, scale 1:2000

FINAL MASTERPLAN

The urban morphological contrast between the project and its surroundings is striking. While the surroundings characterise themselves as volumes in space, the project follows the concept of space in the volume. The design almost is like a small medieval city within green fields scattered with farms. It is not a walled city though. The project is not a self-sufficient community, but it connects its surroundings and also functions as a connector itself between north and south, east and west. The project is not introvert, carefully protecting its treasures. No, rather it gives a positive influence all around. It provides the solely residential developments with a diverse mix of functions and street activity. It is a catalyst of urbanity whereof all its surroundings can profit.

When approaching the project from the city centre or the Zeughaus, the Siebenkapellen is the first object one can see. It forms the entrance to the area and the heart of the neighbourhood's activities. •

GROUND COVERAGE AND DWELLINGS

60 %

4233.4 m²

39 dwellings
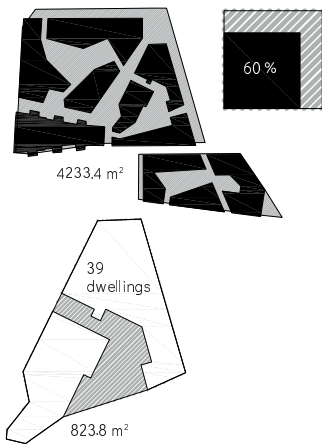
823.8 m²

The total surface area of the location is 7164.2 m². The total built surface sums up to 4233.4 m². The result is that the ground coverage just reaches 60%. Considering the amount of dwellings, for this area (823.8 m²) a goal of 25-41 dwellings had to be met. The design results in 39 dwellings. Therefore both goals posed by Jane Jacobs have been met for these parts of the project.

PROGRAM

apartments and communal roof terraces

homeless centre

shops/ offices

Art museum

homeless centre

shops/ offices
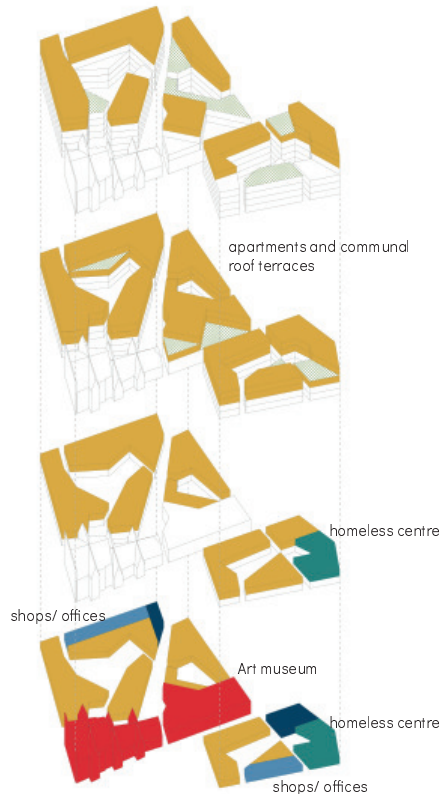
Axonometric view of the masterplan

Ground floor of part of the masterplan that will be discussed elaborately in this thesis, scale 1:500

ROUTE THROUGH THE AREA

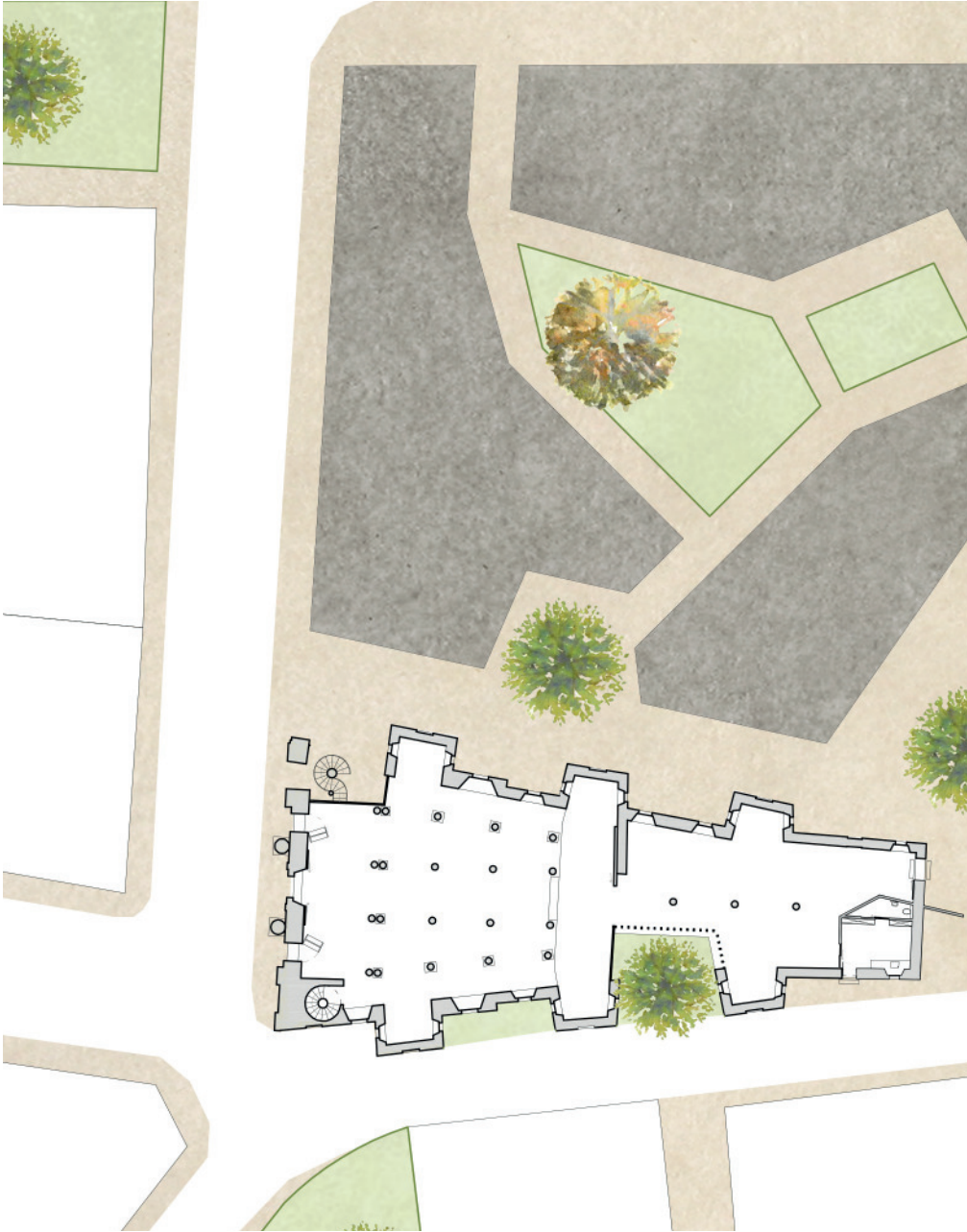The design of the street was very important to my masterplan and is key to the understanding of my project. The street is the place where people meet, where they interact, where they have informal public contact - or as Jane Jacobs called it, 'sidewalk contact'.

In my design I have worked with different materials, setbacks, curves and surprising views, light and shadow to design different gradations between public and communal areas and to evoke different atmospheres. This way I not only tried to design a route that relates to the curiosity and imagination of the visitor, making the area attractive to visit, but also a route that is alternately slower or faster, that invites people to linger, to sit down, or to move.

The street is the place where public life happens on spot. It is the great asset of cities that one can walk in a crowd of people while keeping ones private affairs to oneself. It is another great asset of cities that one can enjoy the casual public contact with others in the discussion over an artwork in an exhibition, by having a chat at the café, asking advice from ones neighbour or just by sitting at the edge of a square and watching the people moving around.

The following pages show a series of images showing a route through the project area I designed. They tell the story of public and communal city life. They
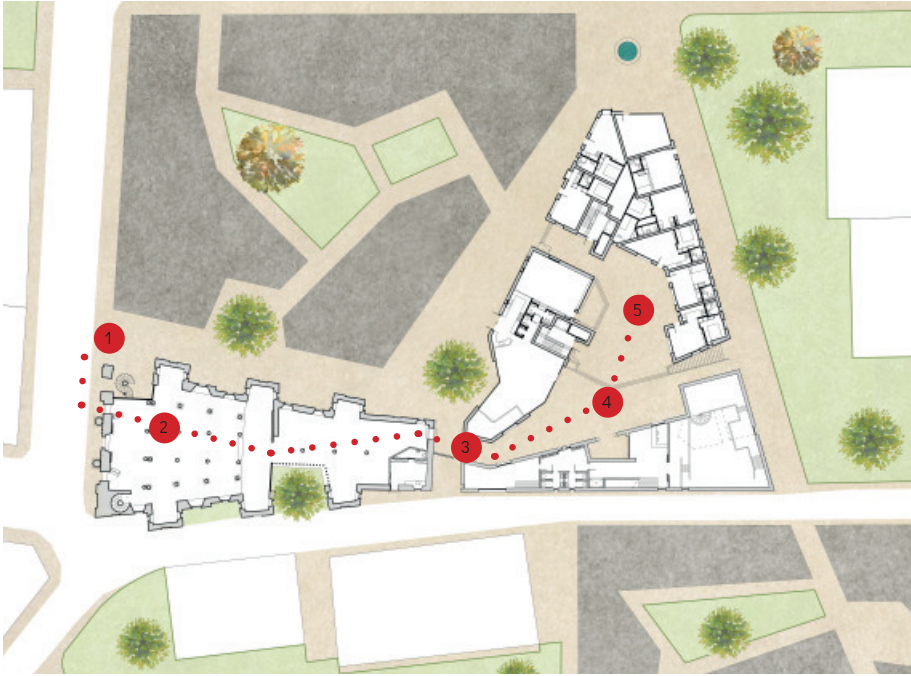
The route through the area indicated in red. The numbers show the order of images that will be shown on the next pages.

also show the relation between the privateness of a home and the activity on the street. As I said, the street is the key to the understanding of the project. It is where it all comes together. It is the street where public and private life collide. It is the street where urbanity is made, where urbanity takes place. We do not need more monotonous residential high-rise in parks abandoned by people. What we do need is some of the charm of the old historic city centre. Not to be romantic about the past, but to learn from what all of us actually like best. To admit that maybe we have been wrong about how to make cities. And to take the courage to use the assets of great city life in new residential developments like this.

When approaching the project area, the Siebenkapellen is the first building one notices. And the part of the building that then strikes the most is the staircase that has been uncovered by means of breaking away the facade. At first glance it is not visible where this staircase comes from and where it leads to. It draws the attention of the visitor who comes to have a closer look. The staircase might look like a typical baroque round staircase from a distance, but when seen from close-by it appears that the staircase in fact is new. As a beautiful ornament it decorates the building. Behind the staircase there is a wall of glass bricks to ensure an indoor climate for the chapel. It has been made of glass bricks to only partly reveal what happens inside, in order that the visitor becomes curious and decides to have a look inside. The combination of old and modern architecture shows a chapel, which almost deteriorated into a ruin, but which has been restored and remodelled. Alterations have not been camouflaged, but are readable for every visitor in order that they gain a clear understanding of the chapel's history.

Upon entering the Siebenkapellen one notices a dynamic space. The shape of the chapel is weird, the many columns are very uncommon and it is not possible to oversee the entire space in one go. Part of this experience has always been there, part of it has been strengthened by new design interventions, such as the wall of glass bricks, and the height difference. The weird shape of the chapel, originally designed to strengthen the idea of perspective and the added interventions again arouse curiosity in the visitor and invite him to explore the chapel. There is a lot to be seen in the chapel, as well in the inside as towards the outside via the many windows. The abundance of light, the openings to the outside and the presence of greenery give the experience of an outside space and thus strengthen the building's character as a ruin as well as its function as public space.

After having left the Siebenkapellen one arrives via a little narrow road at the square in front of the museum. From an environment clad in stone and stucco one suddenly arrives in a small square surrounded by wooden shingle façades. Already when being in the street one can suddenly see more far away a huge window of the museum framing an important art piece. This window is an anchor of the space and directs the movement of the visitors. The function of this building is immediately visible, without having seen a grand entrance yet. It is also directly visible to the user that there is a distinction between the two sides of the square, the right being more formal with a quite closed facade supported by a plinth, the left side being more informal with people loitering around, the terrace of a café and the view into people's dwellings. In the distance the high-rise of the Bienerstrasse development is visible, but for now we stay in this enclosed square.

Upon turning right the entrance of the museum becomes visible. The building only subtly identifies as museum by means of the previously mentioned huge window and massive plinth. The rest of its materialisation connects to the other residential buildings that surround the square. The entrance has been subtly marked with two columns, a reference to the entrance of the Siebenkapellen. The museum draws the visitor inside by means of the entrance that is around the corner. A way of entering that makes the visitor curious about what is happening inside and which at the same time provides a very comfortable transition between outside and inside.

When turning left again, the visitor gains full view of the communal residential square. This square is accessible to the public but is at the same time separated from the more formal square in front of the museum by means of a small height difference. Setbacks in the facade and overhangs from the balconies provide residents with a transition zone of semi-private space. The communal square is the ideal place for children to play safely. Residents can watch the activities on the square from their window sill or the balcony. There are many possibilities to make social contact with others. The façades have been designed in such a way that they are very dynamic and have an informal character which enhances the communal atmosphere of the square. •

SENSE OF PLACE MATERIALISATION AND ATMOSPHERE

In the description of the route through the project area I hinted at the use of different materials on the façades on the outside of the building block compared to those facing the inside of the building block, namely the communal square. In my design I wanted to create different atmospheres for the different types of public space to enhance their particular character and to create a nice variety of views when people walk through the project.

In addition to this I wanted to design with an architectural language and materiality that would connect to Innsbruck's identity, to give the project a 'sense of place'. Although high density housing is a world-wide phenomenon, housing is so tied to a certain area and to the culture of a people that it should be designed in a specific instead of a generic way. People should be able to truly feel at home. In his book *Genius Loci: Towards a Phenomenology of Architecture*, Christian Norberg-Schulz writes extensively about the relationship between the act of dwelling and the spirit of the place man has to come to terms with. He indicates the importance of orientation (knowing the way, by means of nodes, paths and districts) and identification (becoming friends with the environment) in order to be able to feel at home, to experience a sense of belonging. The latter means in the case of an urban environment that one has to identify with man-made things,

such as streets, houses or pavements. With Heidegger, Norberg-Schulz argues that dwelling means to 'gather' the world (to collect the properties of a certain place) and to concretise this information into a building. In this way the building becomes an image of the world that helps man to understand his surroundings. (Norberg-Schulz, 1991)

In interesting dilemma arises when people emigrate to another country and have to settle in a new kind of environment. Should multicultural housing try to relate as much as possible to the architecture of their fatherland to make them feel at home, or should they adapt to a new kind of housing in a new kind of environment in order to integrate into the new society they now belong too? I think it is a bit of both ways. Further on in this thesis I will present the different types of apartments that I designed, which are organised by different relations between public and private, based on residents' cultural demands. This considers the inside of the space but is also reflected towards the outside in the design of window openings in the facade. That is one side of the story. On the other hand I think it is important that a building tells something about the identity of the city or landscape where it is built, to ensure that that place keeps its identity and does not become a generic mixture of objects that have no relation whatsoever. Because if a city does not have an identity of itself, then it becomes even harder to relate to it and to generate a new sense of belonging to that place.

And thus started my search for an apt materialisation and architectural language for the façades of my buildings.

Schematic representation of the materialisation of the design.

Innsbruck's hotel with the golden roof

When one is in Innsbruck, it is impossible to miss the famous hotel with the 'golden' roof. It is an architectural landmark in the historic city centre of Innsbruck, once the place were the royal family had their residence. Apart from its golden roof made of copper, the facade of this building shows all the characteristic elements of Innsbruck's (traditional) architecture: a massive plinth of rough stone above which a facade plastered in stucco (white or a pastel colour). The windows are quite small but with some regularity there will be a bulging bay window protruding from the facade. Elements of this architecture can be found throughout Tyrol, also in the typical Tyrolean farmhouses, which, despite their imitation of an invented stereotype, still preserve some typical materials and elements. The way these architectural elements are combined might be typical for Innsbruck, but in the basis, same architectural means are used all over the world. Building with stones and covering walls with plaster is done in many cultures and adheres not only to the sense of belonging of a typical Innsbruck resident, but might as well speak to people from completely different cultures.

As the streets in my design have been designed especially to form connections between two points, they are meant for more quick movement, either by means of walking or cycling. These streets do provide spaces to loiter and relax, but only in destined areas alongside the street to allow a good flow of traffic. To enhance this more strict character I want to make use of the typical elements in Innsbruck's facade architecture: the stone plinth, the stucco wall and relatively small windows. How this formal architecture has been worked out can be seen in the first chapter of part five of this thesis.

In contrast to the streets, the courtyards within the building blocks are designed for a much slower pace. Here there are staircases and low walls for people to sit on. Residents linger in the semi-private space in front of their dwellings. This asks for a more informal architecture with set-backs, protruding volumes, balconies and larger windows. In search for a material that would complement this architecture I arrived at the wood shingle. Its small size makes it ideal to give the communal squares more human scale. The intricate texture it creates forms a nice contrast against the rigidity and coarseness of the stone and stucco. But just as those materials, the shingle, although commonly used throughout Austria, is not tied to just that country. It is used all over the world, wherever there is growing enough suitable wood. Jens Carstensen describes in his book *Schindeldach und*
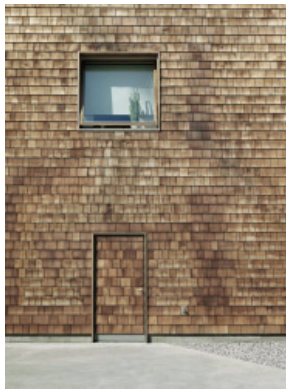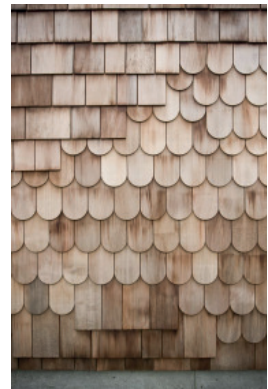
Mountain hut in Steiermark, Austria

Uvdal stave church, Norway (12ᵗʰ century)

Dome of the Cathedral of Transfiguration,
Kizhi island, Russia (1714)

Folkhem Strandparken, Sunbyberg,
Sweden (2013, by Wingårdh Arkitekter)

N-Holiday House, Chiba, Japan
(2016, by Sohei Nakanishi Design)

Schindelgiebel that the shingle is one of the primal building materials as it can be manufactured with very simple tools. He writes that among the Romans roofs made of wooden shingles were very common and that they spread this building material around Europe. However, the use of wooden shingles emerged among many peoples living separate from each other, thus making the shingle one of those elements that adheres to the sense of place of many people. (Carstensen, 1937) I think the question I asked before about the sense of place in our time of immigration and multiculturalism can now be answered. We can built with materials that belong to the surroundings of the building, but these materials can be materials that speak to the imagination of many. Even when not familiar with the materials itself, the human scale and tectonics make them understandable to everyone. •

PART FOUR
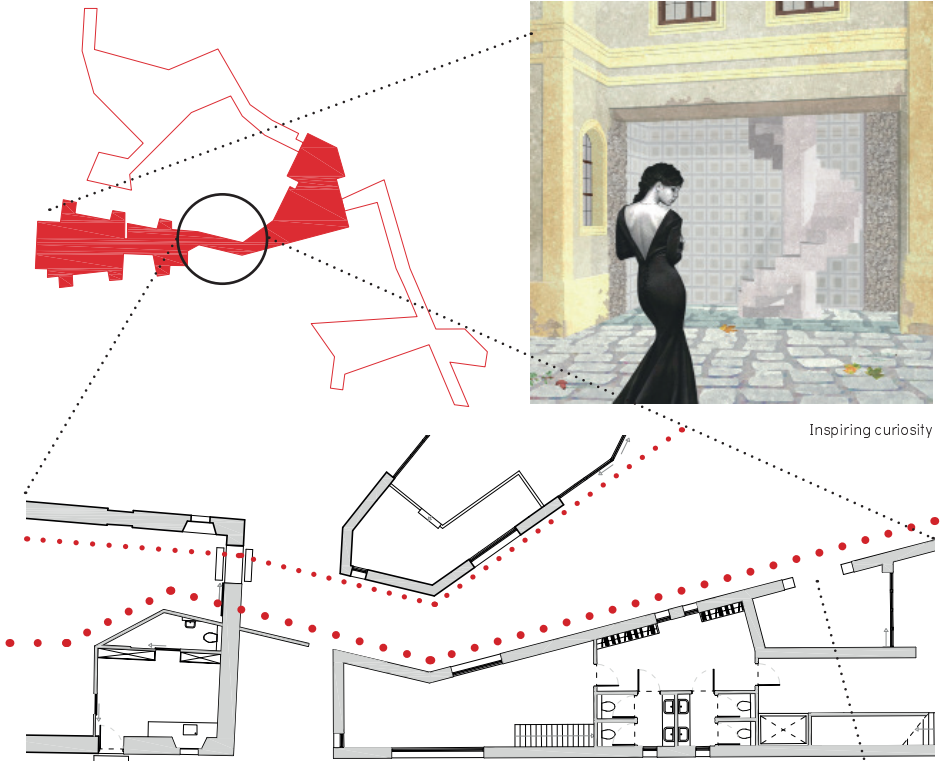
Design of the inside public space

THE CONNECTION BETWEEN OUTSIDE AND INSIDE PUBLIC SPACE

The main challenge in connecting outside and inside public space is how to stimulate people to walk from the outside to the inside public area. Entering a building can be a threshold that visitors need to overcome. In my design this challenge concentrates on the Siebenkapellen, the Art museum and the public space surrounding them. I applied three different methods to make this connection.

First of all I tried making people curious to enter the public buildings by means of translucent (but not transparent) surfaces (e.g. at the Siebenkapellen) and bends in the route (e.g. at the entrance of the museum). This attracts people's curiosity, making them want to know what is happening inside.

Secondly I connected the museum and the chapel by means of architectural elements. The facade of the museum naturally flows into the wall surrounding the service area in the Siebenkapellen. Throughout the masterplan it is the same weird language of slanted forms that connects all courtyards and the chapel. In addition I applied the same kind of materials throughout the project.

Finally I designed the chapel partly with an outdoor climate. I tried to give the indoors the experience of the outdoors by means of an abundance of natural lighting and greenery growing inside the chapel. •

Inspiring curiosity

Connection between inside and outside public space, in this case between the Siebenkapellen and the square in front of the museum


Inspiring curiosity

SIEBENKAPELLEN A CULTURAL HOTSPOT

The Siebenkapellen or Heilig Grab Kirche dates back to 1676. The chapel has an extraordinary floorplan and spatiality. Due to the gradual reduction of its spatial dimensions (the trapezoidal floorplan and the lowering of the vaults) the perspective is exaggerated and the space seems longer than it actually is. This is strengthened by the position of the columns. Due to several restructuring works over time, the floorplan and façade of the church are not the same as they were and lost much of its original qualities. In remodelling the church I wanted to exaggerate its weird shape to make it a true landmark for the neighbourhood. As the chapel is so old and quite deteriorated, I emphasised its character as a ruin by making strong gestures and removing parts of the building to accentuate its characteristics.

The chapel lost its religious purpose since 1785 and has been used as a military powder magazine and storage space. A new function for the chapel has not yet been found. I would like this weird chapel to be the central point where the neighbourhood community can meet and where people from all over the city can come to enjoy Innsbruck's culture. Therefore I joined it to the Art museum and made it into a public building that is accessible to everyone during daytime. In fact, part of the building even has an outdoor climate to strengthen its character
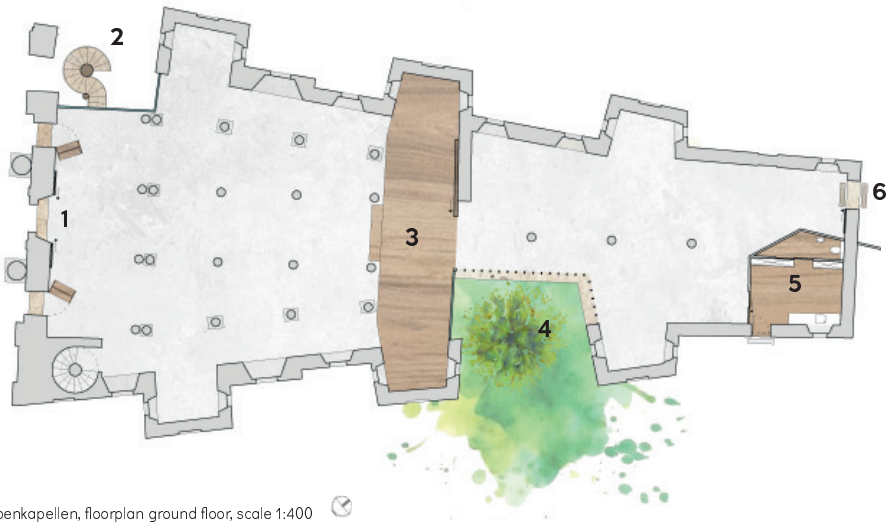
Siebenkapellen, floorplan ground floor, scale 1:400

The numbers in the floorplans label the design interventions that have been made: 1. Opening up the filled-in doors and replace them with wooden doors; 2. Opening up the facade and design the staircase as an object; 3. Stage for performances and division between two parts of the chapel; 4. Scenery of a ruin with a tree growing in the building; 5. Facilities; 6. New exit with sliding door; 7. Reinterpretation of the window as a private place of seclusion; 8. Gallery and Atrium to watch performances from above.
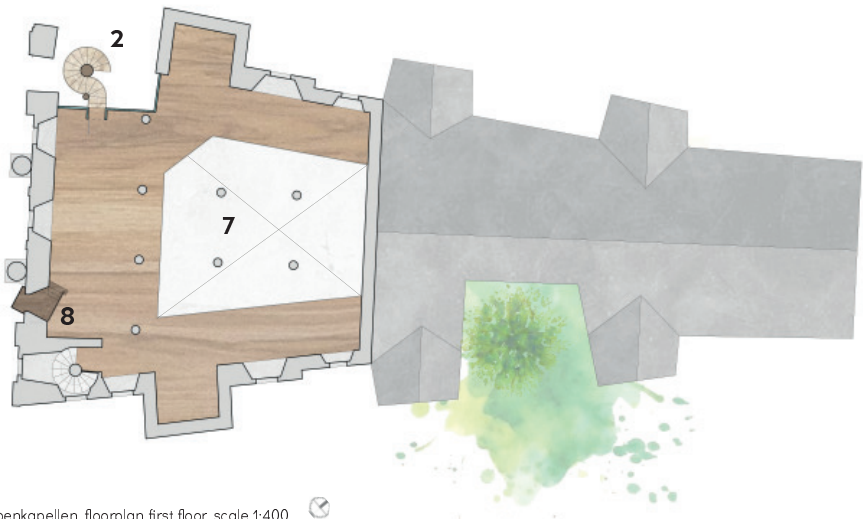
Siebenkapellen, floorplan first floor, scale 1:400

Siebenkapellen, north-west facade, scale 1:400
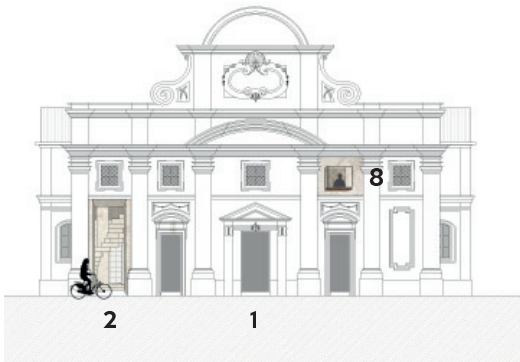
Siebenkapellen, south-west facade, scale 1:400

The uncovered staircase at the corner (intervention 2)

Siebenkapellen, north-east facade, scale 1:400

as a ruin and to connect it with the public space. Al interventions that have been made in the church are characterised by the use of wood as a contrasting element within the chapel, but also to connect the chapel to the new bu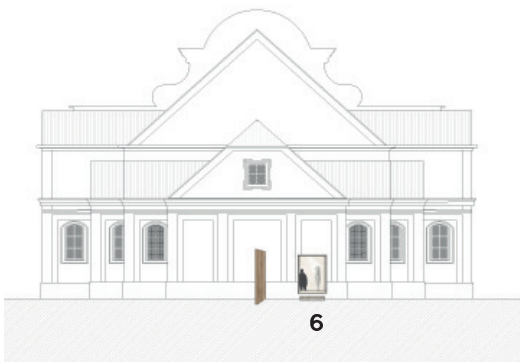ildings surrounding it. The seven interventions can be found in the floorplans and façades and have the following reasons.

The first intervention, namely the opening up of the now filled-in doors of the front facade, has naturally the intention to make the building accessible again. I kept the three openings to preserve the symmetry in the facade. For the middle opening I designed two sliding doors, for the other two I designed doors that can also function as a seat or exposition stand - a multifunctional element that is also used in the residential buildings.

Secondly I opened one corner of the building to uncover one of the staircases. I designed a new staircase that relates to the old version and now forms the eye-catcher of the chapel. It's purpose is to make people curious about what is happening inside - the wall of glass bricks gives a slight hint, but does not show what is inside - but also to make them able to experience the architecture of the chapel in another way.

As I wanted the chapel to have a multifunctional use, I made a stage for performances or lectures in the middle of the chapel, the place were in the past the altar must have been. The stage divides the chapel in two parts, the first part having an indoor climate to make it fit for performances, the second part having an outdoor climate to strengthen the experience of a ruin and to create another interesting exposition space. Two wooden sliding doors can be used to close off the space, and a wall of glass bricks shows a hint of green.

The fourth intervention has been to remove part of a niche in the facade and replace the architecture with nature - is seems as if the tree must have grown there after the building partly deteriorated. Shallow wooden columns separate the outside from the inside. They allow all weather influences, but they prevent people from entering. When the sun is shining they will cast beautiful shadows on the floor of the chapel, which visitors can see from the entrance, unknowing where they are coming from.

To facilitate performances and exhibition I made a small service corner in the back of the chapel. It connects to the outside by means of an already existing door. It houses a toilet/changing room, storage space and a small kitchenette. It has this particular shape to connect with the shape of the outside space behind the chapel (see the previous chapter). Also this volume is clad in wood entirely.

The sixth intervention on the ground floor is an exit I designed in the back facade of the chapel. I deliberately did not design it as a normal door, but as a simple square cut-out in the facade, to show that it is a present day intervention. The opening is framed in wood and two small steps lead up to it.

On the first floor of the chapel I designed a wooden gallery. A similar kind of

gallery must have been their in past times as visible on old floorplans. Of course I made it from wood entirely. Above this gallery there is a sky window as large as the void to the ground floor. This window allows plenty of light into the chapel, making it almost as lit up as an outside space - strengthening the experience of the remodelled ruin.

The last intervention is a bay window which will be discussed elaborately in part six of this thesis. I designed this window as a kind of wink-eye of the building towards it surroundings. It sticks out from the front facade, as a balancing element in the facade with the opened up left corner. The window is a lookout post towards the surroundings of the church - as you often have a lookout point from a remarkable building. It also is a place for private retreat like in former times the side chapels of the church would be places where you could have privacy amidst a public space.

I think this design can really bring back the lifelines of the city to this up until now quite neglected building. The design is flexible and would allow many different activities, from exhibitions and performances to community dinners or wedding ceremonies. I think the peculiar design interventions will make the building stand out from its surroundings in order to become the eye-catcher of this new neighbourhood as the centre of urban life. •

Siebenkapellen, south-east facade, scale 1:400

Interior of the first part of the chapel
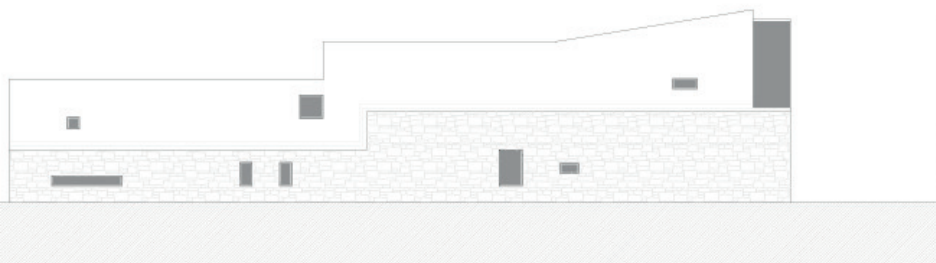
MUSEUM ART CENTRE

The design of the Art museum is based on five elements that can be found in the architecture of the Siebenkapellen. First their are the weird staircases. In the museum these translated to one huge staircase that connects different levels and creates an interesting route with alternating vistas throughout the museum. A variation on the column has been used at the entrance of the museum and a plinth surrounds the entire building to give it the character of an important public building. At the roof edge I created a pattern of missing shingles as a horizontal ornament which is both subtle and sophisticated. As a variation on the chapel I designed a huge window that sticks out of the facade, showcasing a statue and drawing people's attention.

As the museum is located in a residential area, I wanted it to be friends with its surroundings. Therefore it's materialisation and scale is coherent to the surrounding buildings. I gave it it's own character though by mirroring its silhouette to that of the chapel, by means of adding the ornamentation, plint and distinct entrance, and by means of scattering the windows seemingly random over the facade, contrasting with the more strict geometry of the residential buildings.

The interior of the museum has been organised in such a way that it is possible to walk in one long route through the exhibition spaces, one does not
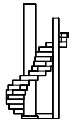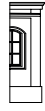
staircase   plinth   column   ornament   chapel/annex
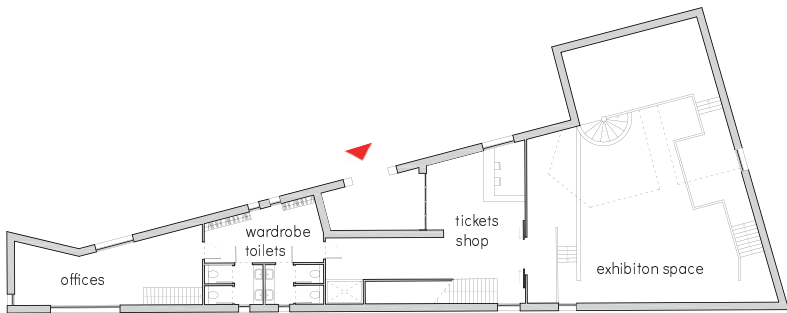
Art Museum, floorplan ground floor, scale !:400

offices

wardrobe
toilets

tickets
shop
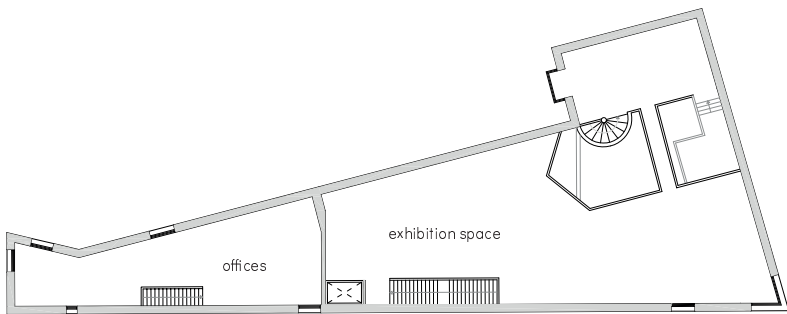
exhibiton space

Art Museum, floorplan first floor, scale !:400

offices

exhibition space

have to walk the same way twice. This route is naturally directed by means of the staircases and carefully positioned windows that attract the visitors attention. The exhibition space has been designed as a very dynamic space, with many different height levels fit for different kind of exhibitions. There is the possibility to look up to the highest ceiling but also to look down on the floor if needed. This alternating route with different height levels also allows visitors to observe artworks from different angles as they are walking their way up to the first floor. The museum is not extremely large, it has a nice size for smaller exhibitions and possible communal activities. •
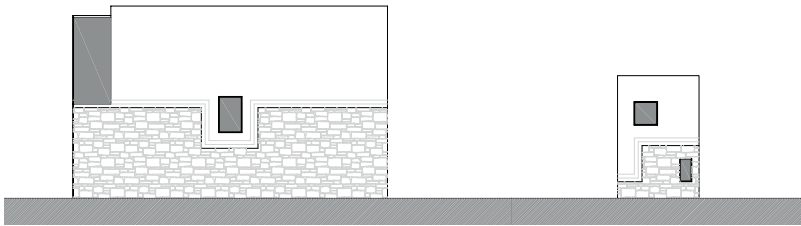
Art Museum, north-east facade, scale !:400

Art Museum, south-west facade, scale !:400
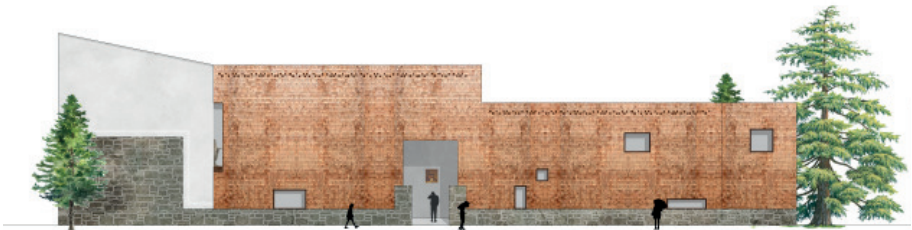
Art Museum, north-west facade, scale !:400

PART FIVE

Design of the inside private space

COMMUNAL SPACES AND THEIR CONNECTION TO THE PUBLIC REALM

What I advocated for in the first part of this thesis was to use urban density and diversity in functions, routes, buildings and a dense amount of diverse people to help building the future multicultural society of Innsbruck. Now we've come to the part where it gets real: *how can social interaction between diverse residents be stimulated in the public and semi-public space?* And *how can diversity in use, designed according to Jane Jacobs principles, contribute to this?* In part four this has been discussed regarding the public space, in this part I will zoom in to the public and semi-public space in between and inside the residential buildings, which, to be clear, I will from now on call the communal space. In this chapter I will deal with the connection between the communal and the public and the design of the outside and inside communal spaces. Following chapters in this part will discuss the design of the dwellings themselves and their connection to the communal and the public space.

Communal space is not something you can call a left-over space in or around a building and then expect residents will use it as such. It needs to be designed carefully. Jane Jacobs wrote about the danger of designing to much togetherness between vast apartment buildings: a park or square - how beautiful its play furniture might be - will not be used by either kids or grown-ups because there is

Two projects in Berlin that feature designed communal spaces. COOP Housing (top) features a public garden and communal roof terraces and indoor facilities. It houses a diverse community that helped co-create the project. R50 Co-housing (right) also was developed in collaboration with future residents. Besides in- and outdoor communal spaces the building features all-round interconnected balconies to which every apartment opens up like an elevated street.

nothing else to do (no shops or café's), there is no space for casual public contact without getting awkward and the place is just a bore. Diversity in use is needed to make communal space work - that is what Jane Jacobs said. (Jacobs, 1961)

To connect these ideas to modern architecture I reviewed two projects that feature designed communal spaces for a residence with a diverse population. Both are located in Berlin and were designed in a collaboration between architects and residents which of course gave the success of those projects a head start. Both projects are claimed to be successful in reaching their goals of a social interactive community connected to the city. What they have in common is that they provide both public(!) and communal functions on the ground floor which is connected to the outside area by means of an open and transparent facade. The buildings feature communal functions such as creative workshops and laundry's, but they also have more casual communal spaces such as terraces, communal kitchens and living rooms. The latter however are only shared with a small amount of people - e.g. just the residents of one floor - while the former are shared with the residents of the entire building. This gives way that informal communal space is more easily shared and used when only a few people that you know come there too. It feels more private than, for example, an outside garden. Therefore I think that a certain amount of togetherness can work - even when there are no predefined functions in a place - when an area is only shared with a few fellow residents and everyone feels responsible for the place. The projects also show that communal spaces (those surrounded with by public functions) give space to the organisation of communal festivities and the like which could also be accessible to the public. (Archdaily, 2015a; Archdaily, 2015b; Bennie, 2015)

In the design of the communal square in between the two residential buildings and the art museum I tried to apply what I have learned from Jane Jacobs and the reference projects I reviewed.

In order to create a communal area that is connected to the public space and accessible for the public at the one hand, but also feels a bit secluded and more informal than the public square in front of the museum, I used different spatial elements. First, I created a little height difference. This creates a natural border and provides informal space to sit as well. Also, I designed the building volumes in such a way that the parts penetrating into the open space work together to form a partly virtual wall for the communal square. The gradations between the public and communal realms have been indicated with dotted lines in the map below.

The entrances to the upper floors of the residential building have been placed in such a way that they form a natural transition between the public and communal space. They do not interfere with the activities in the communal space, but they do provide a visual scenery of people coming and going: there is something to watch all the time during the day. The communal square also has been held free from cyclists; it is completely pedestrian to provide a safe environment for kids to play.

At the communal square there is always something going on and there is plenty of opportunity for informal private and public contact, as there are not only three apartments connecting to it, but also a communal room, a café and a museum.
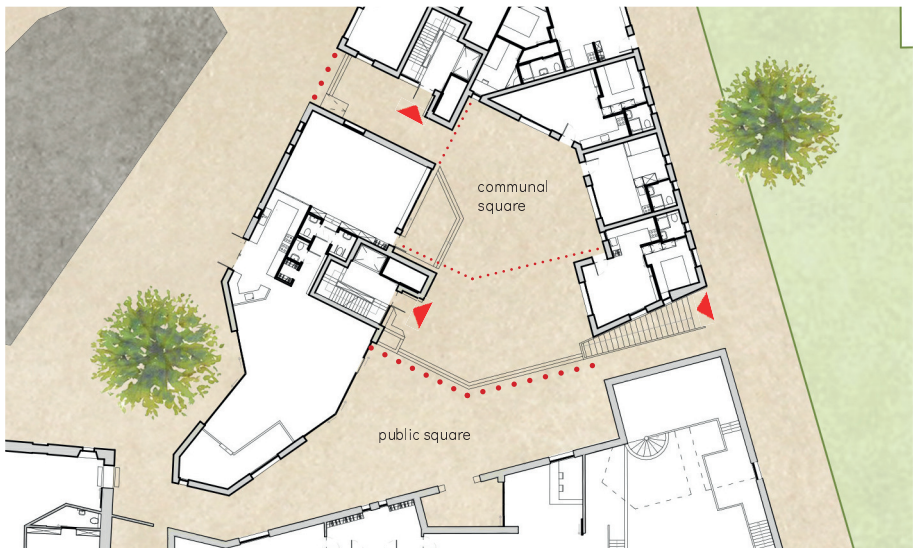
Different levels of 'publicness' surround the communal square in between the residential buildings, scale 1:500

Residential buildings, ground floor, scale 1:400

GROUND FLOOR

Indoor communal spaces at the ground floor are the entrances to the upper level apartments and the communal room. This room is connected to the museum café and therefore allows for a great variety of usages - from private family parties to communal activities - as all the necessary servant functions are there. The communal room directs itself to the communal square by means of folding doors in the facade and a reduced seating area in front. It stimulates people to gather and would be great for organising communal activities.

The entrance halls of the buildings provide a communal storage space. They also have a bench next to the front door and are shielded by the extended volume of the storage space and the overhang of a balcony - a small sheltered space to wait on someone or to socialise with a neighbour thus emerges.

Residential buildings, first and second floor,
scale 1:400

FIRST AND SECOND FLOOR

The upper floors all have an indoor and outdoor communal area destined for the residents at that particular floor. This means that a maximum of 7-12 people share laundry facilities and a communal seating area. As many apartments don't have individual outside space, residents are encouraged to use the communal outside space. This space almost always faces south for a nice climate. The balconies surrounding the communal square connect with it and make more informal interactions possible.

   The inside communal area has plenty of daylight in order that it becomes a pleasant place to stay. The stube-like table and bench provide an intimate area which could be used when one of the residents has multiple guests over or when residents would like to eat together. Because the communal space is only shared with a small amount of people, social interaction is more likely to take place.

THIRD AND FOURTH FLOOR

Just like the communal balconies, the communal roof gardens face south for a pleasant climate. The gardens are meant for all the residents from a building and are ideal to use for larger gatherings or communal activities. They have been designed in such a way that seating is accommodated in different corners of the terrace, so that residents do not have to interfere with each other when they have nod need for that. Residents are not forced to be together but merely encouraged to seek each others company.

In the floorplans is already visible that the balconies have a different type of balustrade at the inside and the outside of the building block. The inside is kept informal and differentiated, the outside is more formal and strict to provide a comfortable relation between either the different communal spaces or the communal and the public space. I will elaborate more on this when discussing the façades of the buildings.

Residential buildings, fifth floor, scale 1:400

FIFTH FLOOR

The fifth floor of the building houses just one apartment. This makes the communal space unnecessary, in this case the communal space has been changed in a type of entrance area which is light and pleasant.

roof garden

shop

Façades at the outside of the residential building block, scale 1:400

roof garden

roof garden

museum café

communal room

Façades at the inside of the residential building block, scale 1:400

roof garden

communal room

museum café
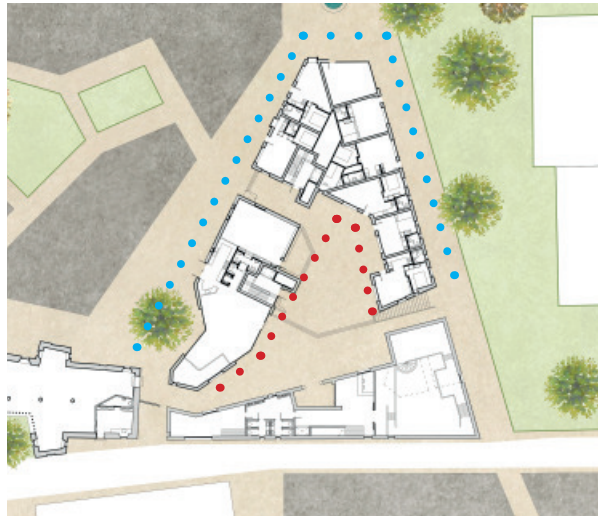
Map, scale 1:1000

• • • • • Façades at the outside of the residential building block

• • • • • Façades at the inside of the residential building block

FACADE: ARCHITECTURE OF THE PUBLIC AND COMMUNAL

On the two previous pages the façades of the residential buildings have been shown. Because the inside of the building block is a communal space, and the outside of the building block a public street, two different kind of façades have been designed. Not just to provide the visitor with an interesting experience, but mainly because the relation between public and private space is different from the relation between communal and private space. Therefore, two different types of façades are required.

The architecture of the public space characterises itself by a massive and sculptural architectural language. Combined with the cladding of stone and stucco, this gives the facade the appearance of a fortress in the city. Most windows in this facade have been kept small, placed deep into the facade, to strengthen the sculpturality of the facade. The stone plinth and stucco, as well as the small windows, are typical elements of Innsbruck's architecture. The roughness of the stone can be experienced by the passers-by and gives a human scale to the building. Several sizes of windows have been used and alternated for a playful effect, to prevent the building from looking unfriendly or austere. Special attention has been paid to the ground floor. A pleasant variety of window sizes and functions has been designed to make the street a nice place to walk through. Note, to walk through, not to reside in (except for assigned spaces like the café and the park). Three passages hint at the space that can be found behind this massive facade, where life has another pace.

The architecture of the communal space, the inside of the block, has been designed more informal and friendly. There is more variation in volumes, overhangs and set-backs and the balconies add some extra airiness. There are more large windows in these façades to enhance the contact between the private and the communal space. The cladding of wooden shingles add an intricacy that is completely different from the rough stone cladding at the exterior of the block. One might say that the communal square has become a pleasant living room in a city of harsh and cold stones. At the inside of the block, the benches underneath the windows, the balconies, and the setbacks provide comfortable spaces to linger and observe the activity on the square.

I think the façades of the residential buildings clearly show the distinction between public and communal space, but at the same time provide the visitor and resident with an interesting experience of differences in materiality and architectural character, which make the communal square a gem in the city of Innsbruck. •

The communal square, a gem within the city of Innsbruck were life is lived in a slower pace.

Was ist passiert mit unserer Stube?

Ach, diese Stadtmenschen!

THE STUBE AS A PRIVATE REFUGE IN A DENSIFIED WORLD

In creating a densified living environment I not only wanted to create a horizontal dense urban tissue, but also to develop compact dwellings - to show that it is possible to create great quality of life on a smaller footprint. I also think that compact dwellings fit in current trends of tiny housing and living for experiences instead of possessions. A compact dwelling that provides all basic needs for living, but also encourages people to make contact with the outside world, is what I envision for the future of densified living.

As I wanted to develop an architectural language for densified living in Innsbruck, I started searching for precedents in Tyrolean architectural history. I found my answer in the architecture of the stube. Although its popular branding in Après-ski café's and mountain huts it has a very long history; early nominations date back to the 12th century. Innsbruck's Volkskunstmuseum houses a large collection of recreated Stuben from old farmhouses in north and south Tyrol and writes: *"Die Einrichtung ist einfach: eine umlaufende Stubenbank, in die Täfelung eingelassenen Wandkästchen, der Tisch im Fenstereck diagonal gegenüber dem Ofen, Vorbänke und Bretter- oder Sprossenstühle."*

The Stube was the place where the whole family gathered for warmth and company. It is comfortable, efficient and flexible: the perfect refuge from a

The Stube functions as a safe and private refuge from the densified corbusian world, like once the Tyrolean farmer sought refuge from the threats of nature.

densified cityscape. The Stube feels comfortable because of its human scale and materialisation in wood. It is efficient because it integrates furniture and storage space into its architecture - no valuable square meters are lost to transportation. It is flexible because one can use it in anyway one wants, it does not dictate a particular function. The stube is a space that adheres to people of all cultures. It is a safe private refuge from the densified corbusian world, like once the Tyrolean farmer sought refuge from nature.

To further develop this idea and in order to gain some more specific design tools I went searching for references. I found these in the architecture of Norbert Fritz, Liane Zimbler and Eileen Gray. All of them create in their designs a synthesis between architecture and furniture which allows for great compactness and multi-functionality. The following pages show some examples of their work, followed by a conclusion and the actual apartment design.
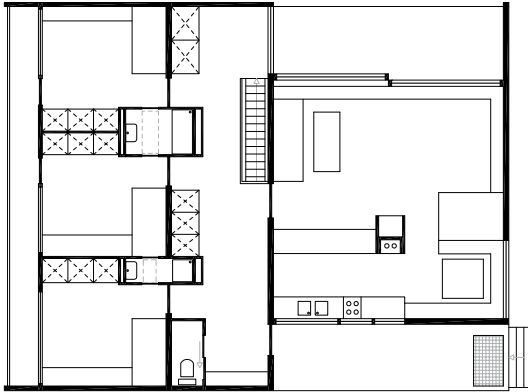
Norbert Fritz, *House Fritz*, 1964, ground floor 1:200

HAUS FRITZ

"Seine überwiegend in Tirol entstandenen Bauwerke verkörpern - auf traditionellen Bauformen beruhende - zeitgemäße regionale Architektur. Seine Wohnbauten, Einfamilien- und Siedlungshäuser zeichnen sich durch ungewöhnliche Lösungen und Landschaftsbezogenheit aus."

Österreichische
Nationalbibliothek, 2009

During our stay in Innsbruck we visited two houses by Norbert Fritz (1935-2006), namely *Haus Fritz* and *Siedlung Pumpligahn*, under the guidance of Arno Ritter from the AUT. I was greatly impressed by the architecture of House Fritz. Designed in 1964 as a residence for his mother, sister and himself, Fritz was able to create an ultimately comfortable house that adheres to our primitive instinct of dwelling in the world. The design incorporates reinterpretations of traditional Tyrolean architectural elements, such as the *flür* in the middle of the house and the integrated storage and furniture - especially the benches alongside the walls. Together with the facade openings, roof-lights, materialisation, organisation of functions and the flowing of the space, this makes a comfortable atmosphere, but also an efficient and flexible architecture that relates to the traditional concept of the Tyrolean stube. (Schönherr, n.d.)

Norbert Fritz, *House Fritz*, 1964, view of the livingroom

THE COMBINED ROOM
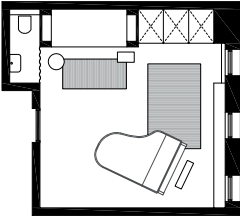
Floorplan, scale 1:200

"Das Zimmer der Musiklehrerin zeigt eine Stärke Liane Zimblers: Sie verband pragmatische Gesichtspunkte mit ästhetischen. Ihr Anspruch war die 'Abkehr von falsch verstandener Repräsentation'."

Gräwe, 2005

Liane Zimbler (1892-1987) was the first European woman to graduate in architecture. Born in the Czech Republic, she studied architecture in Vienna and started her career there. Driven by the threat of Nazi Germany she fled to the US in 1938 and continued to work their. Zimbler developed the concept of the 'combined room' (*das kombiniertes Zimmer*) for single employed women that could afford only one room in which they both had to live and work. By means of multifunctional furniture which only provided the essentials of living situated along the walls she was able to create spacious rooms where private and working life have equal importance.

In her design of a combined room for a music teacher, every detail has a purpose. The sofa can be changed in a bed at night, the niche providing the feeling of a small secluded space. Pillows and blankets can be stored in the drawers underneath the sofa. The built-in cupboards for bedding always have ventilation slots. Left and right in the niche shelves have been placed. Behind the curtain on the left a washing space has been hidden, which includes a mirror, lighting and storage shelves. In the low shelves and behind the sliding doors at the right, the music can be stored away. The piano is located at the position of the observer in the picture. Aesthetic and personal elements are visible in the used colours, patterns and materials. The design thus combines functionality and elegance. (Gräwe, 2005)

Liane Zimbler, *Kombiniertes Zimmer einer Musiklehrerin*

HOUSE 1027

House 1027 'Maison en Bord de Mer' by Eileen Gray (1878-1976) in collaboration with Jean Badovici was built in 1926-1929 at Roquebrune, Cap Martin in France. It is an important example of modern architecture, that uses modern principles like the five points of a new architecture by Le Corbusier, but at the same time humanises them to a less abstract and more subjective architecture that puts human interest and experience first. In her designs architecture and furniture, as well as art, come together to form a unity.

The bathroom and dressing area adjoining the ground floor guest bedroom shows an ingenious wardrobe which, when closed, blends in with the architecture and, when opened, reveals very practical and diverse storage space. Gray's furniture is often multifunctional - like a staircase that is also storage space - and flexible - a cupboard that can extend to form a room divider for example.

The design very much adheres to human needs and the longing for a comfortable live, without using to much square meters. As she described it herself: "House envisaged from a social point of view; minimum of space, maximum of comfort." (Constant & Wang, 1996)

Eileen Gray, *House E1027*, 1929, view from interior to patio.

Eileen Gray, *House E1027*, 1929, bathroom and dressing.

Eileen Gray, *House E1027*, 1929, living room.

ELEMENTS OF APARTMENT DESIGN

The architects that I discussed as references all designed with different styles and materials, but they have in common that they blend architecture and furniture and make sure that everything they design is efficient, flexible and comfortable. From these references I took several design tools and modified them to be applied in the dwellings of my project to give more completion to my concept of the Stube.

Norbert Fritz inspired me to assign a huge role for wood in the materialisation of my dwellings. I think it will give a certain sense of place to the architecture, after all, it is Innsbruck in Tyrol where new residents are finding their home. Wooden architecture however is prevalent in many cultures and the material gives a human scale and feel wherever it is applied. Another element that inspired me was the huge sliding window with the 'stube' bench underneath it. I modified this window into a folding window so that it would generate an even larger connection to the outside. I kept the idea of the bench, I think it provides great opportunity when residents use it as a casual seating spot to enjoy the world beyond their apartment.

Liane Zimbler inspired me with her sensitive approach to architecture. She really thinks about all those very little things that users need but that often are forgotten by architects. The idea of a niche next to the bed - a bed which can be used as a sofa during daytime - is an element that I used in many of my apartment designs and I owe it to her.

Eileen Grey is my example when it comes to flexible and multifunctional furniture. I designed a more simple version of a sliding door that can hide or reveal shelves in the wall, which would fit my architecture. The idea of multi-functionality I kept in mind throughout and in various apartments some flexible solutions can be found.

To show how these elements will be modified and applied into the architecture of my dwellings I discuss a prototype apartment on the next two pages. The aspect of the multicultural society and dwellings fitted for different cultures will further influence the particular design of the reference elements and develop the prototype into three different types of apartments, which will be discussed in the following chapter.
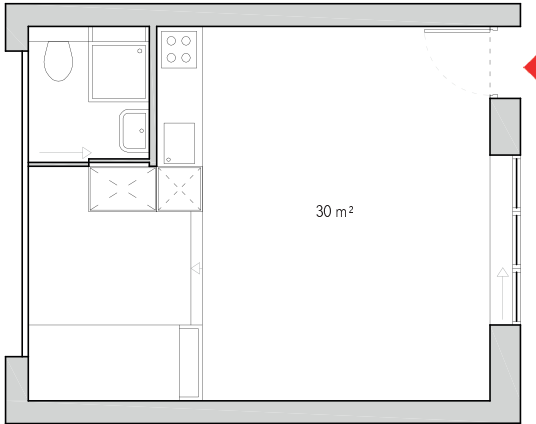
APARTMENT DESIGN

The design of each and every residential apartment follows the same principle: that of the stube. To explain it I use one apartment as an example.

To make the apartment efficient, flexible and comfortable according to the principles of the stube, I pushed all servant spaces to one side to create one simple large room that can be used for multiple purposes. This creates an efficient use of the available 30 m².

The apartment has been designed with different levels of privacy which naturally blend into each other. The living space adjoins the front facade and a large folding window connects it to the outside world. The window sill has been designed as a bench to provide casual seating space (see Norbert Fritz). The front door opens to the side of the kitchen to block the view from the outside into the more private sleeping area. The sleeping area has an open connection with the living room but is distinguished from it by means of the difference in floor level. This small stairs could also function as extra seating space for the living area. The bed is placed behind a cupboard that also offers a niche to the side of the bed to put away books or jewellery before going to sleep (see Liane Zimbler). This apartment/studio is designed for a single person, but there is enough room next to the bed to make it into a bed for two. The wall of glass bricks provides with soft light but secures privacy. The bathroom is seperated from the sleeping area by means of a sliding door that hides behind the wardrobe. It is small but functional, it has inbuilt shelfs for storage space and is also lit naturally through the glass bricks.

Architecture and furniture have been integrated in this apartment to make it functional, efficient and comfortable. Cupboards and shelves can be used to hide away junk but also to display cherished objects. The wooden materialisation makes the furniture comfortable to touch and to use it as seating or sleeping elements. Altogether, the levels of privacy in the apartment, the natural lighting, materialisation and dimensioning make it into a comfortable space. •

Floorplan of apartment, scale 1:100

Location of apartment in building

The relation between open and closed space (poché) in the apartment. The design results in an efficient and comfortable flowing space that is compact and private at the same time.

30 m²

Possible interior of the apartment with built-in furniture, seen from the front facade

Meine Frau sagt mir
Kehren wir zurück
Du hast Sehnsucht
nach deiner Kindheit

Ich denke an meinen Sohn
und möchte nicht
dass er Sehnsucht hat
nach seiner Kindheit

Und sage: Diesen Winter
bleiben wir noch.

Kundeyt Şurdum
(Meighörner, 2017)

PRIVATE COMFORT FOR EACH CULTURE

In the chapter about communal spaces I continued the answer to the first two sub-questions of my research. In the previous chapter I developed a prototype for a densified dwelling. This chapter is a follow-up of the chapter on the Future of Diversity. It will continue on the relation between private and public and the role cultural demands play in this. I will try to answer the following two questions: *how should the densified relation between (semi)public and private space be designed in order to stimulate social interaction and ensuring private comfort?* And *how should the design of high density private space conform to the cultural demands of residents?* My starting point is that private comfort is essential to stimulate people to engage with the outside world. Simultaneously, the architectural relation between public and private space is essential to guarantee private comfort.

Why do I think this? In the previous chapter I described the stube which for me is almost a kind of symbol for the protection against the outside world. This protection however is only one side of privacy. Privacy in its essence is about how we relate to others, and how this relation is designed to make us feel comfortable. People are made for social contact, it is in their system to gather and enjoy each others company. That's why we live in cities in the first place. Architecture and urbanism however plays a huge role in how people enjoy or avoid social contact,

like Jane Jacobs described in The Death and Life of Great American Cities and like I discussed in the chapter on the Future of Diversity. Jacobs mainly focused on urbanism and the way housing projects deal with public space and diversity in functions. I want to take an architectural position in this and zoom in on the layout of apartments and how they connect public and private space. If we could design dwellings in such a way that they utilise the connection between public and private in the manner the resident prefers it, contact with the outside world might be stimulated the best. Than it can be prevented that people do not feel at ease in their own home because its - in their eyes - uncomfortable connection to the public, which prevents them to use that connection.

I think this issue gets an extra dimension in our multicultural society. We always talk about the necessity of integration, of immigrants who actively participate in our society and contribute to it in a positive way. It is important that we try to make it attractive for people of different cultures to live in one neighbourhood. Because only when people live near each other it is the most likely that they meet each other regularly, e.g. at the schools, neighbourhood activities, services and functions, and that they thus have the opportunity for formal and informal social interaction. (Wood & Landry, 2008) To plan neighbourhoods with a mixture in housing development has become common practice in many European countries - although architects in Innsbruck say it is not that common yet in Innsbruck. There is no prove yet that to mix rental and purchase housing, poor and rich, immigrant and native in itself creates more social contact. Wood & Landry however argue that designing mixed neighbourhoods will inevitably increase the opportunities for people of different ethnicities to live alongside each other in cities. It is a desirable step towards the intercultural city. (Wood & Landry, 2008)

We tend to forget however, that it can be very hard for them too, to feel at home in another country, away from their past, their childhood memories and their cultural surroundings (see the poem). Also in Innsbruck, Tyrol this is the case for the many immigration workers and refugees that arrived. (Meighörner, 2017) The writers of The Intercultural City also note that it is important to consider the impacts of the lack of diversity in housing stock. They point at the needs of large Muslim families to lead fulfilling cultural lives at home. They often lead home-based lives and regularly invite large groups of guests. A life that is not supported by a typical European two-bedroom apartment. (Wood & Landry, 2008) Another example they mention is the Rochdale Housing project close to Manchester, UK. The current housing stock there did not meet the needs of the growing Asian community, who wanted owner-occupation and more flexibility in the use of spaces for e.g. working, dining and praying. The new housing development was designed with their wishes in mind. (CABE, 2005)

I would like to develop this idea of cultural adaptive housing and to apply it to the case of Innsbruck. A quarter of Innsbruck's population has a background

of immigration, mostly from western Europe, the Middle-East and north Africa. That is not something that you can just ignore and say, well, those people should just adapt to *our* culture, and *our* way of life. Some sort of adaptation is of course needed to make society work, but I think we have come to the point that we ourselves need to adapt as well and be open to a new type of diverse society. Our world will inevitably change and immigration will only increase, and what right do we have in the first place to reject everything that is different from what we are used to? The adaptation of Innsbruck's current housing stock to accommodate more variety in cultural preferences and ways of life is one of those developments that can foster the comfort of immigrants and make them feel welcome in their second home and more confident in combining the different cultures that make up their lives. This does not mean that one can simply built a neighbourhood of Middle-Eastern courtyard housing between the villa's and high-rise buildings in Innsbruck. It is important I think to accommodate cultural demands together with a new sense of place that is suitable for Innsbruck's climate and that adheres to Innsbruck's architectural identity.

To investigate the possibilities of such a new approach to multicultural residential architecture, I searched for the differences and similarities between housing typologies in Innsbruck, the Middle East and North Africa. In my reviews I focussed on the spatial layout of the dwellings and how they would deal with public and private around and within the house. The examples shown on the following pages I derived from our graduation studio's typology study of Innsbruck (which can be found completely in the joint research book) and from the books *Courtyard Housing: Past, Present and Future* and *Drawn from African Dwellings*. After this short review the thesis will continue with the discussion of the actual designs of the different type of apartments and how they have been influenced by the review and adapted to their new context in Innsbruck.

The goal of this design approach is not that people with a certain cultural background are matched with an apartment type and forced to live their. In the end, the choice for a certain apartment layout depends on ones personal preferences. The goal is though to make people conscious of the many differences there can be in connections between public and private in order that every type of family or individual can live in a dwelling that feels like home. I hope that this might help immigrants to settle in their new environment and to feel confident in interacting with others because that way of interacting suits them and is made possible by the layout and architecture of their apartment. Of course housing typologies won't solve all the issues of the multicultural society, but at least they can contribute to it.
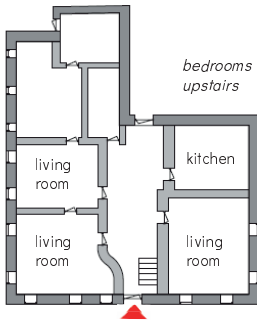
Ground floor of a typical Tyrolean farmers house, located in Alpbach, Tyrol.
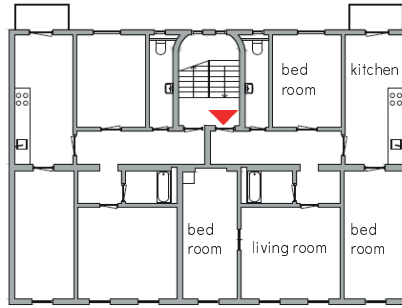
Floorplan of upper-class multi-family housing, Zeughausgasse 8, Innsbruck. Built in 1888.
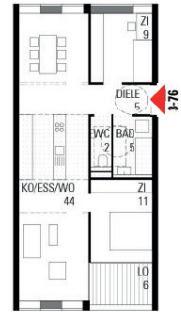
Modern apartment by Reitter Architekten (2020)

WESTERN EUROPE

Above three examples of dwellings located in Innsbruck or Tyrol are shown, from left to right they show typologies from three consecutive time periods. Some organisational elements persist over time, such as the hallway, which is the first space one sees upon entering the house, and the fact that as much rooms as possible have windows to the outside. It is interesting to see that in the past rooms were interconnected through doors, but have sometimes blended into one big living space in modern apartments. There is no substantial organisation or separation between public and private spaces in the house. Bedrooms adjoin living rooms without a transition space like a hallway and bathrooms can be placed next to the front door. This denotes that the dwelling really is perceived as a private space for the family itself, unwelcoming to public guests, or that residents just don't really care about others knowing their private way of life.

The connections between the public and private is ambiguous. Often, it is just a door. There is no transition space between the absolute public and the absolute private except for maybe a shared entrance hall and staircase. There also is a very direct visual relation. Passers-by are able to observe almost all aspects of private family life, and from the inside the outside world can be observed from every room. Through the years, windows have become larger as well due to technical possibilities. This has created an even more abstract relation between public and private, in which everything can be seen, but no physical contact is made.
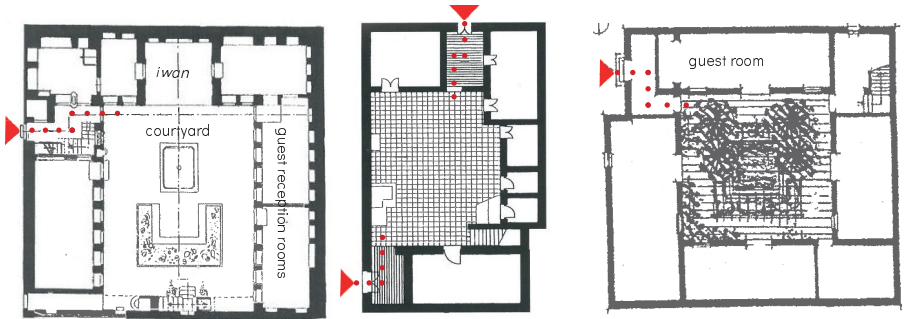
Ground floor of a house in Aleppo, Syria

Example of the ground floor of a house in Kuwait

Ground floor of a house in Marrakesh, Morocco

MIDDLE EAST

In almost all aspects the dwellings influenced by Islamic architecture in the Middle East are completely opposed to the dwellings in western Europe I just discussed. Three examples of such dwellings are shown above. All of them are courtyard houses, a typology that has been influenced for a great deal by the climate, to provide shaded, ventilated spaces but also by the religious beliefs of Islam that value family privacy and especially the privacy of women. The courtyard provides the family with an outside private space to enjoy unobserved and undisturbed family life, and without disturbing their neighbours. (Al-Jokhadar, 2017)

Other beliefs that influenced the spatial layout of the house are the conviction that it is very improper for strangers to be able to see what is happening inside the house. Therefore every house has a passage way that is constructed in such a way that it does not allow a direct view of the private spaces. Besides, it is very important to be welcoming to guests and to offer them lodging. Therefore every dwelling has one or multiple guest reception rooms close to the entrance. Although residents value their privacy, they also offer semi-private accommodation. (Edwards, 2006) Guaranteeing the privacy of the family's living spaces becomes thus even more important.

Another social-cultural dimension of traditional middle-eastern housing therefore is the hierarchy of spaces from public to private and from formal to informal. This is a hierarchy that is completely lacking in modern West-European housing, adding this dimension could really help to make dwellings more suitable for people with an Islamic cultural background.

An aspect that deals more with the exterior of the building is the idea of modesty. Dwellings in the Middle-East don't express the wealth or status of their residents on the outside of the building. All houses look equal. Also in the inside, rooms have moderate sizes, they often have different functions during the day. An aspect that also meets the need for densified living. (Al-Jokhadar, 2017)
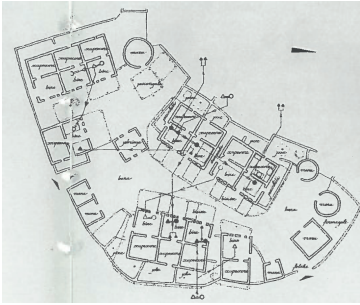
Soninke dwelling in Waoundé, Senegal

Extended family compound in Kabrousse, Senegal

NORTH AFRICA

Naturally there is an enormous variation in the types of dwellings on the African continent. Different climates, materials, religions and colonialist influences have affected the architecture of private dwellings. However there are several general aspects in traditional residential architecture that are completely opposing to European or Islamic architecture.

In many African countries and among many of its peoples the dwelling structure of the compound prevails up on today. In their book *Drawn from African Dwellings*, Bourdier and Minh-ha showcase many examples, two being showed above. The dwellings are clustered and linked by an outside protecting wall. The circular shape leaves a communal space in the middle of the dwelling. Due to the climate, many activities happen outside. To this purpose, many dwellings throughout Africa have a veranda in front of their home that is used during the day for all kinds of activities. Residents thus live in the communal space, or the transition space between private and communal. (Bourdier & Minh-ha, 1996; Hess & Oliver, 2013)

Extending one's living quarters to the communal space can be very natural in countries with a warm climate, but might be more difficult in for example Austria. It will be a challenge to design dwellings that relate intensely with the communal space while guaranteeing a good indoor climate.

The following pages will continue with the actual realisation of three different types of dwellings in the residential buildings of my project. Each type will be discussed thoroughly, from its relation to the public/communal space, the spatial layout of the apartment until its detailing, followed by a conclusion at the end.
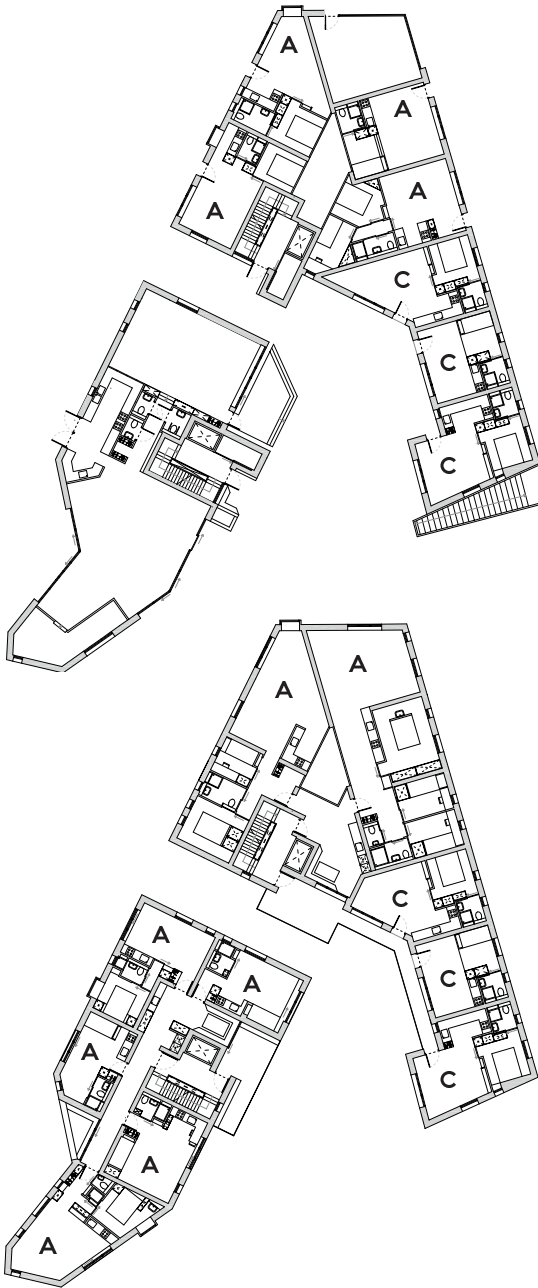
REALISATION

At the ground floor level, apartments designed for singles and couples can be found, as well as one apartment for a three persons household. I deliberately placed these smaller apartments at the ground floor in order that there would be multiple connections between public and private spaces. Also, the smaller the apartment, the more the motivation to also interact with/make use of the outside communal or public space. The type C apartments have been grouped around the outside communal space and are connected to it by means of huge folding windows and a bench in front. The type A apartments have been aranged along the streets, they have a more abrupt distinction between the public and private. They connect to the public space in a visual way by means of windows that function as eyes on the street.

At the higher levels the apartments vary from single studio's to apartments for a family of four. The type C apartments have been grouped around a balcony that they share. The other apartments are type A apartments that look out onto the street and are accessible via an indoor circulation space.

At the most upper levels there are apartments for 1-4 persons, the latter apartment also has an extra guest bedroom for a couple. These family apartments have been placed deliberately on the top floors because they automatically focus more on family life inside the apartment instead of the connection with the communal or public space. The type B apartments have been placed at this level. They distance themselves from the communal and public space as they have their own personal outdoor patio. They connect with the city by means of the guest reception area that forms the entrance to the more private spaces in the apartment. This lack of visual connection also makes the roof gardens more comfortable - when sitting there you are not continuously observed by curious eyes.

The following pages will discuss the three different types of apartments and their connection to the communal/ public space.
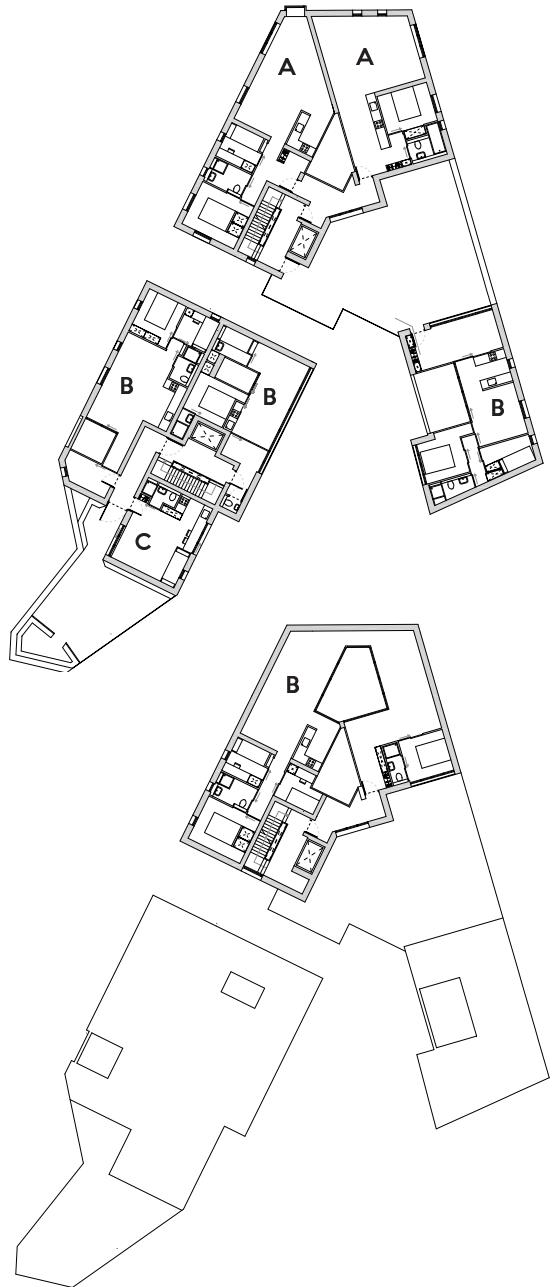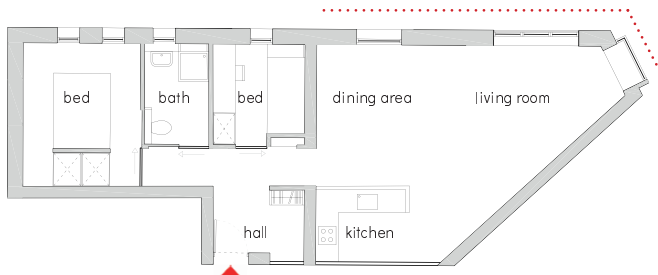
APARTMENT TYPE A

Inspired on the living arrangements of western European this apartment might have many similarities with the standard apartments in Innsbruck. However, I tried to really conform the apartment to the lifestyle in modern west European society by means of subtle design decisions regarding the relation between public and private space. Residents living in this type of apartment would prefer to meet others at a public institution or function instead of at their doorstep. However they do not mind visual contact with the public space, even if that would mean that passers-by can view directly into their living room.

Underneath one example of a type A apartment is shown. Most type A apartments have a little hall after their entrance door, so that there is no direct physical connection between communal and private space. Private spaces such as bedrooms and the bathroom are organised along a small hallway. The bathroom is shared with all family members and potential guests - it is treated more in a functional rather than a private manner.

The servant spaces have been designed as efficient as possible with a minimum of circulation space and space-saving sliding doors. This way a generous family living room can be designed in the area with the best views. The kitchen in the corner is comfortably lit by the wall of glass bricks surrounding the patio. The rest of the space can be used as dining area and living room.

Modernism has had a huge influence on housing in western Europe. Generous windows have become very common, even up to complete glass curtain walls for apartment buildings. In Innsbruck however small windows may be common as well, to increase the passive insulation value of a building or to reduce material costs.

For the type A apartments I have designed generous windows, but located them in strategic spots. The windows now help to organise the large living space into a dining area and a lounge. I also designed a window particularly meant for this type of apartment. It is a modern interpretation of a bay window (also quite common in Innsbruck) that intrudes the public space but also forms a private

Floorplan of a type A apartment, scale 1:200

15 mm wood
70 mm insulation
15 mm wood
20 mm cladding
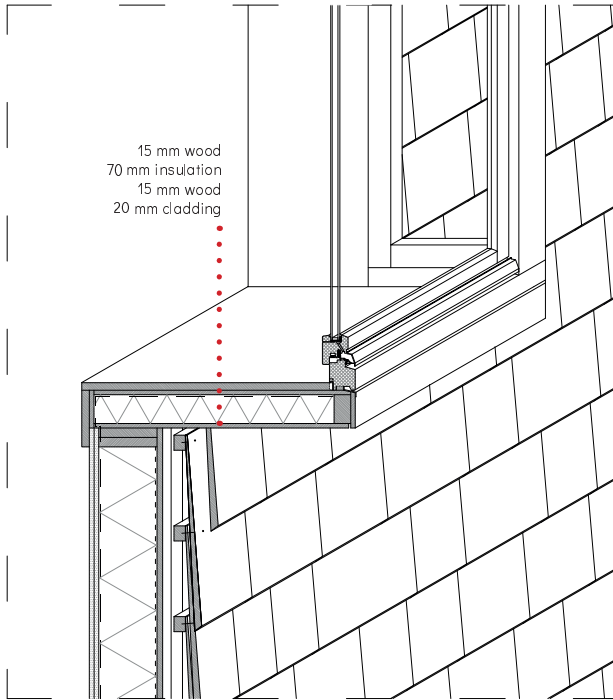
Window detail of a type A apartment, scale 1:20

place within the apartment from where one can enjoy watching the activities happening in the street below. The window is closed at one side to provide a support for the back when sitting in the window sill and to steer the eye in one direction for a focused view. This window definitely is an eye on the street as it encourages residents to sit in it and to watch what is happening.

The detail above shows how the window would be constructed. The window frame has been designed nicely in line with the rows of wooden shingles in the facade. The horizontal and vertical elements of the window have been designed to smoothly connect to each other. The materialisation in wood gives the window seat a very comfortable atmosphere and the fact that the window can be opened and tilted adds to the experience of connection between inside and outside.

This window will be discussed more elaborately in part six of this thesis.
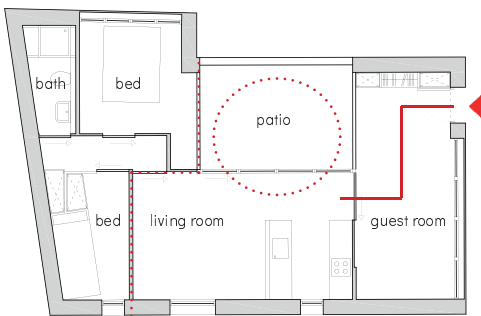
APARTMENT TYPE B

This type of apartment has been inspired on the habits of living in the Middle East or other Islamic countries. Most prominent in this design is the strict division between public and private space. This does not mean that residents live deprived of any social contact with others. Each apartment namely has a guest reception area which is visually disconnected from the private spaces but does form a physical connection to the outside world.

The example of such an apartment below, shows that one first enters into the guest room which has subtle and indirect lighting from a shingle facade at one side and a wall of glass bricks at the other side. This way the guest room is shielded from curious looks from the outside, but also visually disconnected from the private spaces in the apartment. A big sliding door provides entrance to the kitchen and living room. When there are no guests in the house, the residents could open up this sliding door and the folding window that gives access to the patio, in order that the living room and guest room would form one big flowing space with the kitchen in the middle. A lot of unexpected spaciousness can thus be created in this introvert private apartment.

The bedrooms and bathroom are accessible via a separate private hallway. It is not possible to have a view of them when you are in the living room, they are physically and visually separated to guarantee absolute privacy.

Although window privacy, which is important in Islamic cultures, can be easily guaranteed by means of shutters and blinds, I wanted to integrate it into the architecture so that it would also be visible to passers-by that the building houses people with different cultural backgrounds.
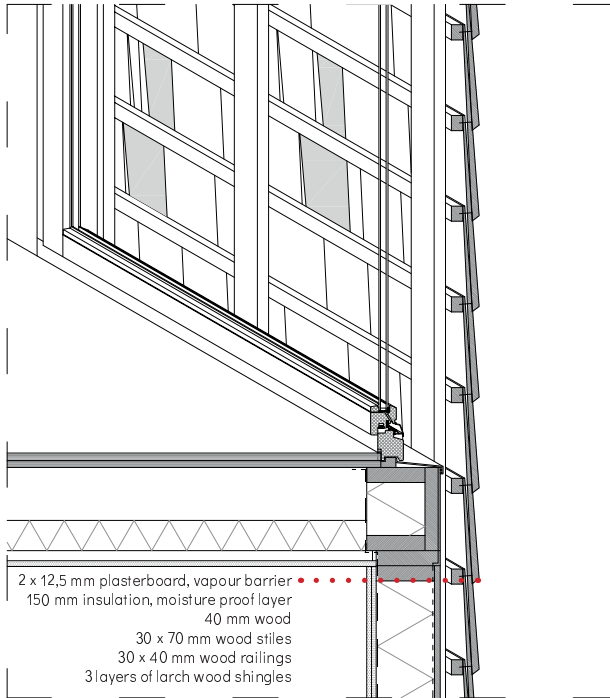
The façades at the outside of the block have small windows that can be covered with shutters that allow a little bit of light to peak through. Rooms adjoining the other façades are lit by means of little gaps between the wooden shingles on these façades. A detail of this kind of facade can be seen at the right.

Floorplan of a type A apartment, scale 1:200

Moucharaby of a home in Caïro

2 x 12,5 mm plasterboard, vapour barrier
150 mm insulation, moisture proof layer
40 mm wood
30 x 70 mm wood stiles
30 x 40 mm wood railings
3 layers of larch wood shingles

Window detail of a type B apartment, scale 1:20

I used a very Austrian element, the shingle, in a way to create an almost middle-eastern facade. The fine mazing reminds of the fine-mashed lattice work of Moucharaby's in Islamic architecture. These projected story-windows where covered in grills and lattices and allowed residents to observe the activities on the street without being seen by passers-by. They also provided the necessary ventilation in hot climates. (Encyclopaedia Brittanica, 2018)

This modern Austrian interpretation of such a facade is constructed of a shield of shingles behind which glass windows are placed which reach from floor to ceiling and which are operable in order to wash them. In summertime it would also be possible to open all these doors and enjoy an outside climate without having anybody being able to look inside your house. Because some shingles have been left out, a pattern of shattered beams of light will light up the space.

I like that this detail combines two completely opposing principles: it features a kind of curtain wall while at the same time guaranteeing complete privacy. It also poses the question of what a window is - the line between facade and window almost blends away in this particular case.
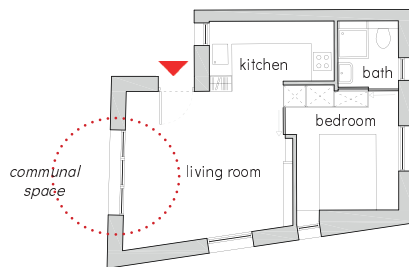
APARTMENT TYPE C

Inspired by African compound architecture and the fact that up to today modern African dwellings tend to direct themselves to the public space, I designed this type of apartment with a strong connection to the communal area. Of course climate plays a huge role in this - living outside is quite comfortable in warm temperatures - but I think it also brought cultural values. In European cities you often see that immigrants from African countries like to gather and linger in the public space. I tried to translate this into an apartment that connects private and communal space.

Type C apartments are always organised around a shared communal space. When entering the apartment, one enters directly into the living area instead of having to pass an obstructing hallway and several doors. This creates a direct connection between inside and outside.

The servant spaces - the bedroom and bathroom - have been organised as efficiently as possible in order to create a generous living area which is the centre of the house were various activities can take place.

To further connect the indoor private and outside communal space I have designed a huge window (detail visible at the right) which can be folded away completely to allow unobstructed contact between in- and outside. The bench under the window has been inspired by the design of Haus Fritz. In contrast to the type A apartments which have a similar window with a bench at the inside of the apartment, the bench is oriented to the outside in type C apartments. This way the apartment directs itself to the outside space. Residents are encouraged to actually open their window and to sit in front of their house to enjoy the activities happening in the communal space or to socialise with others.

The window has been designed as a folding window because this allows residents to completely open the facade (in contrary to sliding windows). The window also reaches as high as the ceiling to allow as much daylight as possible to enter. The window frame has been placed in line with the shingle facade. A frame of 20 mm massive wood has been designed around the window so that

Floorplan of a type C apartment, scale 1:200

15 mm wood bench
on 30 x 30 mm
railing
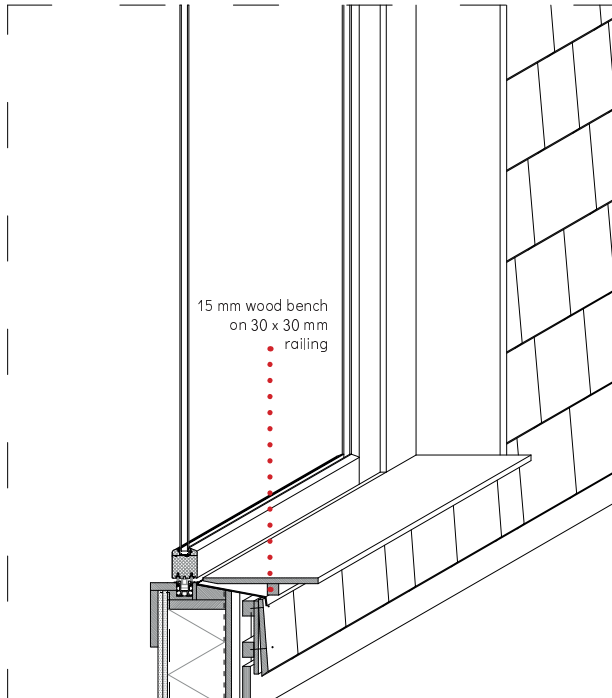
Window detail of a type C apartment, scale 1:20

the bench is subtly integrated in the architecture and to make the windows more expressive as eyes of the building.

CONCLUSION

I think it is important that the details I have designed stay like subtle nudges in a certain direction, but do not force people to behave a certain way. The apartments also stay interchangeable between cultures, it is not the case that a European would not be able to live in a type B apartment. In the end it all comes down to personal preferences. What I do hope is that this approach to different type of connections between public and private creates the awareness that our western way of looking at this is not the only way, and maybe not even the way we personally would prefer to live. I think this approach could help immigrants and 'natives' alike to make themselves feel at home and to experience the private comfort of a home that suits you. Then this safe basis motivates to come in contact with others, let it be on your front door, on the street, at the coffee house or in your guest reception room. •

PART SIX

The window and beyond

THE WINDOW AND BEYOND

The window is one of the most fascinating elements of architecture. In itself, it is a barrier between inside and outside, yet, it's also a connection between those two. Through a window, if merely slightly opened, one cannot only see, but also hear and feel the outside world and its light, its noises, its air and its scent. In that sense, the window becomes a destination within the building. A place that attracts people because of its fascinating connection to another world.

Windows are common among all cultures, albeit in different appearances. The genealogy of the word window in different languages shows that the window was initially perceived as an opening for air and light to enter, but also for looking out of. Literally an *eye hole*, or *door for the eye*. (Koolhaas, 2018)

Windows are the eyes of a building. In a city this is very important. As Jane Jacobs notes, having eyes on the street provides passers-by with a sense of safety. In case something happens, there will always be someone watching from their apartment and keeping an eye on the street. However, to guarantee that during the day always at least one person is watching, there should be something to see as well. No one sits on a stoop or watches from their apartment to an empty city street. But 'large numbers of people entertain themselves, off and on, by watching street activity.' (Jacobs, 1961)

I myself have always loved to watch the activity on the street from behind the living room window - or, when there was none - the rain pouring down from the sky or the wind blowing against the trees. There is nothing new about that. People have spent their time looking out windows since they were being made. Either to amuse themselves or to attract people's attention, to come at ease and meditate on the view or to quietly enjoy the buzz of city life - all depicted in the paintings below.

Two women at a window, Bartolomé Estebàn Murillo (1665-1675)

Meditation, a lady looking out of a window, Arie Johannes Lamme (mid-19th century)
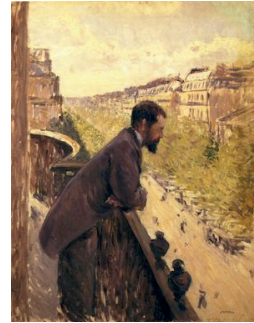
Man on a balcony, Gustave Caillebotte (ca. 1880)

Although a window on its own might say nothing about privacy, as that privacy would be easily gained by pulling down the shades or adjusting the blinds (Jacobs, 1961) it does clearly say something about the relation between private and public space. The window as destination can become a secluded place within ones own home, away from ones family members, but closely related to the outside world. The window thus becomes a private space, notwithstanding its essential public character. A remarkable example in this case is the prominence of the bay window in Edwardian England. Over time it became so large that it became a room within a room. In the 17th century the bulging bay window arises. (Koolhaas, 2018). It becomes a designated place within the home, penetrating into the public space like a wanderer would enjoy a vast landscape from a high promontory. Bay windows are quite common in Innsbruck too. Not in the old farmhouses, but in the grand and humble city houses in streets like the Maria-Theresienstraße, where the façades of the street are flowing like waves because of the many bay windows. I already discussed the bay window I designed for the type A apartment, but I also designed a similar window for the Siebenkapellen. I will explain the latter first and than conclude with a comparison between the two.

^ Bulging bay windows cover the façades in the Maria-Theresienstraße in Innsbruck's Altstadt. There are so many that the entire facade seems to flow. It is likely that they were so popular because people wanted to enlarge their private living space in the dense urban fabric of the old town.

> Looking out from ones window has been popular since the window was invented. Here Gustave Caillebotte's painting merges with the design for my residential buildings, where everyone has the opportunity to enjoy the activities happening on street level from the privacy of their apartment or by mingling in the communal space.

WINDOW DETAIL SIEBENKAPELLEN
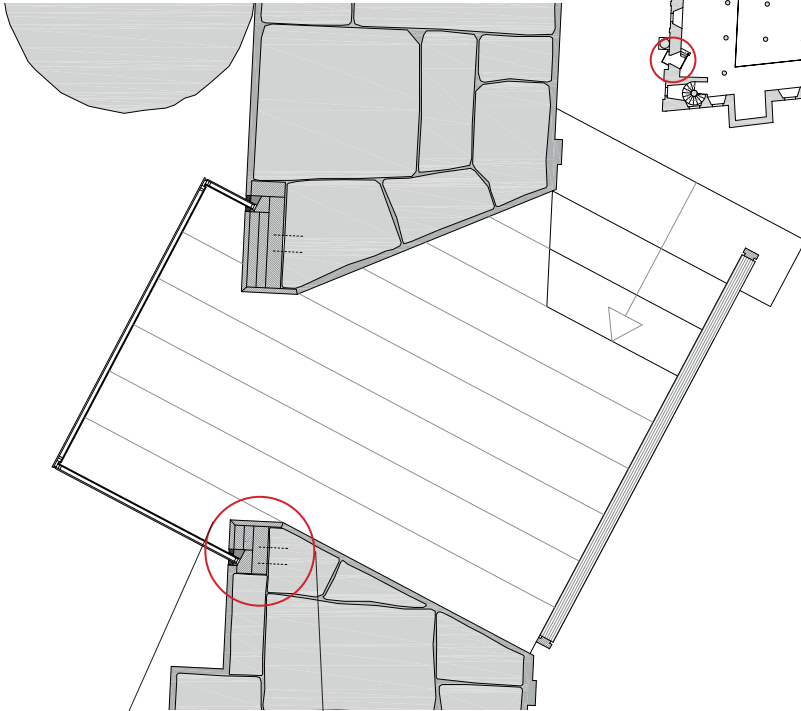
Horizontal detail, scale 1:30
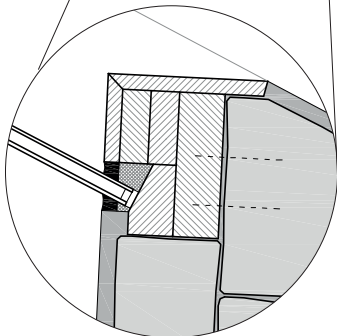
Horizontal detail, scale 1:10

This window detail is located at the first floor of the Siebenkapellen, at the front facade. It is part of a series of interventions which are all designed in wood and accentuate a certain aspect of the building (see part four), in this case the windows of the front facade and the thickness of the wall. According to old floorplans of the chapel the walls must be approximately one meter wide. To let people experience this massiveness I thought of a bay window that makes it possible to almost 'hide' yourself within the walls of the church. Simultaneously the window forms a lookout point from which several streets can be seen as the church is

Vertical detail, scale 1:30

located at a crossing of roads. The design of the bay window has been made as minimalistic and light and precise as possible to contrast with the massiveness and heaviness and roughness of the stone walls. This contrast is enhanced by the different angle and direction of the window compared to the wall. Old and new also have been integrated very subtly in for example the horizontal window frame detail. Part of the stone wall has been cut away and replaced by a wooden frame that flows seamlessly into the stucco plastering. I think this connection is successful because it is honest, it is very well visible how things have been constructed and what is old and what is new, although the complete picture looks one entirety - as if it has been this way for ages.

Because of its size, this bay window really feels like a place within a place. The wooden frame that shields it of from the interior and the steps that need to be climbed to enter it, only strengthen that feeling. Although the chapel is a public building, this window now feels like a private refuge from which the outside world

can safely be observed. This private place might have the same character as the side chapels of the Siebenkapellen once had, aged past. A private place within a public building, where one focusses itself on a world beyond the actual building. I think this version of the bay window that I designed can do the same. It is a place to isolate yourself from the world's hastiness and to come at peace.

A window attracts people, because there is something to see. This window makes people curious because it is partly hidden. The wooden screen that blocks the view makes people want to see what's behind. And that is the moment they discover a little gem of a space.

COMPARISON

Most of the differences between the two bay windows have to do with the fact that the bay window in the chapel is part of the public space, while the bay window of apartment A is embedded in private space. Those differences in public and private result not only in a different type of architecture but also in different sizes and organisations. Being part of a museum, the first window can go more crazy and abstract in its architectural language, such as very minimalistic design and unusual solutions, which really focus on the beauty of detail. In residential, private architecture, I think this is a bit different. I believe that comfort should be the highest standard there, and not expressive, hyper sensitive detailing per se. The apartment's bay window is constructed in solid wood window frames and has more of a cosy and rustic vibe to it. This window is also more user-friendly as it admits light into the rest of the apartment and because it is operable to experience more of the outside world.

The different sizes and organisations of the windows are, of course, due to the difference in wall width, but also due to a difference in need for public and private spaces. In the chapel, which is a public place, the bay window is more shielded in order to create a space for private contemplation. In a family house, this is different. People feel comfortable in each others surroundings and just a small window seat is than enough to separate yourself from others to just mind your own business for a while. There are different means required to gain privacy based on the place where you are. Surrounded by friends and family you might gain your alone time by just shutting yourself out from the rest: taking a little distance, reading a book, listening to music. In a public space however, you might need to make yourself unseen to others and go into a separate place.

Although I wanted to find answers on the complex relation between public and private by developing this details, I have the feeling I am just generating more questions. Because, in its essence, what is privacy? And why do we value it so much? I think privacy is about being able to do what you want without others interfering with you. In some cultures that might mean that you also do not want others to see you. In the Dutch culture that I grew up in, visual privacy was not
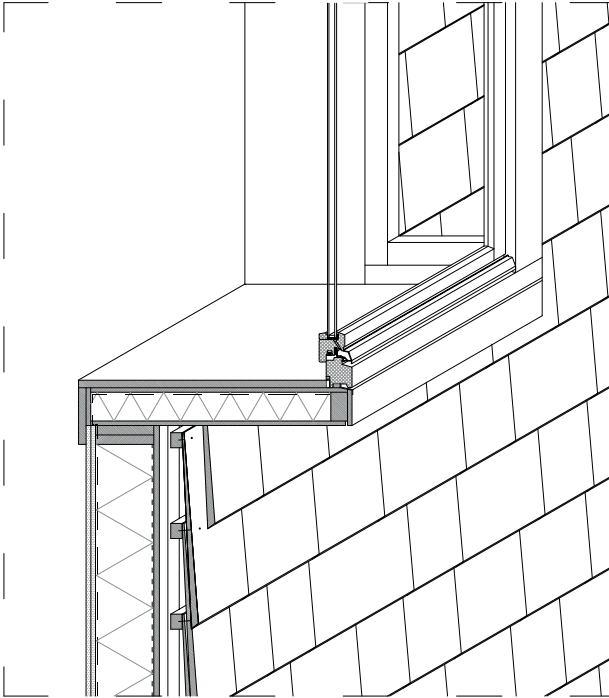
Window detail of a type A apartment, scale 1:20

really important. Most of the times all my family members could see what I was doing, as well as neighbours or passers-by that looked through the windows Then I think privacy is more about others not disturbing you, although they can see what you are doing. I think the bay window symbolises that idea. Everyone can see what you are doing, both the people inside and outside of the house. You are on a stage, behind a shop window. However, you are separated from those worlds as well, you kind of float in between. And you can start to make contact on your own terms; by leaving the window seat and joining your family or by opening the window and shouting to the neighbours downstairs. That is the privacy that is valued so much in cities. You can socialise with others on your own initiative. That is something a good city should achieve, that people feel comfortable where they live and do not feel forced upon each other, but can casually meet and build relations by means of well-designed and well organised formal and informal public space. And remember, the relation between our private space and the public world is of key importance to our feeling of comfort. •

CONCLUSION

This thesis has discussed many subjects and touched upon many issues in order to try to get grip on the topic of densified living in an multicultural world. By means of literature review, talks with architects, observations, reviewing reference projects and designing I have tried to formulate an answer on my research question: *How can densification in Innsbruck stimulate social interaction between a diverse residential community whilst ensuring private comfort?* My design has turned my thoughts into visible ideas and in that sense my design can be read as the answer to my research question and as a proposal for future densification strategies in Innsbruck.

The fact is that large amounts of people are vital to great city liveliness. Densification therefore is not a threat, but a positive development. However, the method that is used to densify cities can completely turn that around. We have seen in Innsbruck that current densification strategies do not bring urban life to the city. Therefore I answer my research question with another proposal. My conclusion is that when we densify cities we should design good public space with a diversity in functions, routes and buildings. I conclude that a horizontal density is more apt to achieve that than a vertical density in the form of high-rise. Designing diverse and lively public space is the key to stimulating social interaction. We should design opportunities to meet and interact at many different levels. There should be place for formally organised interaction (via museums, libraries or community centres) as well as informal interaction (a variety of functions such as shops, café's, hairdressers, etc.). Interaction should be possible in both the indoors and the outdoors, thus loitering places in public area's should be well designed. I further proposed to design communal spaces both indoors and outdoors which allow flexibility in use and do not force people onto each other.

In my design I proposed to support a diverse residential community with a multi-ethnic background by means of providing dwellings that have been designed conform the cultural demands of their residents. I developed three different apartment types that each have their own layout and special relation between public and private space. This way private comfort can be guaranteed as residents can interact with others in the cultural way that they are used to and which their apartment supports.

I proposed this research question because I wanted to investigate how densification could help to bring people together in order to built on the future of a multicultural society. I did this in light of the current social developments around immigration, integration, tolerance and right-wing populism that seems to divide our continent. I do not think that architecture and urbanism can solve all the problems in this regard. But I do think that they can contribute to the facilitating of an inclusive multicultural society. Because we see nowadays that

many residential neighbourhoods are deprived of any qualitative good public space, resulting in lifeless area's where people are unknown to one another. As Wood & Landry stated, designers can not influence the way people of different ethnicities can get along, but they can design good public spaces that facilitate and encourage the contact between people. Spaces that are inclusive and that bring everyone together. It is at least a step in the right direction. I hope my thesis can contribute to the debate about new densification strategies and inclusive residential developments for people of all kinds of different cultural backgrounds.

When I think about what could have been done better I would say that another time I would spend more time on an elaborate research on how dwellings can fulfil the demands of the multicultural society. I could have performed more in-depth research on the state-of-the-art. It was quite hard to find examples in this field, but it would certainly have been interesting if I had found more literature on the topic. I would also have been interesting to have talks with experts and discuss the viability of this idea and how it could be shaped to be applicable in more cities than just Innsbruck. •

REFLECTION

It is a very weird feeling to write a reflection now the end of the project has come in full sight. I have worked a whole year, thinking of this project almost every day, trying to improve the design, to over-think my arguments or just dreaming about how I would present it. Now it almost has come to an end and it is time to reflect.

At the start of the project I set high goals for myself. I wanted this project to be the best project I ever did, to make it the cherry on top of the cake of my education (if that can work as an expression). In this regard I acknowledged the ambitious side of myself, which, up until now, I had always pushed a bit aside. I really learned from this. I have the feeling I achieved more by setting high goals for myself, even though I did not reach all of them. I think that as long as I get more satisfaction from the things I do achieve than dissatisfaction about the things I failed to achieve, I will try to embrace the ambitious side of myself more often in the future.

The high goals helped me to maintain a quite regulated work ethic, working at a steady pace everyday and speeding up to the maximum when needed too, also something I never thought I would have the self-discipline for.

During the design process I also learned about myself that I always need direct answers to every question that raises in my head and that I immediately want to find solid arguments for every decision I make. At the one hand, this helped me in my argumentation and presentation of the project, at the other hand it sometimes made me spend hours reading articles and books or browsing the internet, in which I didn't find anything relevant, time I probably could have spend more useful if I tried to keep my focus. As a result of this, my thesis also has become a document in which I present many small concepts and ideas about almost every aspect of my design - time will teach me if others can follow my thoughts or that I am being to chaotic.

I am very pleased that in this project I was able to design from the urban scale to the smallest detail, on a topic that I am passionate about. I could have never achieved this without you, tutors of the design studio. I absolutely appreciate it that all three of you encouraged everyone to achieve the best they can in a project and design matching their interests, style and individual talents in order that the outcome is very personal. For you the graduation studio really is about the student and that is an attitude I admire.

Maarten, I want to thank you for your help in shaping my arguments and my research topic. Your questions helped me to formulate my own thoughts and opinions on the topic. And of course all the pep-talks were immensely appreciated.

David, thanks for all your guidance regarding the presentation of my project. It really helped me to not just think about what I like to see, but about how others

would perceive my presentation.

Sjef, thanks a lot for all the time you invested in discussing almost every single line and dot of my design and making me rethink them. I really enjoyed the moments in which we designed together. You taught me to make something special of even the most ordinary detail.

Last but not least I want to thank my fellow students of the graduation studio, in particular Gaby and Michelle, for the great time we had together and all the feedback we could exchange. And of course I should not forget to thank my family who had to deal with the worst side of me a lot this year due to my stress levels before every important assessment. •
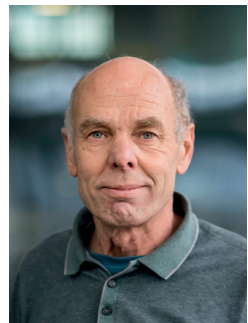
Graduation Studio 'Densified Living' 2017-2018

Maarten Willems

David Gianotten

Sjef van Hoof

SOURCES

LITERATURE

Al-Jokhadar, A., Jabi, W. (2017). Applying the Vernacular Model to High-rise Residential Development in the Middle-East and North Africa. In: *International Journal of Architectural Research*, 11(2), pp. 175-189

Bourdier, J.P., Minh-ha, T.T. (1996). *Drawn from African Dwellings*. Bloomington: Indiana University Press, pp. 9, 286-287

Carstensen, J. (1937). *Schindeldach und Schindelgiebel*. Hannover: Verlag Th. Schäfer, pp. 11-13

Constant, C. & Wang, W. ed. (1996). Eileen Gray. *An architecture for all senses*. Tübingen/Berlin: Ernst J. Wasmuth Verlag GmbH & Co. pp. 68-71, 92-117

Edwards, B., Sibley, M., Hakmi, M., Land, P. (2006). *Courtyard Housing: Past, Present and Future*. Oxon: Taylor & Francis, pp. 32-35, 85, 90-91, 150

Fingernagel-Grüll, M. (1994). *Ehemalige Heiliggrab- oder Siebenkapellenkirche*. In: Vancsa, E. (Ed.), *Die Sakralen Kunstdenkmäler der Stadt Innsbruck, Teil 1: Innere Stadtteile*. Wien: Verlag Anton Schroll & Co, pp. 453-462

Forcher, M. (2008). *Die Geschichte der Stadt Innsbruck*. Wien: Haymon Verlag, pp. 92-96

Hölz, C., Tragbar, K., Weiss, V. (eds.) *Architecturführer Innsbruck*. Wien: Haymon Verlag, pp. 47, 48, 105, 121

Hye, F.H. (1995, October). Das Stadtteilwappen von Dreiheiligen versinn-bildlicht Zeughaus und Pestkirche. *Innsbruck Informiert*, pp. 20

Jacobs, J. (1961). *The Death and Life of Great American Cities*. New York: Vintage Books, pp. 29-59, 62, 98, 150-221

Koolhaas, R. et. al. (2018). *Window*. In: *Elements of Architecture*. Cologne: Taschen, pp. 8-9, 20-27, 32-35, 140-148

Mair, B. (2018, February 3). Zwischen Pflicht und Ängsten. *Tiroler Tageszeitung*. Retrieved from http://www.tt.com/home/index.csp

Norberg-Schulz, C. (1991). *Genius Loci: Towards a Phenomenology of Architecture*. Rizolli, pp. 6-23

Wood, P. & Landry, C. (2008). *The Intercultural City: Planning for Diversity Advantage*. London: Earthscan, pp. 5, 12, 114-127, 172-202, 214-216

DOCUMENTS

CABE (2005). *Creating Succesfull Neighbourhoods. Lessons and Actions for Housing Market Renewal*, pp. 43. Retrieved from CABE, website: http://webarchive.nationalarchives.gov.uk/20110118125740/http://www.cabe.org.uk/publications/creating-successful-neighbourhoods

Larcher, P. (2014). *Plan, Passivwohnbe-bauung Bienerstrasse Innsbruck, Larcher*. Retrieved from Architecktur Wettbewerb, website: http://www.architekturwettbewerb.at/competition.php?id=1499&cid=15894

Meighörner, W. (2017). *Hier Zuhause. Migrationsgeschichten aus Tirol.*, pp. 181. An accompanying brochure for the homonymous exposition in the Volkskunstmuseum Innsbruck.

Pöschl, W. (2008). 7 Anforderungen an einen menschengerechten ('artgerechten') Wohnbau, pp. 4. Retrieved from: http://www.tatanka.lu/tatanka/texte.html

Reitter, H. & Hertl Architekten. (2016). *Plan, Zeughausareal, Reitter, Hertl*, Retrieved from Architektur Wettbewerb, website: http://www.architekturwettbewerb.at/competition.php?id=1867&cid=19770

Schönherr, M. (n.d.). *Haus Fritz: Der Versuch Traditionelle Werte in die Moderne zu übersetzen*. Unpublished raw data, retrieved via Arno Ritter from Architektur Und Tirol (AUT).

WEBSITES

Aram Designs. (2018). Eileen Gray Biography. Consulted August 31, 2018. Retrieved from: http://www.eileengray.co.uk/#biography

ArchDaily. (2017). *de Flat / NL Architects + XVW architectuur*, Consulted April 3, 2018. Retrieved from: https://www.archdaily.com/806243/deflat-nl-architects-plus-xvw-architectuur

ArchDaily. (2015a). *Coop Housing at River Spreefeld / Carpaneto Architekten + Fatkoehl Architekten + BARarchitekten*, Consulted February 22, 2018. Retrieved from: https://www.archdaily.com/587590/coop-housing-project-at-the-river-spreefeld-carpaneto-architekten-fatkoehl-architekten-bararchitekten

ArchDaily. (2015b). *R50 – Co-housing / ifau und Jesko Fezer + HEIDE & VON BECKERATH,*

Consulted February 22, 2018. Retrieved from: https://www.archdaily.com/593154/r50-nil-cohousing-ifau-und-jesko-fezer-heide-and-von-beckerath

Bennie, C. (2015). *Berlin; Spreefeld*. Consulted February 22, 2018. Retrieved from: http://bennieontheloose.com/berlin-spreefeld

Encyclopaedia Britannica. (2018). *Moucharaby*. Consulted October 11, 2018. Retrieved from: https://www.britannica.com/technology/moucharaby

Gräwe, C. (2005). *Liane Zimbler, 2.2.2. Das kombinierte Zimmer*. Consulted July 18, 2018. Retrieved from: http://www.liane-zimbler.de/text/kapitel_2_2_2/frameset_text.htm

Hess, J.B., Oliver, P. (2013). *African Architecture*. Consulted October 19, 2018. Retrieved from: https://www.britannica.com/art/African-architecture

Housing Design Awards. (2007). *Dale Mill, Rochdale, Project winner*. Consulted April 3, 2018. Retrieved from: http://www.hdawards.org/archive/2007/project/dale.html

Literaturarchiv der Österreichischen Nationalbibliothek. (2009). *Norbert Fritz*, in: *Nachlässe in Österreich; Personenlexicon*. Consulted June 12, 2018. Retrieved from: http://data.onb.ac.at/nlv_lex/perslex/F/Fritz_Norbert.htm

Verein für Obdachlose. (2018). *...Chronik ...Fakten...* Consulted April 2, 2018. Retrieved from: http://www.obdachlose.at/chronik.php

Wikipedia. (2018). *Dreiheiligen-Schlachthof*. Consulted April 17, 2018. Retrieved from: https://de.wikipedia.org/wiki/Dreiheiligen-Schlachthof

INTERVIEWS

Peter Lorenz (Lorenz Ateliers), March 6, 2018
Rainer Köberl, March 6, 2018
Martin Mutschlechner (StadtLabor Architekten), March 7, 2018
Wolfgang Pöschl (Tatanka), March 8, 2018
Arno Ritter (Architectur Und Tirol - AUT), March 13, 2018
Hanno Schlögl (Schlögl & Süß Architekten), March 14, 2018
Frank Ludin & Kathrin Aste (LAAC Architects), March 20, 2018
Wolfgang Andexlinger (Stadtplanung Innsbruck), March 23, 2018
Walter Prenner & Verena Rauch (Columbos Next), March 26, 2018

IMAGES

Sources are ordered per page number. Images from top to bottom and from left to right.

3.1 Own digital drawing
5.1 Albrecht Dürer (1495-1497). *Innsbruck von Norden*, [aquarell]
7.1 - 7.2 Own photograph
10.1 Collage based on my own photographs made at Hall in Tirol on March 8, 2018. The street silhouette is that of the Schmiedgasse, seen from its east end.
16.1 Digital adaptation of Alfons Walde, *Frühling in Tirol* (n.d.) and Le Corbusier, *La Ville Radieuse* (1930)
20.1 - 20.2 Own digital drawing/graphic
33.1 - 36.1 Own hand drawing
37.1 Own digital drawing
38.1 - 41.4 Own photograph
43.1 Own digital drawing. Based on *Franziszeiser Kataster mit Legende, Innsbruck 1856*, Retrieved from: http://mapire.eu/oesterreichischer-staedteatlas/innsbruck/#OV_23_3_14
43.2 Own digital drawing
43.3 Own digital drawing. Based on Plan von Innsbruck und Umgebung, 1930, Retrieved from: http://www.tirisdienste.at/scripts/esrimap.dll?Name=anich&Cmd=Start
43.4 Own digital drawing
44.1 Jörg Kölderer (1507). *Innsbrucker Zeughaus* [drawing], Retrieved from: https://commons.wikimedia.org/wiki/File:371Zeughaus_Innsbruck.jpg
44.2 Own photograph
46.1 Digital adaptation of (n.a., n.d.) *Blick vom Eingang entlang der westlichen Säulenreihe* [photograph], published in: Vancsa, E. (Ed.), *Die Sakralen Kunstdenkmäler der Stadt Innsbruck, Teil 1: Innere Stadteile*. Wien: Verlag Anton Schroll & Co, pp. 454 and Albin Egger-Lienz, *Madonna mit Kind* (1920-1922).
47.1 Own digital drawing
47.2 Josef Strickner (1801). *Kirche zur VII.ten Kapelle, oder zum H. Grabe* [aquarell], published in: Vancsa, E. (Ed.), *Die Sakralen Kunstdenkmäler der Stadt Innsbruck, Teil 1: Innere Stadteile*. Wien: Verlag Anton Schroll & Co, pp. 454
47.3 Own digital drawing

48.1 Digital adaptation of (n.a., n.d.) *Leinwandhelden* [photograph], Retrieved from: http://www.leinwandhelden.at/

48.2 (n.a.) (2015). *Im Inneren der Siebenkapellenkirche* [photograph], Retrieved from: http://www.verortete-geschichten.net/orte/

48.3 Nussmüller, L. (2015). *Im Inneren der Kapelle* [photograph], Retrieved from: http://www.verortete-geschichten.net/orte/

49.1 - 49.4 Photographs published in: Vancsa, E. (Ed.), *Die Sakralen Kunstdenkmäler der Stadt Innsbruck, Teil 1: Innere Stadtteile*. Wien: Verlag Anton Schroll & Co, pp. 454

50.1 Digital adaptation of: Tiroler Landesarchiv. (1780). *Die Haupt und Residenz-Stadt Innsbruck in Tyrol* [copper engraving], Retrieved from: http://www.tirisdienste.at/scripts/esrimap.dll?Name=anich&Cmd=Start

50.2 -54.1 Own digital drawing/photo

55.1 Workspace Architects by expressiv.at (n.d.). *Wettbewerb Passivwohnbebauung Bienerstrasse* [digital render], Retrieved from: http://www.workspace.at/75-0-WB-Bienerstrasse.html

55.2 Reitter_architekten. (n.d.). *Wohnbebau-ung Zeughausareal* [digital render], Retrieved from: https://www.reitter.cc/project.php?type_id=-1&abau_id=3268

61.1 - 77.1 Own digital drawing

78.1 Own photograph

79.1 Haydn Fotografie. (n.d.). *Berghütte in Steiermark, Österreich* [photograph], Retrieved from: https://hiveminer.com/User/Haydn-Fotografie

79.2 (n.a.). (n.d.). *detail of larch shingles on onion domes - Kizhi island, Russia* [photograph], Retrieved via Pinterest.

79.3 (n.a.). (n.d.). *Uvdal stave church* [photograph], Retrieved from: http://www.tripwolf.com/en/guide/show/831718/Norwegen/Uvdal/Uvdal-Stafkirke

79.4 (n.a.). (2013). *Folkshem Sundbyberg* [photograph], Retrieved from: http://ekohus.nu/hoghus-i-tra-sunbyberg/

79.5 Nakazato, Y. (2016). *N-Holiday House* [photograph], Retrieved from: https://www.dwell.com/article/this-minimal-japanese-getaway-was-built-for-surfing-1773e89d

83.1 - 86.4 Own digital drawing

86.5 Own photograph

88.1 - 92.3 Own digital drawing

97.1 Ute Zscharnt. (2015). *View from south courtyard* [photograph], Retrieved from: https://www.archdaily.com/587590/coop-housing-project-at-the-river-spreefeld-carpaneto-architekten-fatkoehl-architekten-bararchitekten

97.2 Andrew Alberts. (2015). *R50_AA_DSC8017* [photograph], Retrieved from: https://www.archdaily.com/593154/r50-nil-cohousing-ifau-und-jesko-fezer-heide-and-von-beckerath

98.1 - 107.2 Own digital drawing

108.1 Detail from Albin Egger-Lienz, *Man und Weib* (1910), Retrieved from: http://www.albin-eggerlienz.info/

109.1 Digital adaptation of Albin Egger-Lienz, *Bauernstube* (1920), Gustav Klimt, *Bildnis der Adele Bloch-Bauer I* (1907), Le Corbusier, *A city of towers* (1923) and Le Corbusier, *La Ville Radieuse* (1935).

110.1 Own digital drawing. Based on drawings from Schönherr, M. (n.d.). *Haus Fritz; Der Versuch Traditionelle Werte in die Moderne zu übersetzen*.

110.2 Archiv für Baukunst (n.d.). *Norbert Fritz*. Retrieved from: https://archiv-baukunst.uibk.ac.at/archive_showperson.php?id=3

110.3 Kapfinger, O. (2007). *Holz lehrt bauen. Österreichische Beispiele 1952 bis 1970*. Retrieved from: http://www.proholz.at/zuschnitt/27/holz-lehrt-bauen/

111.1 Own digital drawing

111.2 Plakolm-Forsthuber, S. (n.d.). *Kombiniertes Zimmer einer Musiklehrerin* [photograph], Retrieved from: http://www.liane-zimbler.de/text/kapitel_2_2_2/frameset_text.htm

111.3 Plakolm-Forsthuber, S. (1931). *L. Zimbler* [photograph], Retrieved from: http://www.liane-zimbler.de/text/kapitel_2_2_5/abb_3.htm

112.1 Abbott, B. (1926). Eileen Gray. Retrieved from https://www.1stdibs.com/blogs/the-study/eileen-gray/ with courtesy of the National Museum of Ireland.

112.2 Brown, L. (2008). *Eileen Gray's E-1027 house*. Retrieved from: http://ounodesign.com/2008/12/24/eileen-gray-e1027-house/

112.3 n.a. (n.d.). *E 1027 bathroom and dressing*, Retrieved from: https://i.pinimg.com/s/49/8a/8f/498a8f4d0a4e48a422a66ff8fa9f4b74.jpg

112.4 Brown, L. (2008). *Eileen Gray's E-1027 house*. Retrieved from: http://ounodesign.com/2008/12/24/eileen-gray-e1027-house/

115.1 - 115.4 Own digital drawing

119.1 - 119.2 Drawings by members of the graduation studio 'Densified Living'

119.3 Reitter Architekten. (2018). Wohnbebauung Zeughausareal Innsbruck (competition entry).

120.1 - 120.3 Edwards, B., Sibley, M., Hakmi, M., Land, P. (2006). *Courtyard Housing: Past, Present and Future*, pp. 34, 85, 150

121.1 - 121.2 Bourdier, J.P., Minh-ha, T.T. (1996). Drawn from African Dwellings, p. 9, 286-287

122.1 - 126.1 Own digital drawing

126.2 Béchard Emile. (1870-1880). *Moucharabieh d'une maison du Caire* [photograph]. Retrieved from: https://www.photo-arago.fr/C.x?VP3=SearchResult&VBID=27MQ2JUZZBBM

127.1 - 129.1 Own digital drawing

133.1 Bartolomé Estebàn Murillo, *Two women at a window* (1665-1675), Retrieved from: https://commons.wikimedia.org/wiki/File:Bartolom%C3%A9_Esteban_Perez_Murillo_014.jpg

133.2 Arie Johannes Lamme, *Meditation: a lady looking out of a window* (mid 19th century), Retrieved from: http://collections.vam.ac.uk/item/O123699/meditation-a-lady-looking-out-oil-painting-lamme-arie-johannes/

133.3 Gustave Caillebotte, *Man on a balcony* (c. 1880), Retrieved from: https://www.wikiart.org/en/gustave-caillebotte/man-on-a-balcony

134.1 Own photograph

135.1 - 139.1 Own digital drawing