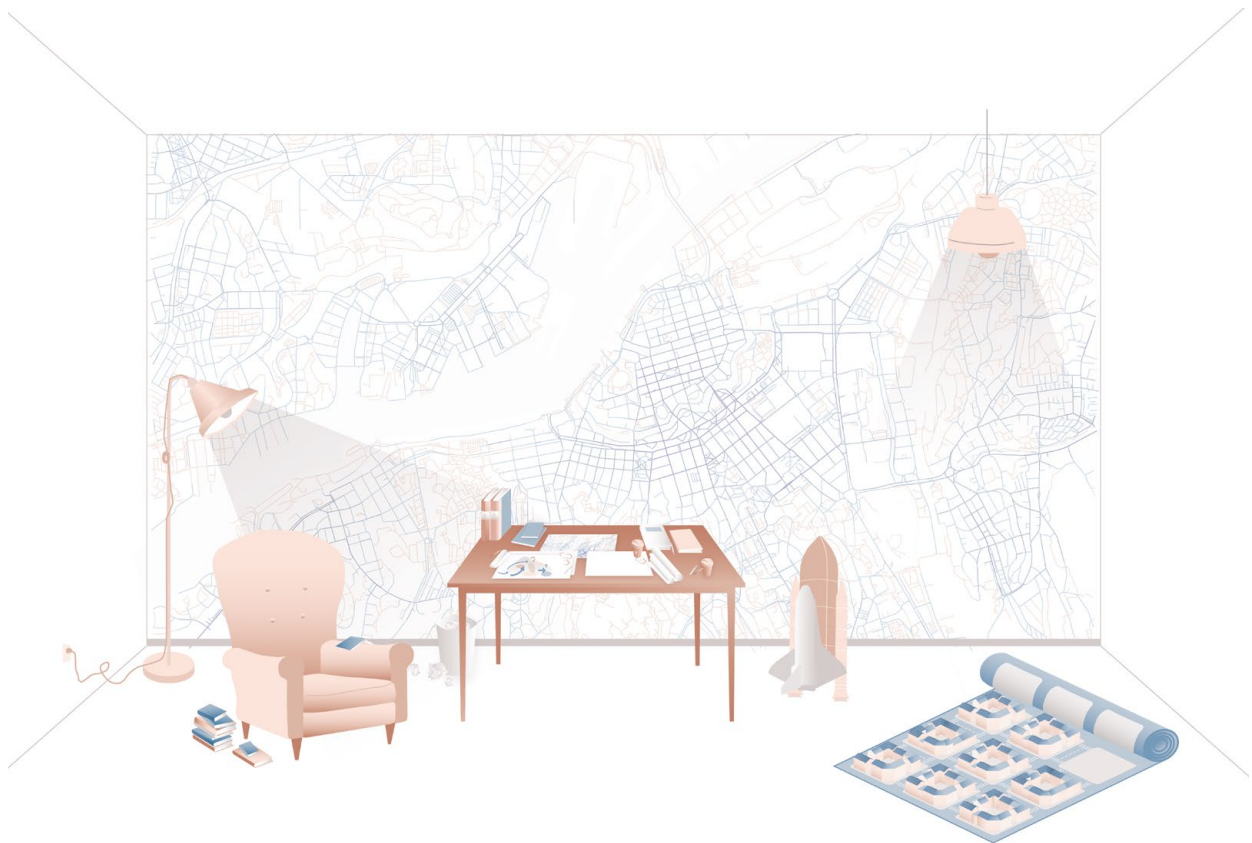


EMBRACING DUALITY

Space syntax's role in navigating the impossible profession



Moa Rydell

Master's Thesis

Chalmers University of Technology

Master Program Architecture and Planning Beyond Sustainability

Examiner: Meta Berghauer Pont

Supervisors: Lars Marcus and Sara Brorström



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Spatial Morphology Studio

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abstract

Do we know what we are doing?

Our cities are becoming increasingly segregated, the socio-economic differences are becoming more evident and there is a huge lack of housing, especially in cities, for large groups in society. Together with the many challenges caused by climate change, urban planners have to tackle a never before seen complexity, putting urban planners in the spotlight. The increasing urbanisation and need for housing could be an opportunity to contribute with our expertise and create more sustainable cities. However, although we agree on the goals, do we also know the means to realise them?

My search for the answers to these questions has led me to look at how we view the profession: both in terms of knowledge (are we artists or scientists?), our view on the city (is it complex or just complicated?) as well as the planning process that legally frames this.

Space syntax is a well-grounded theory and set of tools used to evaluate how well design proposals reach spatial goals and, in turn, socioeconomic goals. Although it could be a helpful tool in addressing the above mentioned challenges, the method is, in my experience, not used to its full potential. There seem to be very different attitudes towards it, which, together with the legal framework of the planning process, affect the use (or lack of use) of space syntax.

This thesis will, through interviews, literature studies and based on my own experience, look into the reasons for these different attitudes and relate this to the views on cities and the legal framework. I am using a set of dualities to map these intricate relations into diagrams, and use metaphors to illustrate the consequences they might have for practice. I then relate this to how the planning process creates certain lock-ins that can hinder using space syntax in a dynamic way and further lead to scepticism towards its usefulness.

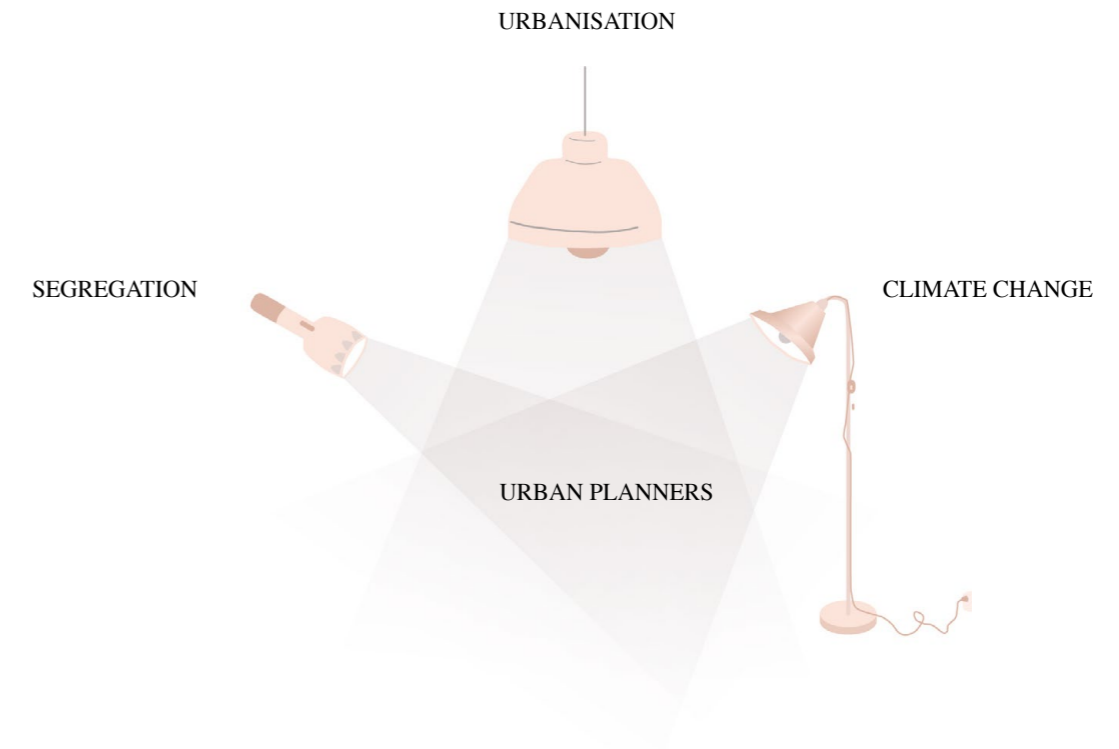
I conclude that it is important to not to define the architect as either an artist or a scientist, but both, and the profession is neither rocket science nor impossible, it's complex. Instead, I plea for us to embrace the dualities found within the profession and ourselves, because that is what makes us and it so fascinating.

Keywords: space syntax, architectural theory, urban design, planning process, dialectics

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problem description



Do we know what we are doing?

Our cities are facing many challenges due to a seemingly endless global urbanisation trend which makes the issues of our societies manifest in our cities. Since 2014 more than 50% of the world's population live in cities (UN, 2014). Sweden is in the middle of an attempt to build 700.000 housing units until 2025. Faced with such big developments it is important to ask ourselves: what types of cities are we producing? As stated in UN's new urban agenda (2016), urbanisation can be seen as an opportunity to create more sustainable societies: "If well-planned and well-managed, urbanisation can be a powerful tool for sustainable development for both developing and developed countries."

However, our cities are becoming increasingly segregated, the socio-economic differences are becoming more evident and there is a huge lack of housing in

large groups of society. Cities are increasingly competing on a global market and in Sweden we are seeing the development of big city regions, which means cities not only have to deal with local and regional interests, but also national and international. Together with the many challenges caused by climate change urban planners have to tackle a never before seen complexity.

Put together, we are placing high hopes on urban planning and putting architects and urban planners in the spotlight. Are we ready for the challenge? Are we well equipped to take on this responsibility?

There's an abundance of elaborate visions, policy documents and objectives stating how wonderful our future cities will be. But do we know how to get there? The ends are stated, but what are the means?

One theory that aims to capture the relation between

CHAPTER 1

the background

This chapter describes what I aim to answer with this master thesis, why it is relevant, how I have done it and who I am. I also present how I've chosen to structure my material and argumentation.

urban form and urban life is space syntax. The theory was developed in the 1970's by Bill Hillier and Julienne Hanson in London, and in Sweden further developed at KTH and Chalmers. It is a theory and a set of tools used to for example evaluate plan proposals in relation to spatial goals. In this sense, it can give valuable input to help us structure the very complex situations that make up our cities. The theory focuses on the performative aspect of buildings, and looks at the configuration of the space shaped by them. It describes the city as a complex system where changes in one area affect the whole, putting emphasis on the importance of taking in a larger area when planning separate parts of the city.

The theory is used to some extent in planning today, most commonly in the form of consultancy, and some municipalities (for example the City of Gothenburg) are looking into using the method in-house. But how is the implementation of the theory into practice going? How well is the legal framework of the planning process adjusted to using space syntax to its full potential?

I've had the chance to work with space syntax in a variety of different settings within the urban design and planning profession. During my experience I've encountered different views on what space syntax is and what it can do. I've found different expectations on what a space syntax analysis can deliver, and different attitudes towards space syntax, ranging from enthusiasm to scepticism. What are the reasons for the different attitudes? How do they relate to how we view the profession?

research questions

WHAT IS A BALANCED ATTITUDE TO HAVE TOWARDS SPACE SYNTAX?

HOW DO VIEWS ON THE PROFESSION AFFECT ATTITUDES TOWARDS SPACE SYNTAX?

HOW DOES THE LEGAL FRAMEWORK AFFECT THE USE OF SPACE SYNTAX?

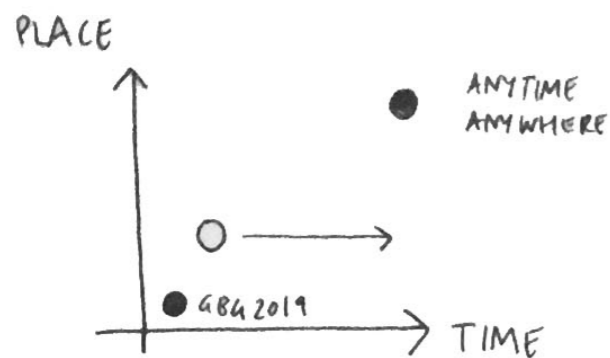
aim

This is my master's thesis at Chalmers School of Architecture. It is not a traditional architecture project in the sense that it has a design proposal: my research is presented in this booklet and my "end product" are in the form of discussions and illustrated diagrams.

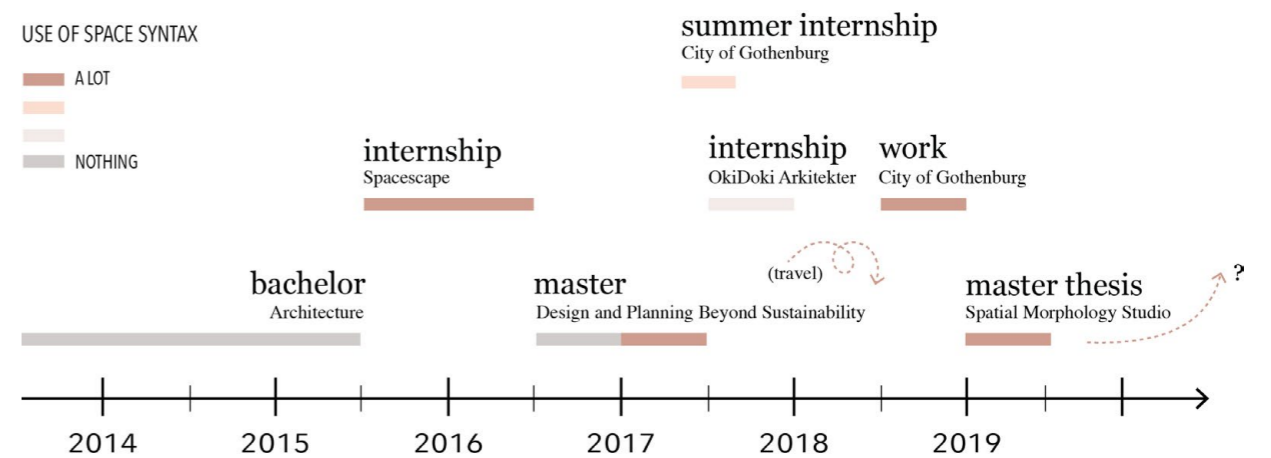
My aim is to present a nuanced image of space syntax, taking in perspectives from different actors in the planning process. Using a dialectic method I wish to discuss what different attitudes towards space syntax are and possible reasons for them. With this comes a discussion on the profession: how we view our role and knowledge now and over time, and how we define our subject: the city.

Although many references are drawn from a Gothenburg context, I think this project can be an input to the discussion on space syntax and urban planning in Sweden today. By not only focusing on one specific time and place I hope this thesis can be relevant for people using or coming across space syntax in the urban design and planning profession in one way or another, whether using it as a tool or getting it as input in their work.

Hopefully it can contribute to deepening the knowledge of what space syntax is and ultimately, what it is not, and help us better utilise its potential.



student's background



WHO AM I?

I am an 27 year old architecture student from Uppsala who has been studying a bachelor and a master program at Chalmers University of Technology.

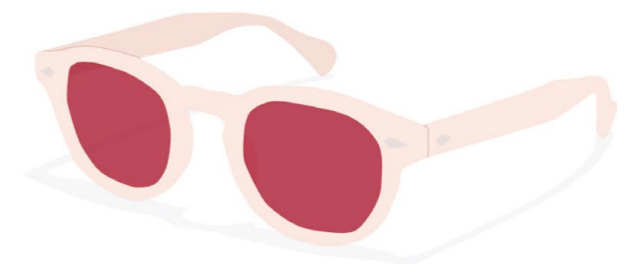


Illustration. My experience "colouring my glasses."

WHY ME?

My work- and internship experiences are what made me formulate the questions for this thesis from the beginning. Although short in comparison to a full professional life (two years), I have experience from different places, both in Stockholm and Gothenburg, and have been perhaps unusually focused on space syntax and urban design and planning. I see this as a strength, having taken in different perspectives during my studies, before I myself "become" one category or the other.

summer internship at the Plan Department at the City of Gothenburg. I have also studied the subject in Spatial Morphology Studio at Chalmers and worked with space syntax for the in depth comprehensive plan for central Gothenburg at the Strategic Department at the City of Gothenburg.

I have interned at a consulting firm doing space syntax analyses as well as an architecture firm receiving analyses, and worked with the methodology during a

space syntax + moa = true?

Why was I drawn to space syntax?

My first contact with space syntax was through an internship at a consultancy firm using the method. I was drawn to that office because they put words on a critique I had started to formulate during my bachelor years at architecture school. Do we know what we are doing? What am I learning? What is our skill? It seemed to me we were learning to argue for things in hindsight and basing our decisions on something hard to grasp: feeling? Intuition?

One example was my bachelor project, where we were asked to make masterplans over Heden in Gothenburg, and basing them on artistic images, like a tree, to draw out the paths. I started to question if the main connections between very central areas in Gothenburg should really be decided based on the branches of a tree?

At my internship I learned to use the space syntax methodology and do analyses before understanding the theory behind it first- learning by doing. When I returned to Chalmers for my master I got the chance to study the subject closer, and later to apply it in practice.



Illustration. The confusion at the presentation of my first architectural project.

method

FOLLOW THE PROBLEM

My approach to this master thesis is that I have "followed the problem" where it leads me. I started out with a theme, a method, and tried to figure out what to do with it. I found the "problem" was differing views and expectations. How does one find out people's views and opinions? You ask them, and therefore a large part of my thesis references are made up of interviews.

ETHNOGRAPHIC APPROACH

To answer my research questions I have used literature studies, interviews, a case study and my own previous experience.

My research based on interviews and my experience can be described as an ethnographic approach. Thomas Laurien, in his dissertation *Händelser på ytan* (2016), describes the ethnographic approach as "a creative process that in a powerful way involves the I." (p. 49, my translation). He means an ethnographic description is:

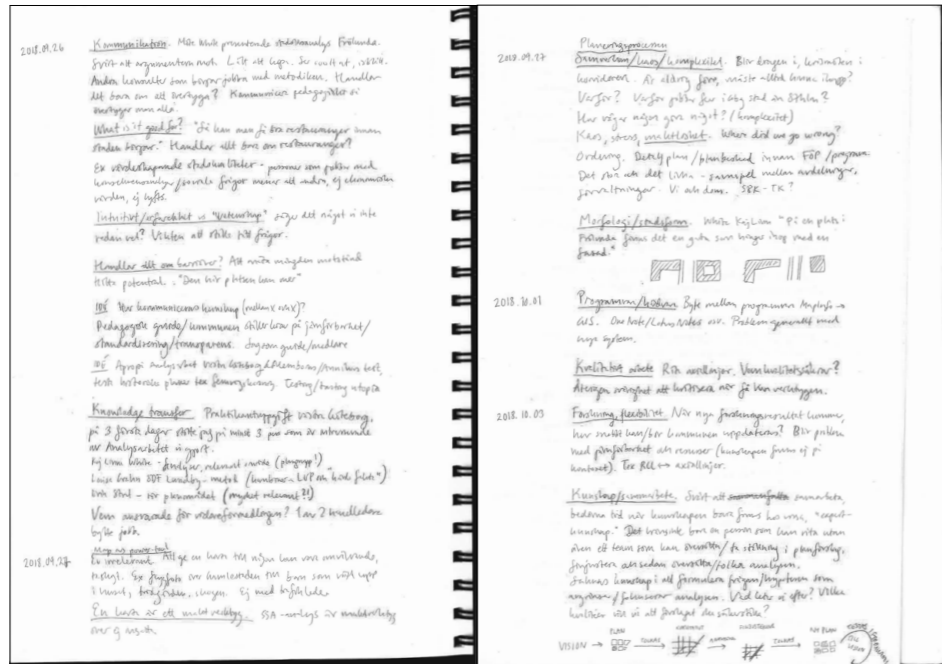
1) Interpretative, 2) interpreting a flow of conversations, communications and social events, 3) trying to salvage important parts of this flow from being lost by fixating them in text and memory shape and ultimately that it is 4) microscopical. This means that the detail is regarded as an entry point to be able to understand a whole. (p. 49, my translation).

With using this definition of the methods I've chosen I want to emphasise that it is not a strictly "scientific" or quantitative method I have used, but

rather a qualitative exploration where each step relates back to me and my experience. In using in depth interviews as a method, I am looking at single case studies where the ambition is not to be generalisable to other settings. And as mentioned in the quote above, I am using detail descriptions from the opinion of individuals to give input to my reflections on the questions I am exploring, and not aiming to fully cover or map the opinions of the many.

SELECTIVE APPROACH

The material I am basing my thesis on is therefore selective, both in my choice of literature, interview subjects and case study. I have not chosen a width of literary sources, I have based it mostly on Bill Hillier's *Space is the Machine*, Sara Westin's *Planerat, alltför planerat: En perspektivisk studie i stadplaneringens paradoxer* as well as texts from Lars Marcus, Ann Legeby and Meta Berghauser Pont, many relating to the implementation of (space syntax) theory into practice. I have not made a survey to find out the opinions of different roles on space syntax and the architecture and urban planning profession, instead I have carefully selected a few in depth interviewees. I have not compared many different projects to each other, instead I have chosen one and studied it in-depth. Wider, comparative analysis of sources and material could of course also be made but since my objective has been more of a personal, reflective text I have chosen this method.



FIELD NOTES

During the semester prior to my master's thesis, I was working at The Strategic Department at the City of Gothenburg. Parallel to this I was taking the Master Thesis Prep course, exploring my ideas. This led to using my work experience there as a sort of preparatory case study, taking advantage of being in that environment and talking about my subject at coffee breaks and during lunch discussions. I also kept field notes, thematically noting down what I found relevant to the thesis, of using space syntax in a municipal setting.

Laurien (2016) describes that in an ethnographic approach, there is a need for a sort of presence where the culture being studied is taking place. Although not "by the book" one can describe my presence at The Strategic Department as a form of participatory observation, giving me relevant insight that has helped me formulate my questions, choose who to talk to and find a relevant case

study, and has given me input when I am synthesising my findings.

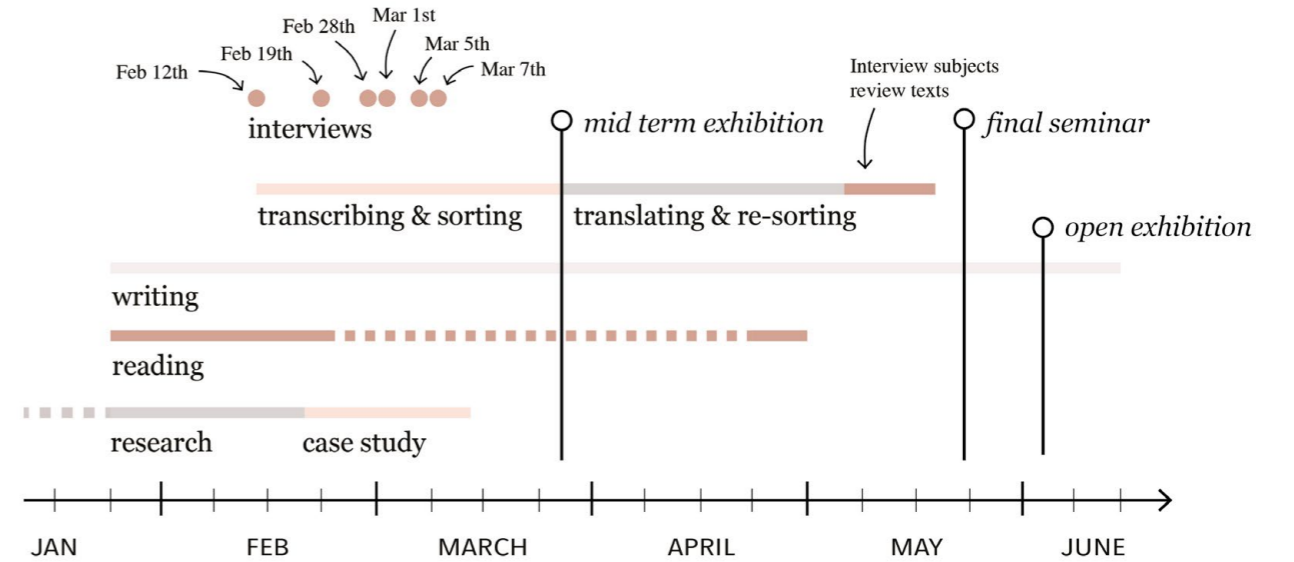
INTERVIEWS

I have interviewed six people with different roles and perspectives on urban design and planning, related to space syntax in some way.

The interview people will be made anonymous in the text, but I will use descriptive "personas" when I refer to them to make them easier to keep track of for the reader.

Interview person 1: "the consultant" - an urban planner at a consultancy firm working with space syntax

Interview person 2: "the politician" - a politician particularly interested in urban planning, former



member of "Byggnadsnämnden"

Interview person 3: "the researcher" - a researcher within space syntax who is also a practitioner working with urban design and planning

Interview person 4: "the social scientist" - a human geographic researcher with a specific interest in space syntax and the role of the architect/planner

Interview person 5: "the strategic planner" - an urban planner working at the municipality at the Strategic Department at the City of Gothenburg

Interview person 6: "the spatial planner" - a spatial planner working at the municipality at the Plan Department at the City of Gothenburg

"The consultant" I chose because of having experience in working a lot with space syntax in different types of projects and during many years.

"The politician" I chose because I thought it would be interesting to have a political input on the use of space syntax in the planning process, and views

on the legal framework in general and because I knew of his special interest in and strong opinions on urban planning and design issues, from him being active in (social) media debate. So in a way, he was interviewed based on his professional and his private role.

"The researcher," who is also a practitioner I chose because of her experience with both academy and practice, and specifically for her insight on the implementation of space syntax theory into practice.

"The social scientist" I chose because of her critical attitude towards space syntax and the architecture and planning profession, problematising the theory and the role of the architect and planner on a rather theoretical level, and coming from another profession. I thought it was interesting to have someone coming from geography and social sciences, since the theory relates a lot to this as well.

"The strategic planner" was chosen both because he was involved with my case study and because of his role as a civil servant working with compre-

hensive planning.

"The spatial planner" was chosen both because she was involved with my case study and because of her role as a civil servant working with development planning.

The researcher, the consultant, the strategic planner and the spatial planner were chosen partly because of their spread on the scale between academy and practice. It felt important to include the actors that I see are involved mostly with space syntax, even though of course not ALL actors are possible to cover within this master's thesis. I also tried to find a spread in attitudes towards space syntax, although I didn't fully know the attitudes beforehand.

I will not present the interviews in their totality or describe them one at a time, rather I will reference them throughout chapters 5-7 and sort them thematically. I have made partial transcriptions of the interviews for my own reference. Since the interviews are conducted in Swedish, all quotes and citations are translated into English by me. All interview people have been given the opportunity to read and comment on the chapters where I reference them. Three have chosen to do changes, mostly relating to the translation of the quotes into English and to be able to clarify their reasoning.

I will describe the questions I used in my interviews, the time and place they happened as well as the length in an appendix in the end of this booklet.

Prior to the chapters where I reference my interviews I will have three theoretical chapters describing my three themes: space syntax, the architecture and urban planning profession and the planning process.

CASE STUDY

I've chosen to look at this case study because it shows examples of many themes I am discussing in my thesis. It is a recent example where using space syntax is specified in the task from the municipality as a preferred method. The case involves both comprehensive and development planning, ongoing in parallel processes, as well as interplay between traffic and urban planning. I have interviewed two people relating to the case, "the strategic planner" and "the spatial planner." As described above, they are however also interviewed based on their professional roles.

personal approach to method

Conducting interviews has been a new method for me. It has proven to be challenging and has left me a bit overwhelmed in dealing with the extensive material from nearly ten hours of recorded material. Luckily I've had a second supervisor from Gothenburg University, helping me conduct my interviews and analysing the material.

As I am interested in etymology, words and their meanings, I have been inspired by Sara Westin's way of analysing words and phrases, to find an underlying attitude, way of thinking. Although my vision of the "problem," the question, has been difficult to put into words, it has become more and more clear during the process.

My interviews have been conducted during one month in time, and even though I've used mostly the same

questions, they have changed in character, I've understood better what I am searching for when I am asking my questions between the first and the latest interview.

It is however not very surprising that I am doing a project where I listen to different people, trying to take in as many viewpoints as possible. I think it is in my nature to be more of a listener, which also means not having to take a stance, to doubt, to be ambiguous. It is also reflected in my choice of literature: it is no coincidence that I picked out Sara Westin's dissertation from a book shelf in November of 2018. The subtitle "En perspektivistisk studie i stadsplaneringens paradoxer" (English version: The paradoxes of planning: a psycho analytical perspective) must have spoken to me.

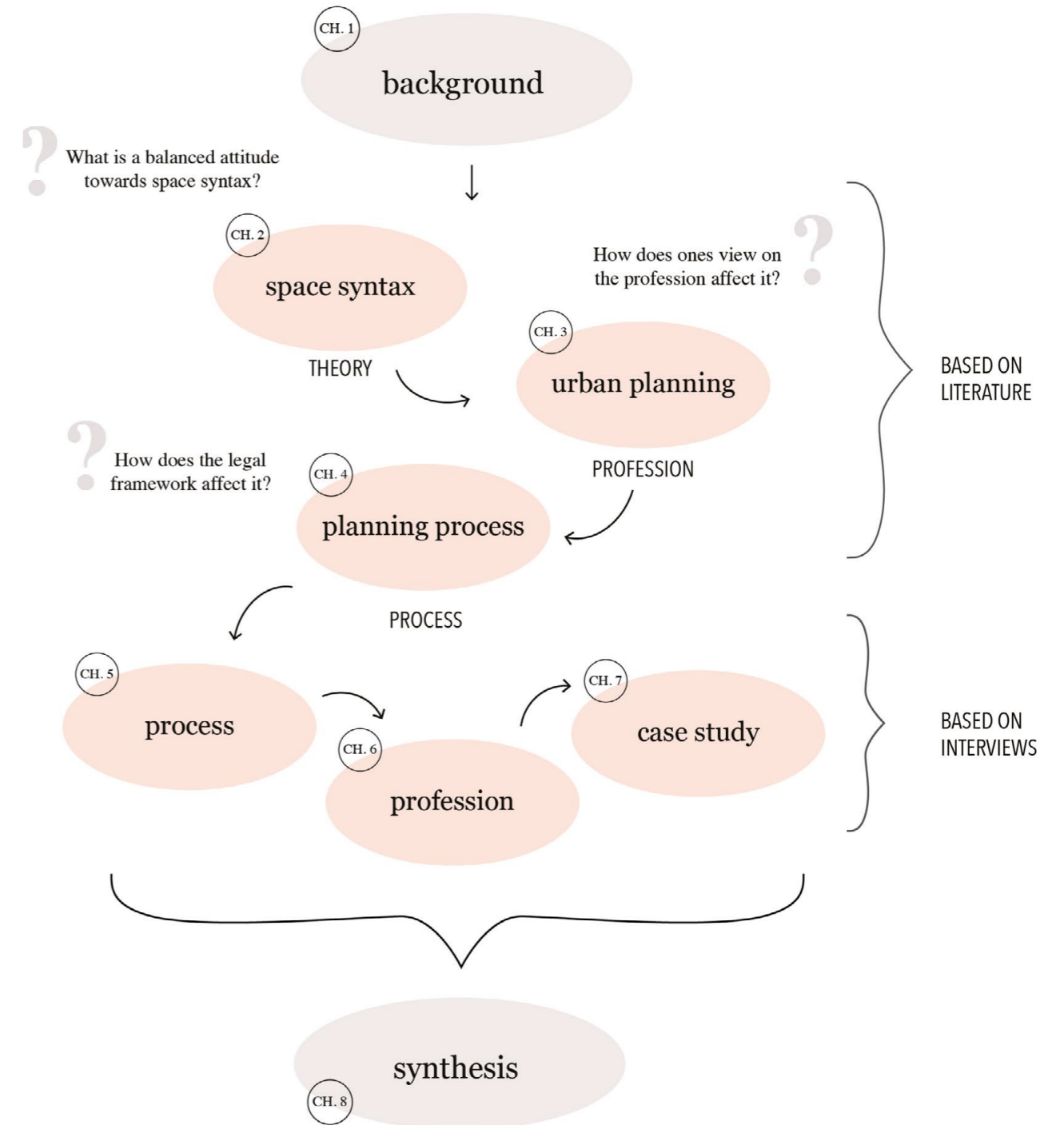


reading instructions

I've structured the chapters of my thesis after three themes: the theory (space syntax), the profession (urban design and planning) and the legal framework of the planning process. My three research questions also relate to these three keywords.

I am using the terms architecture, urban design and urban planning to describe the profession, as well as switching between describing space syntax as both a theory and a method.

outline



what is space syntax?

INTRODUCTION

Space syntax is a theory and set of tools used within architecture and urban planning. It was developed in the 1970's by Bill Hillier and Julienne Hanson at UCL in London and aims to describe the relation between urban form and urban life. What potential does the configuration of the physical space create for social processes to take place? The idea is that buildings shape the space - the urban and public space, in different ways. One can say that buildings are "folding" space, creating either distance or proximity. And this effects how we move in the city.

"First we shape buildings, thereafter they shape us." - Winston Churchill

In the text *Om att mäta stadsform* by Meta Berghauser Pont and Lars Marcus (2018) the intentions of space syntax are described as "distinguishing, analysing and measuring the built form and spatial structure of the city to see how it affects and interplays with different urban processes and qualities." (p. 27, my translation)

In the report *Storstäder i samverkan* (Legeby, Marcus, Berghauser Pont, Tahvilzadeh, 2015) space syntax is described as being composed of "an unusually well-grounded set of theories within architectural research with a clear departure in architectural theory and urban morphology but which also has strong connections to central theory traditions within sociology. (p. 24, my translation). The authors state that space syntax is "offering a more rich and principal research field for continued research based on analytical-empirical methods, something that has been uncommon in architectural research." (p. 25, my translation)

CONFIGURATIONS

A central notion in the theory of space syntax is configuration. In *Space is the Machine*, originally published in 1996, Bill Hillier describes configurations as "relations taking into account other relations." The theory builds on configuration of spaces, and not spaces in isolation. He writes:

We should therefore in principle expect that the relation between people and space, if there is one, will be found at the level of the configuration of space rather than the individual space. This is confirmed by commonsense. Individual spaces place little limit on human activity, except for those of size and perhaps shape. In most reasonable spaces, most human activities can be carried out. But the relation between space and social existence does not lie at the level of the individual space, or individual activity. (2007, p. 20)

The configuration of spaces, like street segments ("gaturum"), their positions in relation to each other, determines their location ("läge") in the structure. This creates a system of spaces with different locations, different potential in the structure. It is a richer description of location than simply "birds distance from the city centre." Based on the principles of network analysis, some spaces will have a more central location than others, what we usually refer to as a "better location," ("bättre läge") which has implications for the type of activities that take place there.

SYSTEMS THINKING

The theory describes the street network as a system where changes in one part influences the whole, putting emphasis on the importance of looking at a larger area when planning parts of the city. Hillier emphasises

CHAPTER 2

the theory: space syntax

This chapter presents the theory of space syntax and what it can and cannot answer. It describes what it can be used for, and how it is related to the issues facing our cities. I describe how space syntax defines and represents space, how it describes the city as a system and in what way it could be used as something to think with.

the interdependency of the parts that make up the configuration, where each space is determined by its relation to all the others. He describes it as follows:

Places are not local things. They are moments in large-scale things, the large-scale things we call cities. Places do not make cities. It is cities that make places. The distinction is vital. We cannot make places without understanding cities. (Hillier, 2007, p. 12)

"Places are not local things. They are moments in large-scale things, the large-scale things we call cities"

SOMETHING TO THINK WITH

Hillier further describes configuration as something we use intuitively but have a hard time to understand or explain, using the example of how we use grammar in language intuitively. He explains the distinction between ideas we think *of* and ideas we think *with*, comparing configuration to the latter:

Configuration seems in fact to be what the human mind is good at intuitively, but bad at analytically. [...] In using language, for example, we are aware of words and believe that in speaking and hearing we are handling words. However, language only works because we are able to use the configurational aspects of language, that is, the syntactic and semantic rules which govern how words are to be assembled into meaningful complexes, in a way which makes their operation automatic and unconscious. In language we can therefore distinguish ideas we think of, that is, the words and what they represent, and ideas we think with, that is, syntactic and semantic rules which govern how we deploy words to create meaning. The words we think of seem to us like things, and are at the level of conscious thought. The hidden structures we think with have the nature of configurational rules, in that they tell us how things are to be assembled, and work below the level of consciousness. This 'unconscious configurationality' seems to prevail in all areas where

we use rule systems to behave in ways which are recognisable as social. (2007, p.28)

DEFINING SPACE

Hillier (2007) argues that cultural and social activities have their own "spatial forms" and that space therefore plays an important part in social processes. He argues:

Culturally and socially, space is never simply the inert background of our material existence. It is a key aspect of how societies and cultures are constituted in the real world, and, through this constitution, structured for us as 'objective' realities. Space is more than a neutral framework for social and cultural forms. It is built into those very forms. Human behaviour does not simply happen in space. It has its own spatial forms. (p. 20)

He continues:

It is because this is so that spatial organisation through buildings and built environments becomes one of the principle ways in which culture is made real for us in the material world, and it is because this is so that buildings can, and normally do, carry social ideas within their spatial forms. To say this does not imply determinism between space to society, simply that space is always likely to be structured in the spatial image of a social process of some kind. The question is: how exactly does this happen, and what are these structures like? (Hillier, 2007, p.20)

BUILT FORM - SOCIAL PROCESS

Hillier uses an example of a building plan to further explain the relation between configuration and social and cultural activities. He introduces the term integration, meaning depth in the system.

If we count the number of spaces we must pass through to go from the salle commune to all other spaces, we find that it comes to a total which is less than for any

other space — that is, it has less depth than any other space in the complex. The general form of this measure is called integration, and can be applied to any space in any configuration: the less depth from the complex as a whole, the more integrating the space, and vice versa.

He continues:

This type of method allows us to retrieve from house plans configurational properties that relate directly to the social and cultural functioning of the house. In other words, through spatial configuration culturally determined patterns are embedded in the material and spatial 'objectivity' of buildings. By the analysis of spaces and functions in terms of their configurational relations within the house, and the search for common patterns across samples, we can see how buildings can transmit common cultural tendencies through spatial form. We must now ask how and why this is the case, and what follows from it? (Hillier, 2007, p. 25)

"Human behaviour does not simply happen in space. It has its own spatial forms"

CONFIGURATION - MOVEMENT

If you apply this way of thinking to a city scale, the "rooms" equal different street segments or public spaces ("gaturum"), and the configuration of the spaces in relation to the other spaces determine their location in the structure. So what does that mean for social processes? The answer is explained via the relation between configuration of spaces and movement, that is, people moving through the spaces in a city. And the flow of people is a driver for many things in a city, described in the next section. In *Space is the machine*, Bill Hillier "reports a fundamental research finding: that movement in the urban grid is, other things being equal, generated by the configuration of the grid itself." (2007, p. 4).

"(T)he structure of the urban grid considered purely as a spatial configuration, is itself the most powerful single determinant of urban movement, both pedestrian

and vehicular." (2007, p. 113)

He describes this movement as "natural movement" and describes the relation between that and origins and destinations as well as generator and attractors as follows:

"The structure of the urban grid considered purely as a spatial configuration, is itself the most powerful single determinant of urban movement"

Natural movement is the proportion of movement on each line that is determined by the structure of the urban grid itself rather than by the presence of specific attractors or magnets. This is not initially obvious, but on reflection does seem natural. In a large and well developed urban grid people move in lines, but start and finish everywhere. We cannot easily conceive of an urban structure as complex as the city in terms of specific generators and attractors, or even origins and destinations, but we do not need to because the city is a structure in which origins and destinations tend to be diffused everywhere, though with obvious biases toward higher density areas and major traffic interchanges. So movement tends to be broadly from everywhere to everywhere else. To the extent that this is the case in most cities, the structure of the grid itself accounts for much of the variation in movement densities. (Hillier, 2007, p. 120)

FLOW

So why is movement in the grid important? In the text *Om att mäta stadsform* by Meta Berghauser Pont and Lars Marcus (2018) the role of flow of people in a city is described as follows:

In cities, the most important flow is that of people. Where a lot of people are in movement good locations for commerce and local markets appear. [...] But it can also influence how many people I meet when I move in the city and where they are from, so to say, it can directly affect how socially segregated a city is. (p. 24, my translation)

They describe how different measures (like integration and betweenness described on the next page) used in space syntax analyses have shown "very good correlations with pedestrian flow, which is why they have been of special importance when it comes to tying urban form to different everyday qualities in the city concerning the degree of presence of other people in streets and squares and ultimately also the extent and character of the range of service and attractions." (p. 11, my translation)

MULTIPLYER EFFECTS

The relation between configuration, movement and attractions in a city is described by Berghauser Pont and Marcus (2018). They write that because the configuration of the grid has a big influence on pedestrian movement in cities, it could mean that central locations also attract activities. They describe it as a "synergic effect where central locations attracts people in movement which attracts activities and ultimately these activities attract new activities." (p. 21, my translation)

Hillier (2007) describes it as multiplier effects which also relates to the density: more central locations tend to have higher densities which will attract new buildings and uses, something he defines as "urban buzz:"

It is this positive feedback loop built on a foundation of the relation between the grid structure and movement that gives rise to the urban buzz, which we prefer to be romantic or mystical about, but which arises from the co-incident in certain locations of large numbers of different activities involving people going about their business in different ways. Such situations invariably arise through multiplier effects generated from the

basic relation between space structure and movement, and ultimately this depends on the structure of the urban grid itself. In other words, how the urban system is put together spatially is the source of everything else. (p. 126)

FAST AND SLOW SYSTEMS

Legeby et al. describe the city as a complex system. They define complex systems as typically consisting of many systems, some which are fast variables and some which are slow variables, where the slow variables tend to dominate over the fast ones over time. They describe the physically built city as a slow variable while social segregation can be seen as a relatively fast variable. Therefore, they argue, the physical built form "has a great influence on segregation processes in our cities." It can also be "an important instrument when it comes to slowly changing or steering this process in another direction, for example towards increased integration." (2015, p.22, my translation)

ANALYSIS

Space syntax can be used for analysing different plan proposals, how they effect their surrounding and how they perform in relation to spatial goals. Examples of use can be determining which street has the best potential to carry shops or restaurants, where a public building versus private housing gardens are best placed in a structure or where to place bridges for best effect in tying different parts of the city together.

To make an analysis using space syntax methodology, one uses GIS (geographic information system) software to draw up a system of streets in a city. In the analysis, each street segment is represented by a line that covers the longest sightline accessible by foot or bike. This is called an axial line, and an area or city where each space is represented by a line is called an axial map.

To make for example an integration analysis, one can use a software plugin called Place Syntax Tool which

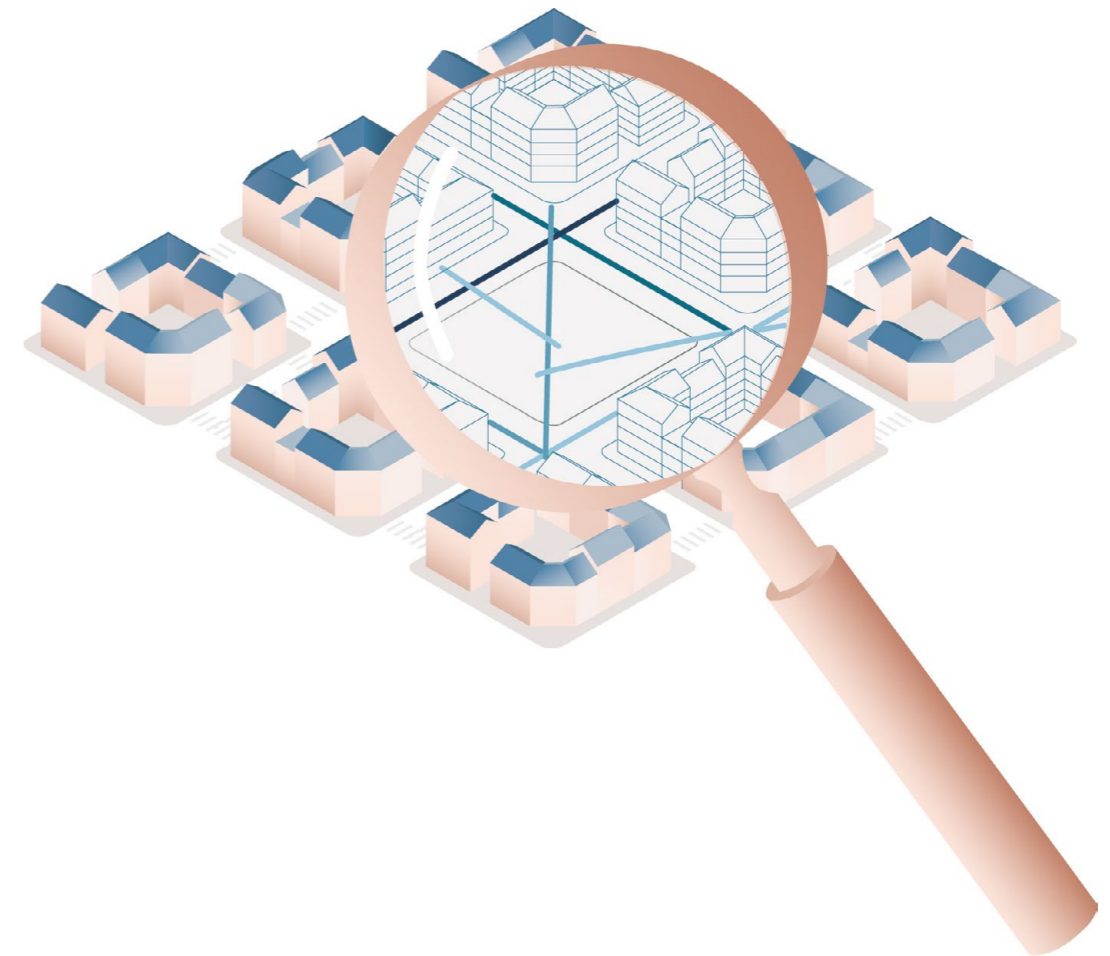


Illustration. Seeing space as showing the otherwise hidden "second form" of our built structures.

calculates a centrality measure, an integration value, using algorithms for each line in the network. The more central a line is, meaning that it is closer to all other lines, the higher is its centrality measure in the analysis. This is commonly represented by applying a red colour to the highest values on a scale down to blue for the lowest values. One can then make changes to the map, for example adding or removing connections, and compare the results to each other.

TOPOLOGY

The analysis calculates the integration of the street network using topological distance, for example three

topological steps in each direction. A topological measure is like a subway map, describing the relation between spaces but not taking into account the metric distance or physical location. The analysis aims to capture the way we intuitively use space, based on how we read it with our vision.

The analysis can be made in the form of an integration analysis (described above) that typically captures "to-movement" and a betweenness analysis that typically captures "through-movement." Often, these analyses are combined using the Place Syntax Tool, through for example an "attraction reach" analysis or "attraction density" analysis. These analyses take into account origins and destinations or attractions and can analyse for example how many shops or restaurants are reached within a certain distance, via the grid (the axial lines).

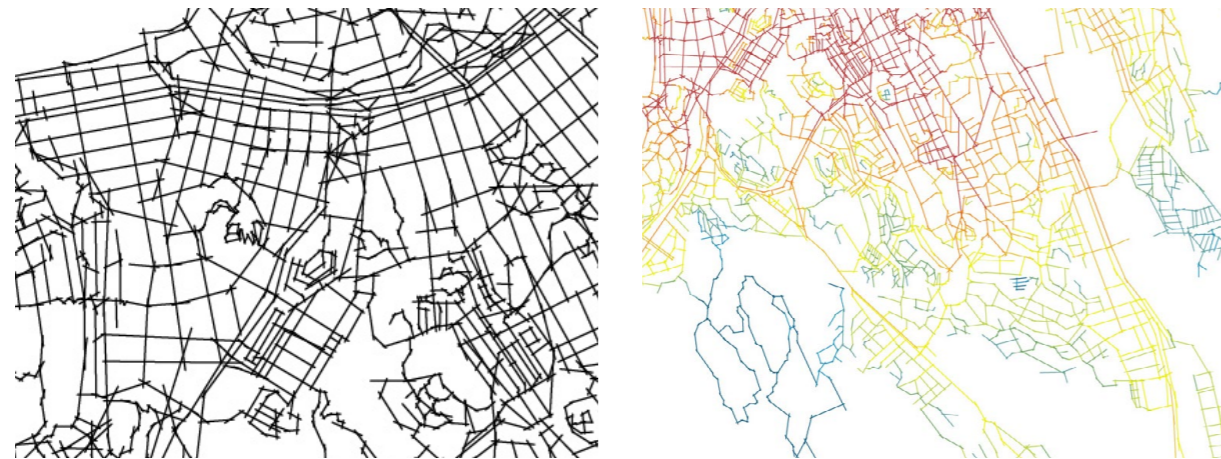


Image 1. A neutral axial map compared to a colour-coded integration analysis (radius 16 axial steps).

Other examples are determining how many square meters park is reached within a certain distance from each address point in a system.

SCALE

The integration analysis can be done looking at different scales, for example the effects of a plan proposal within a neighbourhood, between neighbourhoods or in relation to a whole city or region. The analysis can then be set to different radii, measured in either topological steps or walking distance via the network. Integration analyses made on different radii are commonly described as capturing local or global integration.

Hillier (2007, p. 99) states:

[L]ocal integration in urban systems is the best predictor of smaller-scale movement - that usually means pedestrian movement because pedestrian trips tend to be shorter and read the grid in a relatively localised way - while global integration is the best predictor of larger-scale movement, including some vehicular movement, because people on longer trips will tend to read the grid in a more globalised way.

He further describes that the relationship between these two levels of integration "governs the degree of natural interface [...] between more local [...] internal

movement and more global[...] in-out movement and through movement." (Hillier, 2007, p. 101)

REPRESENTATIONS OF SPACE

A "neutral" axial map, without any analysis made is a way of representing space that highlights a certain aspect of it. It shows the spaces accessible by foot or bike and takes into account barriers. An interesting thing is that in this way of mapping the city, all barriers are treated the same. It doesn't matter if it is a river, a mountain, a highway intersection (traffic spaghetti) or something else. The spaces that are left blank could be anything. Just like a figure ground map highlights the space between the buildings more than the buildings themselves, this mapping highlights something other than our traditional maps. This in itself is an interesting analysis, and I think important to have in mind when you talk about the analysis.

THE SECOND FORM

In an article, *Dags för den andra formen*, published in the magazine *Plan* (2018) Lars Marcus describes

dealing with the relational, configurational or systemic aspect of architectural form as "unveiling a hidden dimension of architectural form, a dimension that is already there and is a result of architectural work just like 'regular' form."

He means this dimension is already existing but is not as easy to see because of it being about relations between architectonic elements and not the elements themselves. He means our traditional architectural mediums are not used to capturing this, but that architectural- and urban morphology has managed to create digital tools that are. This leads to a number of architectonic properties and qualities becoming "possible to see, put into words and work architectonically with". He calls the regular form "the first form" and the unveiled form "the second form." He argues that since this form has not been visible it has not been dealt with properly, and the expertise has not been developed.

Since this "second form" is not optional and is always there, Marcus argues we also need to take responsibility for it. "We can't say: I only work with the first form, it

would be to say that I don't wholly and fully work with architecture." (2018, my translation)

He concludes the article in saying:

How we shape and structure the physical space with built form therefore has an enormous influence for very many aspects of our modern societies, and the experts on how this works and how it is shaped is actually the architects, or could be. I have a hard time seeing any other professional group with a more attractive knowledge and ability to offer the world today, but then we need to make it visible in its entirety so that we can talk about it with precision - it's time for the second form. (2018, my translation)

AN INDICATION

A space syntax analysis could be described as indicating in which direction for example a plan proposal is going, or evaluating if one change or another is better at fulfilling different goals. One can say it indicates what potential a certain space has in supporting social processes. The way we use a tool like space syntax could be compared to the way a doctor uses a tool like the thermometer to diagnose a patient. A high temperature gives an indication as to what is wrong with a patient. The doctor could also use their hand to feel the temperature of the skin, but this is a way of getting a specific number, other than "hot" or "very hot" or "normal." But why a thermometer is so helpful is also because of its ability to specify a value, a temperature, which can be compared to the temperature after trying to treat the problem. The fever going down indicates that the efforts put in are working, while the fever going up indicates the opposite, and maybe the diagnosis is not correct.

It is not necessarily the number in itself that is interesting, but the difference in temperature before and after. And a thermometer makes it easier to compare between 40,2 C and 39,5 C than between "very warm" and "warm." And in the same way, space syntax can be said to be an indicator and a help in evaluating in what way different changes in the urban structure help reach the goals. I will get back to this metaphor in the coming chapters.

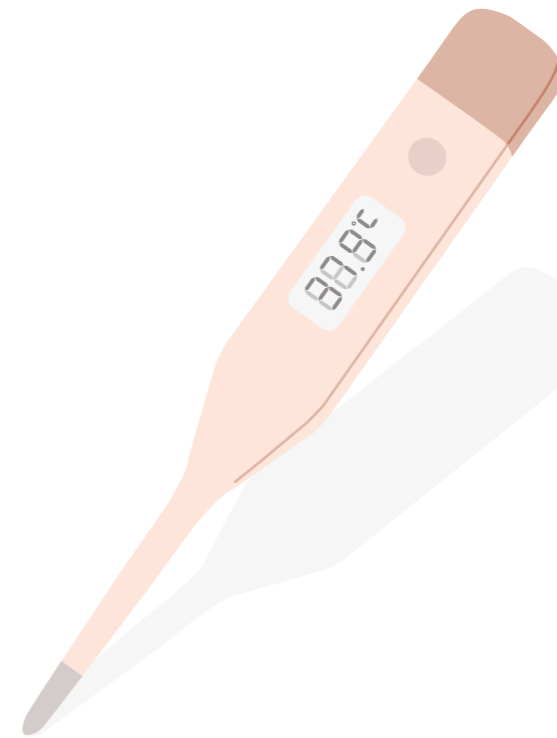


Illustration. Seeing space syntax as an indicator

critique

One critique of space syntax as expressed by Koch and Ekelund (2012) in *Space syntax: Ett analysverktyg för planering och utvärdering av arkitektur och byggd miljö*, is that it might seem to present a universal solution to all problems:

"Space syntax is perhaps best known for its ability to adjust to different scales, from a regional level to an interior. [...] This very flexibility is paradoxically also a basis for criticism in many contexts. The reasons can be that space syntax at a shallow glance could easily be perceived as a sort of universal solution that can solve everything." (p. 13, my translation).

The authors mean this might lead to dismissing the theory as a whole and that it is important to, like with all methods, use it in a "wise way." The importance of being aware of what a space syntax analysis can and cannot answer is a recurring theme in my interviews with people using the method, described in chapters 5 to 7.

BEHAVIOURISM

In a text for *The Journal of Space Syntax*, Sara Westin (2015) draws a connection between space syntax and the psychological tradition behaviourism. She describes behaviourism as "a form of understanding that permeates much of our technological civilisation."

The words and expressions used by some space syntax researchers ('response', 'manipulation', 'objectivity' and 'prediction'), are a direct legacy of behaviourism – the psychological tradition that is modelled after the natural sciences. Behaviourism is imbued with the idea that human behaviour is considered as an environmental product, and behaviourists tend to limit themselves to the study of phenomena that are quantitatively measurable. A distinction is made between man as an internal, subjective world and man as an outer, objec-

tive world, and the focus is on the latter. (Westin, 2015, p. 6)

In her dissertation, *Planerat, alltför planerat: En perspektivistisk studie i stadsplaneringens paradoxer* (2010) she references Merlau-Ponty and writes: "What a behaviouristic way of thinking misses is that also inner stimuli affects our behaviour, that the thought aspect influences the body aspect and vice versa." (p. 288, my translation)

This can be compared with the critique that a space syntax model reduces people into bodies without taking into account their intention or aspects like territoriality (see for example Linda McDowall, 1999).

As a response to this, Ekelund and Koch (2012, p. 39, my translation) put emphasis on using it as a complementary tool:

As is common when using tools uncertainties can appear regarding their delimitations. Its strengths can turn into its weaknesses if the tool is used in a wrongful way. This is true also for space syntax which gives some answers and not others. To get as close to a complete spatial analysis as possible, in buildings as in cities, space syntax analyses need to be complemented with analyses of aspects that are not included in the method - like for example representative aspects, cultural meaning and the psychosocial effect on the built environment.

INFERENCE PROBLEM

The inference problem is a problem within geography that is described by Westin (2015). She means that just because a space takes on a specific spatial form where a certain use is to be found, it doesn't mean that the same use is guaranteed. She refers to what within geography

is described as the inference problem:

[...]space syntax presents evidence that used space, i.e. a busy street or square, requires a certain type of spatial configuration. To claim that urbanity assumes used space and that used space, in turn, requires a certain spatial configuration is to physically-spatially define the urban. It means making inferences from process to form. But is it also possible, as Hillier seems to suggest, that a certain spatial configuration generates used space and that used space is more or less the same as urbanity? In other words, is it possible to make inferences in the opposite direction, from form to process? (Westin, 2015, p. 8)

She further adds: "Space syntax techniques may help planners solve the problem of how to generate 'used space', but 'used space' is merely one prerequisite for urbanity; it does not guarantee it."(Westin 2015, p.11)

QUANTIFICATION TREND

It is difficult to talk about space syntax without putting it into the context of quantification. Quantification is a trend we see in many professions in society, and the architecture and urban design profession is no exception. Today, we are aiming to quantify more and more aspects to be able to evaluate them according to set targets, whether it be the production of objects or even social aspects, as seen in elderly care for example. And space syntax can be seen as a part of this trend. Just as in other professions, one can be sceptical of attempts to with quantitative techniques measure qualitative aspects, and this critique of space syntax exists as well.

what is architecture?

ART OR SCIENCE?

Architecture

: the art or science of building

specifically : the art or practice of designing and building structures and especially habitable ones

When looking at a dictionary definition (Merriam Webster online dictionary) of architecture one can discern an ambiguity in the profession. Architecture seems to be somewhere in between art and science. This duality is also expressed in literature. In her dissertation, Westin (2010) discusses architects' relation to art and science and argues that most architects see themselves as artists:

..most architects regard themselves as artists. The goal of the artist is different from that of the scientist. While the latter seeks to describe reality as objectively as possible, the former is not concerned with what is 'real:' her task is, in short, to give personal expression and to create illusions. Hence, if architecture is a profession, it is an incomplete profession. (Westin, 2010, English summary)

"...most architects regard themselves as artists"

In *Space is the machine* (2007) Hillier defines architecture as both art and science. He describes how one might think advocating space syntax which is an analytic theory in architecture would imply making architecture into a science, but argues this is not the case:

In pursuing an analytic rather than a normative theory of architecture, the book might be thought by some to

have pretensions to make the art of architecture into a science. This is not what is intended. One effect of a better scientific understanding of architecture is to show that although architecture as a phenomenon is capable of considerable scientific understanding, this does not mean that as a practice architecture is not an art. On the contrary, it shows quite clearly why it is an art and what the nature and limits of that art are. Architecture is an art because, although in key respects its forms can be analysed and understood by scientific means, its forms can only be prescribed by scientific means in a very restricted sense. (p. 7)

Further he adds:

(...)Architecture is therefore not part art, and part science, in the sense that it has both technical and aesthetic aspects, but is both art and science in the sense that it requires both the processes of abstraction by which we know science and the processes of concretion by which we know art. (p. 7)

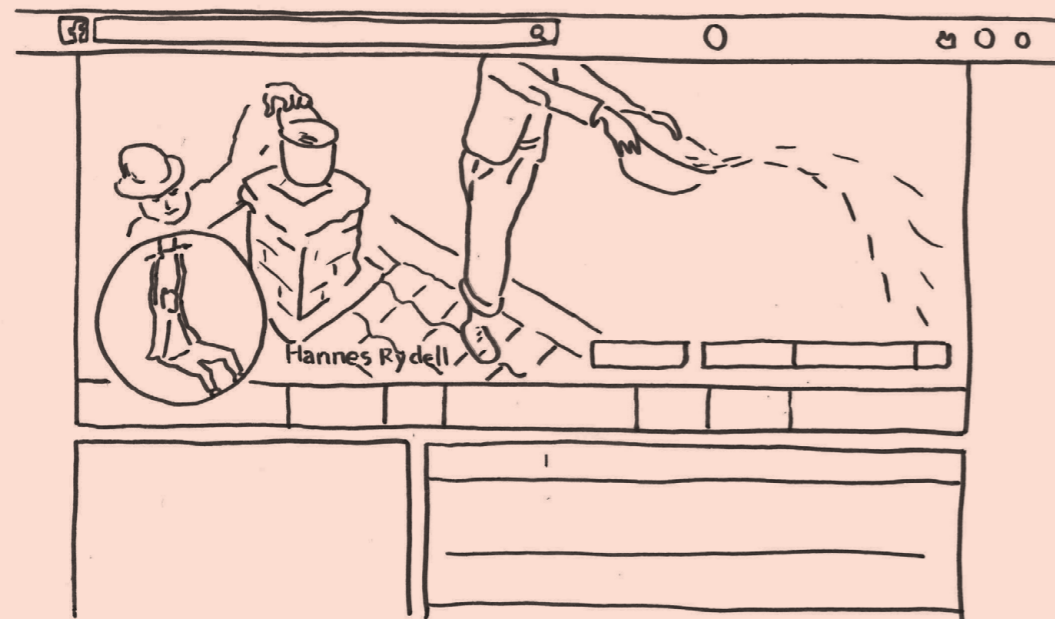
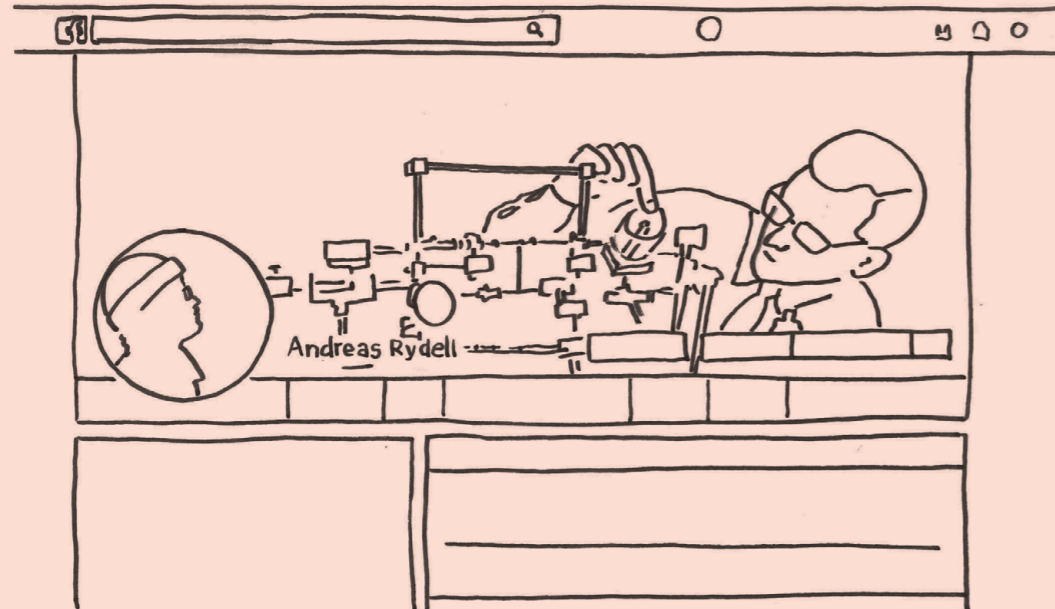
WIDENING THE DEFINITIONS

I would like to widen the concepts of "art" and "science." The term art can be defined as something to master, rather than as a something made by an artist. In a discussion with Lars Marcus (personal communication, April 25th, 2019), the Swedish terms "kunnande" and "vetande" were proposed, which lack a clear definition in English. "Kunnande" can be translated into "know-how" as in knowing how to make a soup for example, while "vetande" could be understood as "knowing" or "understanding" why the soup is edible, and the process that makes it "food." Having one type of knowledge doesn't mean having the other, and both are needed to be a good chef. This could be translated into having theoretical knowledge about urban design, for example via space syntax theory, but without an under-

CHAPTER 3

the profession: architecture/urban planning

This chapters explores different ways of viewing our profession: if it is an art or science, if our focus is on the architectural product or process and how we define our subject: the city. The chapter also explores how our role has developed and how we have related to theories, today and over time.



the duality and me

This duality between art and science is what first got me interested in architecture. I, as having a background in traditional science subjects but also a deep interest for artistic subjects: dance, literature & poetry, was attracted to the idea that architecture seemed to encompass both of my "sides." This can be represented by looking at my two elder brothers who I am influenced by. The illustration shows the Facebook profiles of my two brothers, the "artist" and the "engineer." Who am I? Is it possible to be both?

During the thesis I have reflected a lot upon my own role as an architect and as a person, inspired by Sara Westin's descriptions of dualities and paradoxes found within us. In talking to different people I have noticed times when my two "selves" or roles are contradicting each other, which has been as interesting as it has been confusing.

standing of how to translate it into design, the knowledge is not so useful. On the other end, one can practice urban design without using an (articulated) theory, basing decisions on inherited knowledge and experience, for example creating an area of perimeter blocks that usually generate a lively area, and not understanding why this fails when put in a new context.

THE NEED FOR BOTH

In his dissertation *Architectural Knowledge and Urban Form*, Marcus (2000) describes attitudes towards more knowledge and theory in architecture, and describes that the intention is not to replace one type of knowledge with the other, but rather that both are needed.

That such a development does not seem to be possible, may simply depend on our seeing so little of the success of such theory; that it seems not desirable, may depend on the appearance that the intention be-

hind such theoretical development would be to replace the architect's creative work with researched norms and algorithms. This is, however, a naïve perception and again involves the confusion of different kinds of knowledge. Scientific knowledge always speaks at the level of principles or how something relates in general, while the architect's knowledge to a great degree is experimental knowledge, which identifies what to do in a specific case. (p.29)

"...no kind of knowledge can be replaced by any of the other, on the contrary, they are remarkably dependent on each other"

He continues:

This means that no kind of knowledge can be replaced by any of the other, on the contrary, they are remarkably dependent on each other. Though each individual case is unique, this does not mean that knowledge of a more general kind cannot be applied in these cases. At the same time, general knowledge cannot show us how it should be applied in the specific cases. In practice, architects always work at both these levels, as what they actually do is to apply generally applicable knowledge in a specific form in the individual case; the relevant question being how well-founded the general or theoretical knowledge actually is. Scientific knowledge thus provides support in the form of principles of knowledge when one's own experience of earlier examples no longer suffices to give the requisite answers. Responsibility for how such knowledge is later applied in the individual case rests with the architect and as always, is just where her or his skills are revealed. (p. 29)



Illustration. The difference between different types of architectural knowledge, illustrated by preparing a soup.

pseudo-science?

Marcus (2000, p. 29) describes architectural knowledge as follows: "In a sense, architectural knowledge seems to practice, at least partly, in a scientific field, but does so with undeveloped scientific theories."

This can be compared to Marshall's text *Science, pseudo-science and urban design* (2012), which explores the urban design profession and to what extent it could be said to be a science. The author describes it as follows: "the article uses the idea of pseudo-science as a lens for scrutinising what may be wrong with the scientific basis of urban design theory, and how it could be put right." (p. 258).

He examines the hypotheses underlying four classic urban design theory texts and how they have come to be interpreted and used in urban design practice. He argues that "the field as a whole adopts and absorbs knowledge that may individually be scientific, but combines and disseminates them in an unscientific way" (p. 268).

Although individual theories may be scientific, the way that the discipline as a whole treats them and uncritically incorporates them into the fabric of its own knowledge base points to it being, collectively, pseudo-scientific. (...) Here, urban design lies on a foundation of a mix of scientific and less than scientific knowledge that is combined in a way that is less than scientific but appears to be scientific, and hence is inadvertently pseudo-scientific. (p. 264)

He continues:

It is not just that often we do not know whether a particular theory or hypothesis is true or not, but that urban design does not even seem interested in its scientific validation. This is not to say that urban designers do not appreciate good evidence when it is available; rather, it seems that urban design in general does not insist that the scientific, empirical, evidential bases for its theories' underpinning assumptions are correct,

consistent and up-to-date.

Urban design seems to settle for: (i) reliance on classic treatises as a source of wisdom rather than more recent scientific findings; (ii) treating hypothetical suggestions and assertions as if facts; (iii) selectively reporting and combining originally scientific knowledge in an unscientific way; and (iv) criticising urban design theories mainly for their normative stance rather than their scientific validity. (p. 264)

ROCKET SCIENCE?

Marshall draws a parallel to rocket science and describes how arguing for the profession to be more scientific doesn't mean to abandon "designerly" knowledge.

"Cities are 'not rocket science' – they are more complex than that"

For urban design, the prerogative for being more scientific need not mean abandoning 'designerly' knowledge, and better science on its own is not going to 'solve the city'. Cities are 'not rocket science' – they are 'more complex than that'. (p. 268).

Rather, he puts it: "...as long as urban design is an academic discipline, urban design theory is surely better supported on a foundation of science than pseudo-science" (p. 268).

He adds: "Some may argue against the 'scientisation' of design, or that cities cannot be 'reduced' to scien-

tific scrutiny. However, the lack of a proper scientific grounding erodes the case for urban design being considered a properly academic subject."

He adds: "By questioning whether urban design is pseudo-scientific, the intention has not been to undermine the field from within, but to call for it to be fortified from within." (p. 268).

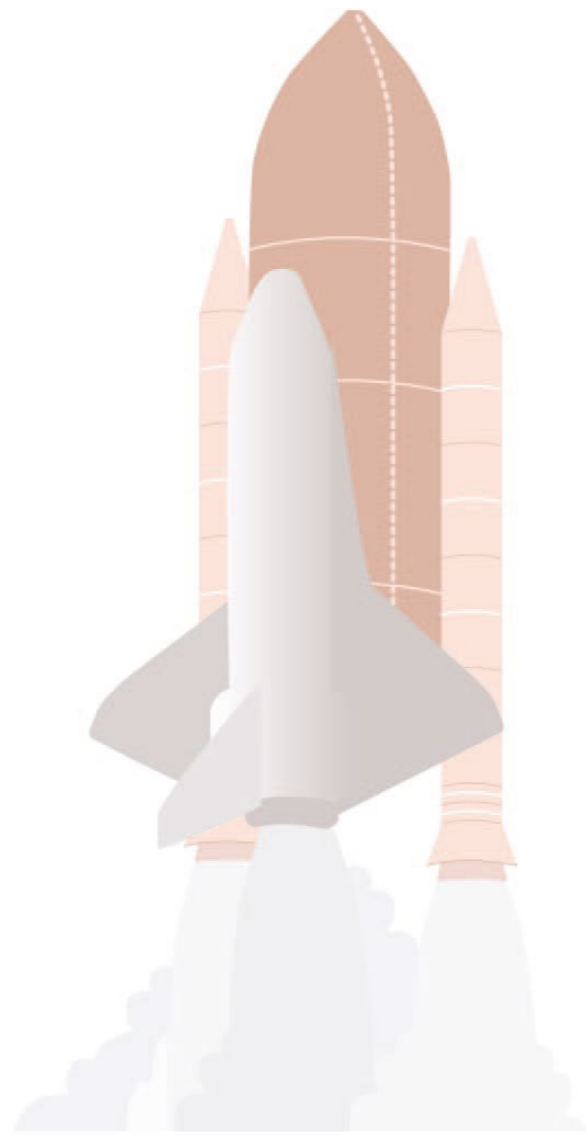


Illustration. Comparing cities with rocket science

the need for theory

In chapter two of *Space is the Machine* (2007), Hillier argues for "the need of an analytical theory of architecture" (p. 4). He argues architectural theories have increasingly borrowed ideas and concepts from other disciplines. In that way, architecture has "become part of a wider intellectual debate," but "the internal development of architecture as a discipline" has received little attention. (p.2)

He argues we do use theory within architecture without being aware of it:

Theories can be used, and often are used, tacitly or explicitly, in two quite distinct modes in the design process: as aids to the creative process of arriving at a design; and as aids to the analytic process of predicting how a particular design will work and be experienced. (...) The use of theory is of course only one way of structuring the design process. In fact few designers claim to create designs from theory, and many would go out of their way to deny it. But this does not mean that they do not design under the influence of theory. Much use of theoretical ideas in architecture is tacit rather than explicit. (2007, p. 44)

He describes a theory as follows:

The word 'theory' is used not in the common architectural sense of seeking some set of rules which, if followed, will guarantee architectural success, but in the philosophical and scientific sense that theories are the abstractions through which we understand the world. An architectural theory, as we see it, should deepen our grasp of architectural phenomena, and only subsequently and with great modesty, suggest possible principles on which to base speculation and innovation in design. (2007, p.2)

Westin (2010) describes space syntax's development and focus as follows:

This is why I turn to the theory of space syntax - a the-

ory, which developed as a critique against the arbitrariness and lack of empirical support within the discipline of architecture. Instead of focusing on symbols, on what architecture does to our eyes, space syntax is a (natural) scientific approach that investigates what architecture does to our bodies. In other words, this theory provides a new - if not revolutionary - perspective on the problem of the relation between built form and social life. (Westin, 2010, English summary).

"... theories are the abstractions through which we understand the world"

THE NEED FOR AN ANALYTICAL THEORY

Bill Hillier (2007) states that architectural theories have influenced the built environment a lot in the past century, but have not made us understand architecture much better. He describes space syntax as being an analytic theory and critiques other architectural theories, like modernism, of being dominantly normative, and generally good at generating design but lacking a deeper understanding of "the theoretical content of architecture." (p.2).

Looking back, it is easy to see that in spite of the attention paid to theory in architecture in the twentieth century, and in spite of the great influence that theories have had on our built environment, architectural theories in the last decades have in general suffered from two debilitating weaknesses. First, most have been strongly normative, and weakly analytic, in that they have been too much concerned to tell designers how buildings and environments should be, and too little concerned with how they actually are. As a result, the-

ories of architecture have influenced our built environment enormously, sometimes for good, sometimes for ill, but they have done little to advance our understanding of architecture. (p.2)

He means we need an internal theory of architecture, instead of one "based on concepts borrowing from other disciplines," (p. 2) a "truly analytic theory of architecture, that is, one which permits the investigation of the non-discursive without bias towards one or other specific non-discursive style." (p.4).

Hillier describes the risk with architectural theories which are based on illusory analytic foundations, in the sense that they do not offer a "realistic picture of how the world works" (1996, p. 45). He describes the consequences as follows:

A poorly founded analytic theory will not inhibit the designer in the creative phases of design, but it would lead him or her to look in the wrong place. It would also mean that the designer's predictions would be unlikely to be supported by events when the building is built. This is why bad theories are so dangerous in architecture. They make design appear to be much easier, while at the same time making it much less likely to be successful. This, in the last analysis, is why architects need analytically well founded theories. (Hillier, 2007, p. 45).

"If the analytic theory is wrong, then the likelihood is that the building will not realise its intention. Architectural theories, we might say, are about how the world should be, but only in the light of how it is believed to be." (p.42)

Hillier concludes the importance of an analytical theory within architecture by writing:

[O]ur interventions in the city can only be based on our understanding of the city. Where this understanding is deficient, the effects can be destructive, and this will be more the case to the degree that this false understanding is held in place by a value system. The value system according to which we have been transforming our cities over much of the past century has always appeared as a kind of urban rationality, but it was never based on the study of the city. (p. 135)

"[O]ur interventions in the city can only be based on our understanding of the city. Where this understanding is deficient, the effects can be destructive"

DIFFERENCE FROM MODERNIST THEORIES

Hillier describes the theories of modernism as follows:

"The problem was that the architectural means proposed were not the means required to achieve those objectives. The theories were weakly analytic. They did not deal with the world as it actually is. The normative dominated the analytic." (Hillier, 2007)

Hillier discusses how the "failure" of modernism in architecture has had effects on the way we view and use theory in architecture. He describes it as "seen as at least failure of a theory — the most ambitious and comprehensive ever proposed — and even by some as the failure of the very idea of a theory of architecture." (Hillier, 2007, p. 39). He describes how this led to the questioning of theories of architecture, and even "questions about architecture itself." "Does architecture really need theories, or are they just a pretentious adjunct to an essentially practical activity?" (Hillier, 2007, p. 39).

In the report *Storstäder i samverkan* (Legeby, Marcus, Berghauser Pont, Tahvilzadeh, 2015), the authors describe how "it was the architectural profession which became the main target for the strong critique which followed the typically expert driven million housing programme" (p. 21, my translation). They describe how the effects of this was that the development of expert knowledge ("sakkunskap"), like research on the design of housing areas, came to be downgraded and decreased.

In the report *Om att mäta stadsform* (Marcus,

Berghauser Pont, 2018) the authors compare the newer set of theories like space syntax to earlier ones. They mean "earlier efforts have been heavily criticised and that research in some cases did sanction mistakes." They describe that there are similarities with earlier epochs but argue that "today's research is based on a new knowledge theoretical foundation and is to a large extent sprung out of a reaction to earlier mistakes" and that the new research sees the relation between human and built environment as more complex than before (p. 2, my translation). They describe how the current research trend has "taken the earlier research's analytical approach and put it in new theoretical frameworks." This implies leaving the earlier static models regarding the relation between man and built environment and instead seeing it as a dynamic system where movement and change are central concepts. (Marcus, Berghauser Pont, 2018, p. 2).

what is urban planning?

THE IMPOSSIBLE PROFESSION?

Westin (2015) describes the inherent complexity of being an architect/planner in dealing with urban planning. She defines it as one of the impossible professions, according to Freud.

In fact, being fundamentally political, urban planning and architecture comprise one of the three professions that Freud (1976) characterised as impossible. That is, professions in which you can be sure to achieve unsatisfactory results (the other two being education and psycho-analysis).

She refers to a quote by Ivar Tengbom in 1911:

'There are so many interrelated factors to take into account that the art of city planning stands out as the most demanding of all the arts; it is the sum of all architectural experience and knowledge.' (p. 1)

She exemplifies this further by focusing on the paradoxical role of the architect/planner, as described in the coming pages.

DEFINING URBANITY

"Bygga stad" (building city) is a common phrase used in Swedish urban design practice. Urban design and planning- planning and designing the urban, can be said to revolve a lot around this a lot today. Both Westin (2015) and Marcus (2000) are sceptical of the way we go about "building the urban" today. While Westin (2015) discusses the difficulty of capturing and defining the term "urbanity," Marcus (2000) focuses on our (often failed) attempts to recreate the qualities strived for, whether they are "urban" or other.

Westin has studied the term "urbanity" closely, and discusses it in depth in her dissertation (2010). She describes that it is a concept hard to define, and above all to create. In a text for *The Journal of Space Syntax* (2015) she describes how "creating urbanity" is a common goal in Swedish urban planning and describes it as "one of the popular clichés of planning rhetoric," meaning there is "a confusion as to what the term 'urbanity' really means." She means it is widely spread both within urban planning practice and within education.

Westin uses the term "urbanity" to argue that the language of planning is often made up of "empty signifiers:"

The fact that this term is both undefined and widespread is a frequent target of criticism, but it is hardly surprising; being a fundamentally political activity, the language of planning is made up of 'empty signifiers'; that is, "comfort terms" ... meaning everything and nothing'; ideas that mean 'all things to all people.' (p. 2).

On top of being rather loosely defined, she argues "it seems that planners do not really know how to build in order to create urbanity."

She describes how different ways of creating urbanity fail when merely using symbols for it instead of a deeper understanding of what it is that makes up urbanity.

Common solutions to the problem of trying to create urbanity are to strive for density and to design buildings and public spaces so that they demonstrate a visual resemblance to the inner city. Materials and details of design are here seen as important tools in promoting an urban atmosphere. There are also attempts at renaming streets and places, to ensure that the project in question carries the word 'city'. In sum, we see here how the planners put their trust in various

symbols when trying to implement the goal of creating urbanity. (p. 2).

"...planners put their trust in various symbols when trying to implement the goal of creating urbanity"

MODERNISM IN DISGUISE

Marcus (2000) uses the example of the term "town-like" as an example of attempts to strive for qualities of the traditional urban form, (like the stone city from around the turn of the 19th century). He writes that the new urban projects around the 1980's were claiming to be a return to traditional urban form from before the modernist movement but in reality were more of a "development of functionalism." The criticism that was formulated towards this was focusing on the lack of knowledge on how to achieve the traditional qualities, and was not a criticism of the intention of trying to recreate said qualities:

In which sense did the new urban projects resemble traditional urban form; were not the differences despite everything greater than the similarities; was it not more accurate to describe this new form of urban planning and design as a development of functionalism rather than as a return to the traditional as, in many ways, it had greater similarities to the former? Thus a criticism of this new form of urban planning and design - which often was called 'town-like' in contrast to both traditionalism and functionalism - came to be formulated. It was a criticism that above all stressed that this new form of urban planning and design was not what it was said to be, namely a revival of traditional urban form and its qualities, but it hardly regarded the intention as such as being at fault. We can thus say that the criticism was not concerned with whether one should strive for one or the other, but was clearly deeper; as it focused on the obvious lack of knowledge of

how to achieve the one or the other. Subsequently one characterise the criticism of knowledge rather than as ideological criticism. (p. 37).

He continues:

The core of this criticism is that 'town-like' appears to be a superficial copy which in practice continued to work in the functionalist tradition and thus was far from successful in recreating the qualities to be found in traditional urban milieus. The criticism thus shared the opinion that a marked difference exists between traditional and functionalist urban form, but had a different idea of where the boundaries between these categories lie, and of what the differences between them actually consist. According to the criticism, the problem was that advocates of the 'town-like' had conducted too superficial an analysis of traditional urban form to be able to identify what created the specific qualities in it, which in turn led to one not being able to recreate these qualities in the new urban development projects that were implemented. (p. 38).

THE CITY AS A SYSTEM

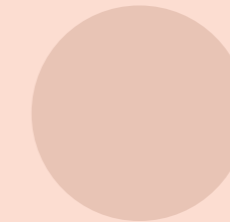
In an article, *Är det verkligen kvartersstad vi vill ha?*, by Spatial Morphology Group at Chalmers University of Technology for the magazine *Plan* (2016) the authors describe that the way the modernists planned the city still lives on to some extent in practice today. The authors argue it "leads to a very confused discussion on perimeter block city ("kvartersstad") - the word itself leads the thought in the wrong direction. The thinking of modernism is simply living on both in the way we think about flow and location."

They describe that in the same way the modernists placed out buildings in the landscape, blocks are now placed as either complements to existing open buildings or in new grid patterns. They describe that the qualities often sought after by doing this are the lively streets often found in the traditional block city, but mean that in both cases there's a lack of understanding for the fact that it was the overall street structure that was crucial for creating the lively streets.

urbanity for me



I think it is important to be fascinated by what you do, to have a personal connection to one's subject, to be able to say: "This reminds me of..." What is urbanity for you?



Övergångsstället

Isblåst mot ögonen och solarna dansar
i tårarnas kaleidoskop när jag korsar
gatan som följt mig så länge, gatan
där grönlandssommaren lyser ur pölarna.

Omkring mig svärmar gatans hela kraft
som ingenting minns och ingenting vill.
I marken djupt under trafiken väntar
den ofödda skogen stilla i tusen år.

Jag får den idén att gatan ser mig.
Dess blick är så skum att solen själv
blir ett grått nystan i en svart rymd.
Men just nu lyser jag! Gatan ser mig.

Tomas Tranströmer ur Sanningsbarriären 1978

CONFUSION MEANS - ENDS

The report *Genomlysning Av Planförslag till Frihamnen Framtagna i Kunskapsresan* by Spatial Morphology Group at Chalmers University of Technology (2018) is an evaluation using space syntax methodology of four plan proposals for Frihamnen, an urban development area in central Gothenburg. In the report, the authors describe how it is not uncommon in urban planning documents that means are confused with ends at an early stage. The example, the goals of the River City Vision ("hela staden, möta vattnet, stärka kärnan") can in Swedish be interpreted as both social and spatial goals. The authors argue for the importance of not drawing to quick conclusions of the relation between spatial solutions and social goals, using the example of density. "A dense city" is something that is often sought after today, but it is quite clear that the densely built city is not the goal in itself but rather urban life or "buzz" with many people ("ett rikt folkliv"). Although it can easily be assumed, building density does not equal urban buzz. The authors describe "urban design" ("stadsbyggnad") as a means that with the help of built form and spatial structure tries to fulfil societal goals" (p. 8, my translation).

In the report, the authors break down the overall goals of the River City Vision into five more concrete goals to be able to evaluate the plan proposals in relation to. They then pedagogically give examples of how these goals can be interpreted in different ways, and motivate why they chose one interpretation over another. For example: "strengthening the core" could be interpreted as i) the city's central parts concentrically growing over the rest of the city with a continuously high density, ii) that Gothenburg shall be composed of a multi-core landscape of connected nodes or iii) that the core is strengthened by a network of main paths that reach far out of the city (p. 9). The authors describe that because of the repeated references to the central parts of Gothenburg they perceive the last goal as the one sought after.

With this transparent and pedagogic exercise the authors highlight the importance of knowing what you want, and what you mean with the terms used as goals and visions.

The point they are making is that if visions are unclear and can be interpreted in different ways (which is often the case), then the analysis can't really say much. To be able to evaluate something, like a plan proposal, it needs to be evaluated in relation to a social goal, interpreted into a spatial one.

who is the architect?

DIFFERENCES

In the report *Storstäder i samverkan* (Legeby et al, 2015) the authors discuss how the role of the architect and planner have developed over time and how the roles have changed. They describe the co-existence of two professions, the architect and the planner, within the practice of urban design and mean they have common roots but have over time developed different profiles, which could lead to some uncertainty regarding their identity. They describe the architect as part of a long history while the planner was sprung out of the architect but focusing on a larger scale. They describe them as having different focus and explain how the architectural competence came to be associated with the physical plan and the spatial delimitation, the "product," while the planning competence became more characterised by focusing on the process leading up to it.

The authors describe how the profession as a whole has changed since around the 1960's, from an "expert based profession" with an instrumental view towards a profession with more focus on the process around the 1980's. (p. 20). They describe a distinction between "procedural" and "substantive" knowledge and describe the former as coming more into focus, where including citizens in the planning process is one example. The authors describe the "communicative planning paradigm" where local knowledge and experience was seen as equivalent to expert knowledge. (p. 20).

The authors then pose the question on whether the focus on the planning process and procedural knowledge during recent years has overshadowed the substantive knowledge within urban design and planning. They describe how the development of substantive knowledge came to be downgraded after the critique of the modernism movement and mean a "re-definition of the architectural expertise on a deeper level was taking place during the 1980's which in simple terms meant moving away from the role as a social engineer towards a more

free artistic role." (p. 21, my translation).

The authors describe the planning profession as having become a "strong planning profession with responsibility to drive an attentive process which takes into account a diversity of interests with a wide range of parties, where a central element also is to make sure necessary inquiries ("utredningar") and knowledge input are made" (Legeby et al., 2015b, p. 21, my translation). But they also question whether it is possible to maintain an expertise within the many subjects that the profession has come to deal with. They describe some planning educations as leading towards a "partly new planning role where the responsibility for an efficient and legitimate planning process is central and where the role to a large extent is about mediating different interests, sometimes known as power broking" (p. 21, my translation).

The different focus of the planner and the architect can be recognised by Hillier (2007), even though he describes it as the relation between planners and urban designers. He means there is a divide that has developed in the last quarter century between planners and urban designers where planners are "preoccupied with analysis and control of the social and economic processes which animate the city" while urban designer are "concerned with physical and spatial synthesis in the city." He calls this a "disciplinary apartheid" which has the effect that abilities to analyse urban function and conceptualise design are not found in the same profession. He also means it results in a scale gap, where the whole city scale is not properly dealt with on any level:

There is now a deep split between those who are preoccupied with analysis and control of the social and economic processes which animate the city, and who for the most part call themselves planners, and those concerned with physical and spatial synthesis in the city, who call themselves urban designers. This split is now, in effect, a split between understanding and de-

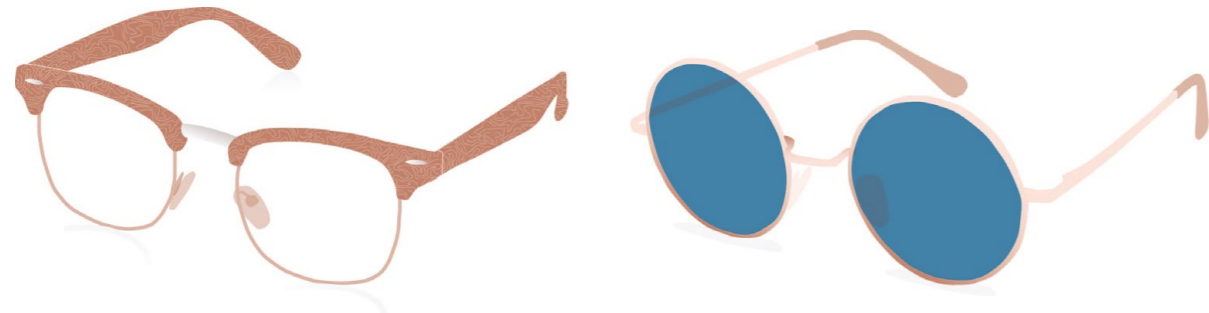


Illustration. Sunglasses symbolising different views on the architectural profession. From the "expert glasses" of the social engineering modernists towards

a more humble listening role focused on a just process taking in different perspectives originating around the 1980's.

"...moving away from the role as a social engineer towards a more free artistic role"

sign, between thought and action. From the point of view of our ability to act on the city, there are two consequences. The first is a form-function gap: those who analyse urban function cannot conceptualise design, while those who can conceptualise design guess about function. The second is a scale gap. Planning begins with the region, deals reasonably with the 'functional city', that is, the city and its 'dependences' (as the French say of outlying buildings) but barely gets to the urban area in which we live. Urban design begins with a group of buildings, gets to the urban area, but hesitates at the whole city for fear of repeating the errors of the past when whole city design meant over-orderly towns which never quite became places. Neither applies itself to our need to understand the city as a spatial and functional whole. (p. 111)

SIMILARITIES

Throughout her dissertation, Westin (2010) shifts between using the term architect and planner, and clar-

ifies that she defines them as more or less one profession. Her focus is not on the differences between architect and planner but rather on the differences between architect/planner and others. She defines architects and planners as "persons who on scientific or artistic grounds are deemed by the society to have the ability to judge how the city or parts of the city should be shaped." (p. 27, my translation). She uses a similar wide definition of architectural knowledge as Marcus (2000, p. 7): "a certain disposition in individuals to look at things, or design things, or even formulate questions on things, in a way that differs from other individuals."

ARCHITECT - FLANEUR

Westin views the architect/planner as part of a "thought collective" and bearers of a certain way of thinking. She defines it as something developed over time and by several generations with bearing on how individuals act and think (p. 28). She means this thought collective is shaped during the education, and that architects/planners as trained in a way of thinking about the city and urbanity behave differently from the way someone who is not an "expert" in that sense, does. She puts the architect in contrast to the flaneur, someone who experiences and "lives" the city, while architecture is a mainly visual, observing activity. She described the flaneur as someone who, like herself at the time of writing, seeks the pulse and the vibrancy of the city.

She lets the "eye of the architect" and the "body of the flaneur" symbolise the duality between architect/planner and others. She means that this duality is also found within planners and architects, taking the shape of paradoxes between their professional and their private role. She uses a perspectivistic world view and shines in on the knowledge of architects and planners. She means that we are not aware of this duality, but that it is manifested in our built environment. "Planners say one thing and do the opposite."

She uses an example from Jane Jacobs describing her friend planner who, in his role as an urban planner wants an area to be rejuvenated. But in his private role, as a friend of Jacobs, he admits that he himself visits this neighbourhood and quite enjoys it "in the sun."

She refers to Jacobs critique of the New Urbanism wanting to recreate the traditional, European and lively urban block city. But the urban environments this ideology have lead to Jacobs refers to hopelessly suburban and says: "They only create what they say they hate." (p. 176)

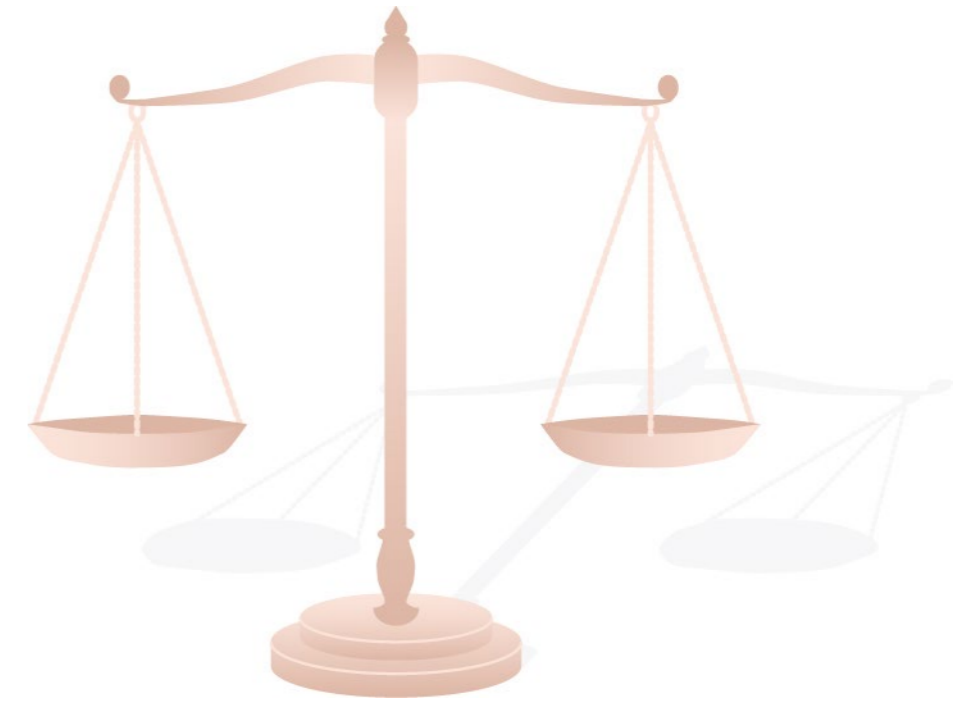
THE POWER OF THE ARCHITECT

Westin (2010) argues architects and planners are fostered into a way of thinking that relies on an objective view on knowledge, whose role is to be neutral and rational. Westin questions, or rather affirmatively argues, that this is never possible. She emphasises the power relation between the planner and the flaneur, and the responsibility that comes with it. She questions the categorisation of urban planners as "neutral experts" and argues many Swedish planners view themselves as such. (p. 26). She writes: "to claim one's neutrality as an urban planner is to claim that one is a passive object that has been imputed a professional role." (p. 37).



Illustration. Westin discusses perspectivism, the notion that what you see depends on where you stand, your glasses are coloured by your perspective.

what is the framework?



The Swedish planning process is described by Boverket, The National Board of Housing, Building and Planning.

On their website (2019) they define physical planning as " a matter of deciding how land and water areas are to be used." They describe one needs to follow the Planning and Building Act (Plan- och bygglagen, PBL) where "different public interests must be weighed against each other in an open and democratic process, taking into account the rights of individuals."

They further add that according to the Planning and Building Act, "the Swedish planning system consists of the regional plan, the comprehensive plan, the area regulations and the detailed development plan."

"...different public interests must be weighed against each other in an open and democratic process, taking into account the rights of individuals"

LEGAL DIFFERENCES

The National Board for Housing, Building and Planning (2019) write that contrary to development plans, comprehensive plans are not legally binding documents but "can be seen as indicating the overall direction of the municipality over a significant time period

CHAPTER 4

the process: the planning process

In this chapter I present the legal framework of the planning process, with definitions of the different legal documents within comprehensive and development planning, as well as describe the municipal plan monopoly we have in Sweden.

and as guidance in the development of the detailed development plan and in the permit granting process."

MUNICIPAL PLAN MONOPOLY

Regarding the role of the municipality The National Board for Housing, Building and Planning write that in Sweden, "the municipalities have the main responsibility for planning." They mean that the municipality has several roles, both as an authority but also as a property owner.

They write:

The municipalities are responsible for the planning of land and water areas within their geographical boundaries. It is only the municipality that has the authority to adopt plans and decide whether the planning is to be implemented or not.

POLITICAL ORGANISATION

Regarding the political organisation, The National Board of Housing, Building and Planning state:

Every municipality must have a local building committee. The local building committee is a local authority committee consisting of elected representatives. The committee has an administration with public officials to assist it. The local building committee decides on permits, preliminary decisions, start decisions and completion decisions, and handles the other phases in the building process. The local building committee is also responsible for supervision to ensure compliance with the planning and building legislation.

COMPREHENSIVE PLANNING

They define comprehensive planning as follows:

The municipality must have a current comprehensive plan that covers the entire area of the municipality. In the comprehensive plan, the municipality must present the basic characteristics of its intended use of land and water areas; how the built environment is to be used, developed and preserved; what consideration is to be given to public interests; and what the intention is regarding how national interests and environmental quality standards are to be served. The plan must also indicate how the municipality intends to take into account national and regional goals, plans, and programmes of significance for sustainable development within the municipality.

They further write that in the comprehensive plan different public interests are weighed against each other, and since one does not take into account private interests, the plan can not be appealed against.

They write that the comprehensive plan has an important role as a goal document and path finder towards a more sustainable future (my translation). The contents of a comprehensive plan are not legally defined, but the National Board of Housing, Building and Planning give advice on "a process methodology for working with sustainable development" with examples from different municipalities "working sustainably in their comprehensive planning."

DEVELOPMENT PLANNING

The National Board of Housing, Building and Planning describe the development plan as "the plan with binding rights and obligations."

A detailed development plan enables the municipality to regulate the use of land and water areas and what the built environment is to look like in a particular area. Detailed development plans are generally prepared when new construction is to be carried out in a dense area and often encompasses one or several city blocks. The detailed development plan regulates what are public spaces, development districts and water areas, and how they are to be used and designed.

"...the comprehensive plan can be seen as indicating the overall direction of the municipality"

A detailed development plan may regulate development in more detail – for example, where new buildings must or may be placed, how large or tall they may be, how much distance there must be between a building and the site boundary (...)

They describe the process of development planning as usually initiated by a property owner or developer, in the form of a request for a planning decision. They write that "the municipality is always responsible for the formal part of the planning work" but that "the developer can be assigned the responsibility for necessary studies and documentation." The municipality then "proposes a detailed development plan based on the idea from the developer."

They write that during the process, affected stakeholders are given the opportunity to comment on the plan proposal. All comments received are then "compiled and responded to in a document, the review statement."

USE OF SPACE SYNTAX

A common use of space syntax analyses in the planning process is via municipalities contracting consultants. The analysis is then made as an investigation ("utredning) among others via a procurement ("upphandling"). Interview person 5, "the strategic planner" mention the juridical difficulties with this form of knowledge transfer, described in the coming chapters.

The analysis is in this situation used as an input that comes at a specific time in the process, answering one specific question relating to how the plan structure is at that moment. This input can then be used as a basis for changing the plan.

SPACE SYNTAX IN DEVELOPMENT PLANNING

In the text *Om att mäta stadsform* (Marcus, Berghauer-Pont, 2018) the authors describe the importance of having the type of knowledge that space syntax offers in the planning process. Especially in development planning, since exploitation levels and land use to a large extent is determined in development plans.

They write that the typical goal to develop new neighbourhoods with active ground floors "a little bit everywhere" is unrealistic and there's a risk of wrongful investments and empty ground floors. They describe the importance of prescribing activities when the conditions for them really are there, but also having an understanding for the fact that one can create said conditions through the shaping of the street network. (p. 21, my translation).

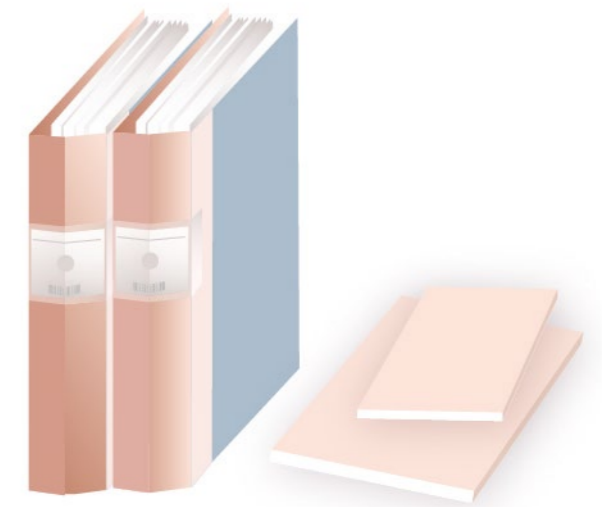


Illustration. The legal documents of the planning process affect the use of space syntax.

need for an early binding structure

THE NEED FOR A BINDING STRUCTURE

Many of my interview subjects discuss the current legal framework from the Planning and Building Act that makes it difficult to work in a particular way or scale that is desirable.

Interview person 1, “the consultant” (personal communication, February 12th, 2019) who is an urban planner working with space syntax, means he uses space syntax almost exclusively in one type of scale, a neighbourhood plan, (“stadsdelsplan”), in for example in depth comprehensive plans or input to programs. “We are at a stage in planning where we are building rather large new neighbourhoods.” He argues for the need to work with the urban structure early in the process of a new area, before the plan is “set.”

That’s the thing, in an early stage you can change the structure, and that’s where the space syntax analyses of course are put to best use because it is a laboratory tool. If the structure is already set the space syntax analyses become interesting because you could see how the different space have different potential, but it’s of course most interesting if you experiment with the structure.

To argue for the need of an overall structuring plan that is set early between several plans or urban areas he uses the example of Frihamnen and Backaplan in Gothenburg.

It would be so nice if one at a very early stage could just decide on these main paths and not sit and fine-tune, like, what the buildings should look like. Rather put all focus on what the main streets between these areas should be and do everything to make them remain there, and then solve all the other things after. But from my perspective I didn’t feel it was prioritised.

He adds: “That’s why it never really works, because you don’t have a cohesive structure.” “For me these are

really important, central questions that everything else has to organise around.” He continues:

If I had been project leader I would have ordered a great consultant investigation and tried to establish it in both The Traffic Department and The Urban Planning Department, just these central connections, and focused on them. What is needed for use to make them happen?

"For me these are really important, central questions that everything else has to organise around"

He has an interesting and in true Gothenburg sense striking metaphor between an overall binding structure and a boat held by its tamps:

This boat, it has been sitting untied in its boat harbour. It should have been tied up properly, connected to its tamps so that it could somehow resist... because when there are storms and other things coming it just floats around. It would have been clearer if we had identified: these are the connections we really need to work with. They are so central and important. I’m thinking it shouldn’t be impossible at all.

"The consultant" directs criticism towards putting focus and above all money on the “wrong things” like “giant workshops with consultants from all over Europe” instead of working on “identifying central connections” and daring to be concrete.

It is a scale level that is missing, that in turns demands a lot of investigation to be able to become realised, because the traffic situations are very complicated among

CHAPTER 5

views on the planning process

This chapter describes the opinions of some of my interview subjects on in what way the framework of the planning process affects the use of space syntax.

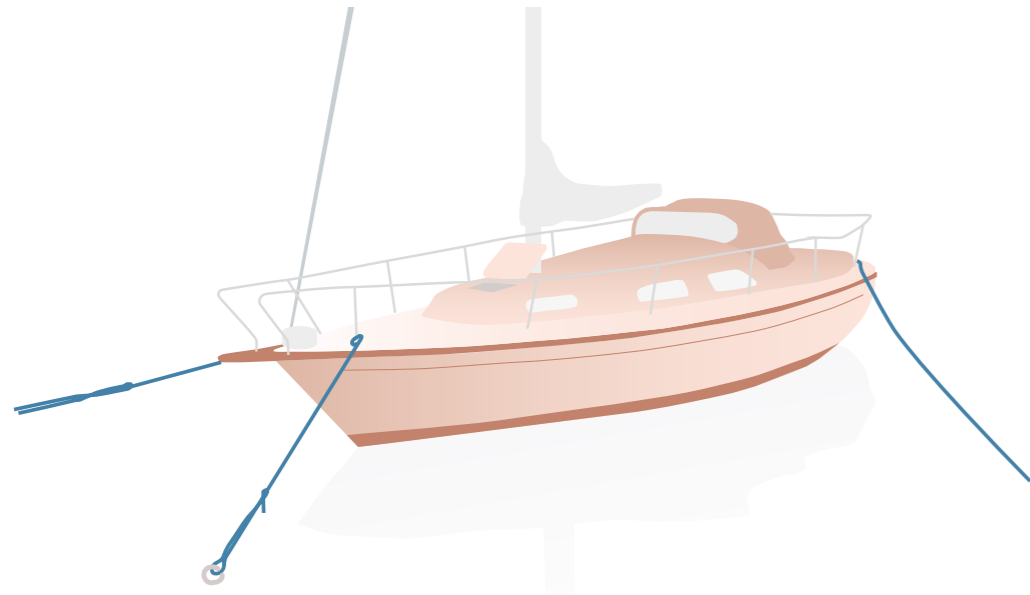


Illustration. An early binding structural plan with strategic connections could be symbolised by a boat

held by its tamps to withstand coming storms and turbulence.

"This boat, it has been sitting untied in its boat harbour. It should have been tied up properly, connected to its tamps"

other things. For that reason exactly one should investigate it instead of coming five years later and just realise that it's not going to work.

He says:

This is an urban structure that is to connect the future inner city in Gothenburg that is to grow in size four times and will be there and work during hundreds of years, then I mean it's SO central, and that hasn't really been understood. I stand by what I'm saying.

He sums up the importance of using space syntax as a tool within strategic planning as follows: "If you're serious with the goals in the comprehensive plan, and the goals are about building a more cohesive city, then

I think there are few other analysis tools that are better than spatial integration analysis."

He continues in saying that it is ultimately the responsibility of the municipality which is in charge of the public domain:

Spatial integration relates to the pedestrian network which is a public domain that the municipality is responsible for. So it is a municipal responsibility to make sure that what we build in a way increases the integration. It doesn't have to imply every space should be well integrated but if you're serious then all meaningful plans should be put in and evaluated, and the model should be kept updated.

need for being concrete

Interview person 2, "the politician" (personal communication, February 19th, 2019), is rather critical towards the strategic planning in Gothenburg today, meaning we "barely" have a strategic planning at all:

Space syntax could theoretically be a pillar stone in a truly meaningful strategic planning, if we had a strategic planning that actually filled its purpose in a way. But we don't, what we have instead is like an endless giant conference where people go on and have meetings and talk in different constellations without getting anything done.

"Space syntax could theoretically be a pillar stone in a truly meaningful strategic planning, if we had a strategic planning that actually filled its purpose in a way"

He means the reasons for this is that we haven't needed comprehensive planning since post-modernism, partly because of many people moving out of the city during the 70's and 80's, meaning there wasn't so much urban development.

He means the architectural education after the modernism backlash mostly became "sitting and holding hands with people and talking about their unique life stories," which he describes as "useless." He means that during this time, the architectural profession moved away from master plans, describing them as "dangerous:"

You shouldn't come in with horned glasses anymore

and line everything up and have great plans, no no. You are to talk to people, everything should be small scale, none of these large things. And that works perfectly fine for 30 years when you don't have to build anything. But then it leads to problems, and that's where we are now.



Illustration. The "horned" glasses of modernist architects and planners.

He discusses the way the modernist planned and means it was a functioning strategic planning, that actually carried through all the way to the implementation. He describes it as "they managed with what they wanted, but what they wanted wasn't really what we thought."

In his view, the development plans are structuring in today's planning process. "I mean we have a strategic planning but it's completely meaningless [...] the practical planning is completely 'postage stamp planning' ('frimärksplanering')." He further argues for the need of a city plan, like in the 19th century. In that way, he means the municipality could be more proactive when investors come wanting to build.

"The politician" is critical towards the lack of con-

creteness in the comprehensive plans. He critiques architects and planners for not drawing, only writing and discussing and adding "some colour stains."

To the question on whose responsibility it is to have a better strategic planning, "the politician" means it's the responsibility of the politicians: "It is a political problem in the end, a political responsibility to make sure the civil servants can do something that makes sense, instead of just sitting and having meaningless meetings."

"It is a political problem in the end, a political responsibility to make sure the civil servants can do something that makes sense, instead of just sitting and having meaningless meetings"

In his view, most planners have a vaguely positive view of space syntax but see it more as one input out of (very) many since they have so many perspectives to consider. He means it should be higher up in their priority list and come before everything else:

"If you ask them about space syntax they will say: yes, it's really important, but if you ask them about solar panels or sedum roofs they will also say it's really important. And the question then is: on this priority list, where does it go?"

"The politician" uses the term "cognitive dissonance" or "cognitive schizophrenia" to describe some architects or planners who seem to agree when talking about space syntax and the importance of connecting certain paths for example, but then do something "completely different" when drawing plans or getting into detail.

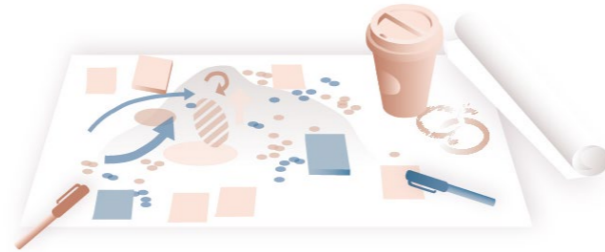


Illustration. The "endless workshops" and "colour stains" of the strategic planning, as described by "the politician."

And what's funny is that all the planners completely agree about this in the 'talking world,' that's no problem, they can absolutely agree with that, on this general level. But as soon as something concrete is to be done in reality... There's always some damn reason to why this, that everyone is one hundred percent on terms with in the talking world, is impossible to do at that very time.

He adds:

Sure, when you're busy with your in depth comprehensive plan and you're all sitting in this lovely group hug in the pillow room, maybe then you philosophise about that sort of thing, but when you are immersed and working concrete with a damn project and you sit with an angry investor, then you don't think about how all this will come together.

organisational issues

Many of my interview subjects describe the different organisational, juridical, bureaucratic and political issues with the urban planning process in general. Especially "the politician" (February 19th, 2019) points this out several times during our interview. He described these issues specifically relating to not being able to have a successful strategic planning that enables "good ideas" like an overall urban structure early in the process, helped by space syntax methodology. "The problem is these institutional preconditions that mean regardless of how enlightened you are, none of this will ever become reality [laughter]."

He continues:

There are these concrete obstacles: administrative, political, juridical, economic and financial to making these good preconditions and ideas happen. And that has to do with the very process and the logistics if you will, surrounding societal planning. Since it looks like this it is more difficult. If it had worked like in the 19th century it would have been easier.

"The problem is these institutional preconditions that mean regardless of how enlightened you are none of this will ever become reality"

parallel processes



DIFFERENT INTERESTS

A reality in many major projects at a municipal Urban Planning Department is several projects relating to the same geographical area being developed at the same time. For example a comprehensive plan, a program and several development plans undergoing parallel processes.

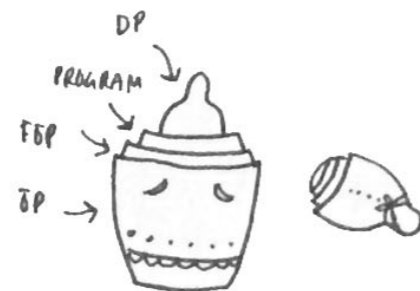
Interview person 5, “the strategic planner” (personal communication, March 5th, 2019) who is a civil servant working with comprehensive planning, as well as other interview subjects, point out that it can’t happen in any other way.

”And that’s the way it has to be in a city, in a way. You can’t say: ’now we’re starting the work with a comprehensive plan, let’s put all the other work on hold [laughter] . It’s not possible, so it has to happen at the same time.”

“The strategic planner” describes this situation as setting higher demands for cooperation between the different projects and scale levels, within the internal organisation. He points out the possible conflicts, where for example placing housing in a development plan in a way could make difficult important strategic structures.

He further describes how the comprehensive planning and development plans naturally have different driving forces, where the planning department’s economy is dependent on the production of development plans and have to deal with the pressure to produce more plans because of the housing shortage.

This problem is also discussed by interview person 6, “the spatial planner,” (personal communication March 7th, 2019), working with programs and development plans. She means the development plans have a shorter time span and higher level of detail and if the strategic planning happening simultaneously doesn’t “catch up,” there’s a risk of the development plans “becoming governing.”



static relationship

CONSULTANT-CIVIL SERVANT

As described in the previous chapter, the perhaps most common way to use space syntax analyses in the planning process is via consultants in a procurement (“up-handling”). “The strategic planner” (personal communication, March 5th, 2019) describes the difficulties of making a successful procurement in this rather static relationship between civil servant and “expert”. He expresses a wish for having the kind of competence in a colleague, to be able to discuss the way to (at least) phrase the questions so that the answers can be relevant and helpful. But when the person with the competence is a consultant (who costs money) the process becomes more complex, and there’s not as much room for discussions within that framework. He describes the difficulty of asking a question that needs to be rather specific, when it is often hard to foresee what will happen in complex processes, where new questions arise along the way.

“I don’t understand how I in a cost-efficient way could get it into the system”

If you could understand the issue very well and phrase the question in a very good manner, the risk of the economy and the money ’running off’ decreases. If I were to ask the question I guarantee it would be a really ’fuzzy’ question on something that I didn’t know could be answered or not. So it would be difficult. And therein lies a big part of my hesitation towards space syntax, not because I don’t believe in the method- because I would like to use it - but I don’t understand how I in a cost-efficient way could get it into the system, if I didn’t have a colleague who I really trusted who could phrase the question in a proper way and who understood the issue.

architect - planner

Some of the people I've interviewed make distinctions between architects and planners when talking about space syntax and the urban planning profession. In this section I will discuss the critique of the lack of evidence-base among mainly architects. "The politician" could be interpreted as having a view of some architects as "artists" in the sense of basing decisions on "feeling" rather than "evidence."

CONTEXTUALISM/FEELING

"The politician" (personal communication, February 19th, 2019) who is a politician interested in urban planning is quite enthusiastic towards space syntax and criticises the lack of "evidence-base" and quantifiable knowledge within the architecture profession. He describes himself as being "very critical towards the contextualism that is predominant in planning circles" using as example *genius loci*, "the sense of place", basing decisions on "feeling" and listening too much to the opinions of citizens.

He continues:

"I am extremely critical towards this contextualism that is very predominant in Swedish planning circles. With *genius loci* and everything, like: 'Oh, now we need to analyse this amazing feeling, and this unique... like, who are these people here, what are their thoughts and dreams, we need to talk to them.'"

He says he has a hard time to trust someone's feeling as a politician.

But that's the way Swedish urban planning is to a very, very, very large extent, that's what you learn, as an architect, that it's about building up a feeling somehow for things, where you just feel... What is that, what should I do with that? I can't do anything with that [laughter]. How is anyone else supposed to receive

that? The only way to receive it is through just accepting what you say: yes, you're an architect, I trust in your feeling. And that must be the worst way of all, right? That's what I feel anyway.

"The politician" steers the discussion into typology when we talk about space syntax. For example he suggests "the context" could be used as an excuse by civil servants to produce modernistic freestanding tower blocks buildings ("punkthus") instead of perimeter blocks. He means this would be partly because it is the way it's been done before and because it is what the contractors wants.

"I am very critical towards this contextualism that is very predominant in Swedish planning circles"

"And you're ready to say anything as an argument to not have to do it, and often the context is used somehow (...) So that wherever you are, the answer is some type of standard modernist tower block building ("punkthus")."

"The politician" has a very positive attitude towards space syntax, and talks about it in the sense of quantification and evidence-based knowledge in general. In his view, some architects feel threatened by quantification because it could "replace them and their knowledge." He adds, a bit jokingly, that this is a correct attitude to have:

I think you understand, on a subconscious level, that if this quantification that space syntax relates to and the actual evidence-based urban planning has a break-

CHAPTER 6

views on the profession

This chapter describes views on the profession and towards the use of space syntax. I've chosen to organise them as a set of relations between different roles within urban planning, and let my interview subjects describe their views on their roles and the use of space syntax.

through, what you're going to need then is a couple of space syntax people, a few economists, some lawyers and then some planning maybe. But you won't need people who like, 'feel what the spirit of the place wants.' And I think that's what you're afraid of. Because that's what you've been taught.

When I ask him to clarify what he means by replacing architects with "space syntax people" he means it is a question on how you view urban planning. He argues the urban planning process could be made less complicated and would then require much less people.

He uses the example of the master plan of New York City, that one could think required a lot of people but in his view only required the "right people:" "To create a city plan for example, you need the right people maybe, but you don't need a lot of people." He continues:

"The thing is, if you make the task complicated enough you will need an incredible amount of architects who will need to discuss it in eternity, yes. The simpler you make the task, the less work force it needs, basically."

"You can make the task easier for yourself, if you deal with the right things on the right level"

He adds:

It is an incredibly intense, labour intense planning process we have today because we need highly educated people, very competent and capable people, many of whom sit for YEARS twisting and turning to create ONE damn house. And it's like, yes, a process like that of course requires a lot of people. But that's because the task is made so incredibly complicated and difficult. You can make the task easier for yourself, if you deal with the right things on the right level.

The lack of evidence-base within architecture and urban planning is also expressed by "the consultant"

"Because urban environments and urban form have such a big significance in our lives, it's very strange that it isn't explored in the same way as many other phenomena"

(personal communication, February 12th, 2019). "Because urban environment and urban form have such a big significance in our lives, it is very strange that it is not explored in the same way as many other phenomena."

"The consultant" describes space syntax as an attempt to "bring in a form of objectivity to the urban planning discussion." He means it is "very problematic" that some people, for example architects, can "claim certain things without having to prove it." In his view, this can cause frustration with many planners who feel the result in a plan for example doesn't relate to what is being said. They might look at the plans presented and say:

Oh my god, this has nothing to do with what they say. This is something else. It might be great for the investors, but it won't integrate the city at all. And then I think one feels there's a need for this type of quantification tool that has some form of basis in research and lets one 'de-code' these plans, and their functional outcome.

"The consultant" describes a criticism that can be found towards space syntax and quantification in general. He means that when the consulting firm started the criticism was found above all among "artistic architects" whom he describes as letting "the aesthetics in the plan shape rule, and flows and other things come second" and being unwilling to "let someone else come in with a tool telling you you're wrong." He describes a criticism found today as some people thinking quantification is very hard and governing: "Are we really sure these quantification analyses really capture the experience, which is so great and complex and difficult?"

civil servant - expert

INTERPRETING ANALYSES

"The consultant" (personal communication, February 12th, 2019), who is a space syntax expert in this sense, talks about the importance of being pedagogic when presenting analyses to contractors (most commonly civil servants). He describes how the consulting firm where he works has moved away from showing actual analysis (for example integration analyses) to contractors and moved towards showing conclusions from them, summarising them in text and making illustrations. He means the maps are powerful and says that when they show an integration analysis, it needs a lot of explaining and often leads to a simplified discussion about good or bad (red = good, blue = bad).

"It is completely pointless to deliver just a map with integration results to someone. It is like, some sorts of file with raw data if you compare to another analysis tool."

He argues that because the consulting firm has knowledge of the municipal processes, they can translate

"It is completely pointless to deliver just a map with integration results to someone"

the expert knowledge into something relevant in the context of the contractor. He adds that showing all the data from an analysis doesn't "automatically give the municipality valuable input for future planning, you have to summarise the analysis, the essence of what we've found." He means that within research it's more important to account for everything you've done, and says there could be a risk of "focusing on things that the planning practice isn't primarily interested in."

He describes how their contractors trust them in having expert knowledge and drawing conclusions and reflects on how this could make it easy to manipulate results if one would want to (of course not implying they would). "They have to trust us, that we do the analysis correctly, that we know about the delimitations of the method."

Regarding the competence being more wide-spread or had in-house at municipalities "the consultant" sees no issue with this. He mentions his office has helped other municipalities in drawing axial maps for example and sees no problem in sharing that knowledge. However he adds that apart from drawing, there needs to be someone who can interpret the analysis, "otherwise they are only useful in theory." He means the consulting firm have built up a long experience of working in different sized cities and formed a way of drawing axial maps (for example principles when drawing crossings) that they think is credible. The drawing of axial maps is not meant to be a secret, however the interpretation of the analysis is what they are selling:

"Sure, we are the ones who have by far most experience of it and we are happy to sell our interpretations but the actual method of drawing them shouldn't be a secret."

KNOWING WHAT YOU WANT

Interview person 3, "the researcher" (personal communication, February 28th, 2019), who is both a researcher and practitioner describes the dangers in drawing too quick conclusions or believing the analysis gives answers in terms of "good" or "bad."

"I think it's important to point out that it's not a normative theory, I appreciate this analytical, generative side. Like Bill Hillier argues, it's something to think *with*,

and not of.” She argues that knowledge about the theory helps you understand the effects of certain layouts or design proposals more intuitively.

She continues:

”It’s a theory that helps you understand the city, understand why things function the way they do.” ”If I can understand the spatial conditions better I can change those conditions, or simply accept them in the urban design practice.”

When I ask her about possible ways of using the method in a ”bad” way she describes the importance of interpreting the analyses in relation to how goals are formulated. She describes it as ”rather problematic” if one draws conclusions from an analysis if the ”input parameters cannot answer the question posed.” She continues: ”It is also problematic if people do simplifications and argue that it is only about pedestrian flow.” She means the analyses must always be evaluated in relation to aims and objectives.

So if you don't know where you are going, space syntax doesn't say anything. It reveals the configurational properties of urban spaces and what kind of conditions they provide. But if you don't know if you are aiming for a climate smart or climate "un-smart" city, you can't really make much out of it.

She continues:

”There is no 'right' or 'wrong' in the analysis itself in that sense, so it is super important that it is understood in relation to: What do we want with the city? and What do we want with the urban design and planning?”

She argues it is not specific to space syntax being a method that needs knowledge to be able to make interpretations of analyses or values. She uses a parallel example of density, which is not useful to evaluate without its context.

You need to know quite a lot about density to be able to say if 2.0 or 1.0 is relevant. For what purpose? What are we going to solve? It is exactly the same. And it tells us something, but we need to understand it in an urban design context. Is 2.0 high or low? It depends, where we are and in which... If we were to make a new

area that has a low density, then it would be perceived as very dense even if it would be only 1.5. But 1.5 in another context can suddenly be perceived as a pause in a dense area. We need to know what we want, before it can tell us anything.

"So if you don't know where you are going, space syntax doesn't say anything"

This attitude is also found in “the social scientist” (personal communication, March 1st, 2019), a human geographer, who describes space syntax analyses as follows:

”It is a tool, it can’t tell us where we are going. It can tell us how to reach certain parts in the planning process, but it can’t really say... or put a stamp on the planning of an area: ’this is good.’”

COMBINING INPUTS

Many of the people I interview repeatedly point out that space syntax is something that should not be used in isolation, but rather as a complementary tool used in combination with other methods.

“The consultant” (personal communication, February 12th, 2019) describes space syntax as ”one tool of many in the toolbox” of the consulting firm where he works. He means it is important to have in mind that an integration analysis only looks at one aspect, but to be able to draw conclusions one needs to take in other perspectives as well:

That's what's so fantastic about it [the integration analysis], that it is so limited to only urban structure and nothing else. It is such a clear delimitation which is very nice, because it lets you talk about only that. But when you talk about what is to happen in the future, what life will appear, then all those other things are

equally important.

He describes space syntax as ”opening up to a way of thinking” and as ”a very powerful plan indicator” that gives a lot of information compared to other indicators, like for example ”amount of green space.”

You can talk endlessly about an integration analysis. It often gives a good image of the mental map that people have of how a space is placed in the structure, what role it has. There is this empathetic effect that gives the space syntax analysis credibility. If you explain what it's about, that it has nothing to do with traffic flow, the number of restaurants along the street and so on, that it's only spatial relations. If people understand that, that it is only about spatial relations, and that spatial relations of course are important, then you get reasonable expectations on the map. That humble angle is important to have.

He continues:

It builds on a basic understanding of urban design ("stadsbyggnad") that I believe is important to have, so you don't get too 'snowed in' in your interpretation of these analyses. That's also when it gets interesting I think, to put the integration analyses in relation to all the other aspects of the built environment.

EXPORTING JUDGEMENT

“The social scientist” (personal communication, March 1st, 2019) also mentions the importance of seeing the analysis in its context and highlights the risk of thinking an analysis can answer more than it can.

If a space syntax analysis is given too much power, if planners see it too much as the Solution with capital S, “then the science of space syntax turns into religion,” she explains. “Clear and neatly presented quantitative analyses can have that effect on us,” she continues, and highlights the risk that comes with that; “if trusting in science means you set your ethical judgment aside it is not good.”

She compares it to religion and means there’s a risk if one sees it as such a ”welcome, seductive simple

solution” that could lead to ”setting your judgement” aside as a planner. She means there could be a risk if you believe that ”just because we have hired these consultants we have exported our mission as planner” and put complete faith in them. She means it could be a threat if planners believe ”now we have been given a solution, now I can relax, now everything will turn out 'right' if I just follow this consultant’s words; in other words, if consultants are treated like gods.”

She adds that the alternative isn’t good either, that is to not listen to scientifically informed consultants at all, and says that she has noticed among some of her fellow human geographers that they are sceptical towards quantification in general, and that they discard space syntax completely because of that. She sums it up: ”So the best is to use it with good judgement.”

THE IMPOSSIBLE PROFESSION

With “the social scientist” I have an interesting discussion about how to deal with the complexity of the profession. She describes architecture and planning as one of the ”impossible professions,” and says ”planners welcome simple answers where they can get it, because their task is so complicated.” ”I admire those who are willing to take on the responsibility that comes with being a planner, I can only imagine how difficult it must be and it is very important work.”

...planning is paradoxical and ethically problematic, there's no way around that. We can find new methods, like space syntax, that can seem revolutionary but you can never get away from the choices one has to make. Whether you're aware of it or not, you will always disappoint someone with what you prioritise.

“The social scientist” describes herself as not dispositioned to be an architect or planner, ”I twist and turn too much, I’m too sensitive in that sense, I think.” ”I’m much less of a ’doer,’ more of a thinker, which I really don’t wish for all planners to be.” ”I’m too stuck in the thought of planning as an impossibility, and when you think like that you can’t really be a planner, but that’s not what I want either.”

She describes a wish that planners have an awareness

of the complexity and the paradoxes of planning – that it's impossible to create the "perfect" city, for example, and that good intentions seldom are enough – although without giving up completely. Nothing gets done if one "thinks too much", she says, but she also says that "warning bells start ringing" if a planner doesn't acknowledge the complexity and ethical difficulty of his or her profession.

She describes the responsibility of architects and planners to acquire knowledge if it is available: "if there is knowledge available I think it is irresponsible towards the citizens to not take it into account, in one way or another." But she also adds that it is not realistic to be a researcher and a practitioner at the same time:

"At one point all occupations need to enter some sort of normal state. Because you can't have the energy all the time to question and/or research everything all the time when you have decisions to make. Nothing practical would ever get done if everyone proceeded like a scientist."

She argues that the planner needs to find a balance between indulging in theoretical knowledge, on the one hand, and stopping to make decisions, on the other; and being transparent about one's priorities, guided by one's ethical compass and judgement.

She continues: "A good planner for me is someone who struggles with these difficulties, like: "I almost

"A good planner for me is someone who struggles with these difficulties, like: "I almost want to drop out", but then still goes to work each day"

want to drop out", but then still goes to work each day. Those are the ones I trust the most!"

"The social scientist" makes an interesting comparison between planning and parenting children:

In some way, since I became a parent and thereby was given, or took on, this ethical responsibility for a human being other than myself, I had to become more of a 'doer' than a 'thinker', because this is what parenting – like planning – is about. Everyday I engage in the act of parenting, it is not a theoretical endeavour as much as you want to think that what you have read about child development matters; you have to follow through with dealing with the real-life challenges and only later see the consequences." "Some things will get fucked up, but what is done is done and at least I did my best. Parenting and planning are similar activities when it comes to the responsibility and difficulty that characterise them.

There are empirically informed theories about urban development and there are empirically informed theories about child development, and the parent/planner has an ethical responsibility to at least know the basics about what they're dealing with, she says, but there is no simple solution to neither planning nor parenting. She uses the example of research which says that screen time for children is bad. "This is knowledge you have to take into account as a parent, but you also have to take other factors into consideration, like the importance of having peace and quiet as a parent while the children watch TV." She highlights the importance of being aware that nobody is perfect, but we have to do as well as we can; "you have to choose a path and go with it."



Illustration. "The social scientist" means it is important to find the balance between indulging in theory and making decisions.

PRAGMATISM

The relationship between civil servant and expert in this case can be argued to also symbolise the implementation of theory into practice. "The researcher" (personal communication, February 28th, 2019) who is both a practitioner and a researcher means one has to be a bit pragmatic when implementing theory into practice: "Are we able to say something better, than saying nothing at all?"

"If it helps us to better fulfil goals, then why not?"

She describes using space syntax as: "If it helps us to better fulfil goals, then why not? But then you have to be a bit careful because it might not give the design solution in that sense."

To my question on whether she sees any risks with using a method (like space syntax) without knowledge of the theory behind it (for example if the method would be used in-house at municipalities) she answers:

"As a practitioner one has to, right? I use a lot of methods as a practitioner without knowing all the details about the theories. I work a lot with traffic issues, of course I don't know everything about the traffic research field, but still, I work with redrawing streets in Gothenburg. I have to."

She continues:

"That's why we have hand-books, minimum measurements, and all the other things we are taught during the education. It isn't necessarily the case that every student knows where they (the regulations) come from, right? What research has led to certain measurements? Many don't care either, they just want to apply them."

"The researcher" doesn't describe any major "risks" with using space syntax without a deeper knowledge of the theory behind it if you do basic analysis, and under the condition that you do have some knowledge of it: "As long as you are on solid ground and do the

standard analyses, well then you are working within something that is relatively well grounded." She adds: "Hopefully you know something about it, it's not like you would use a method that you don't know anything about."

She means that space syntax is a tool that is rather easy to use, and it is only if you want to change the method or question the research leading up to different measures for example, then you need to deepen your knowledge: "When you start to question these measurements, that's when you need to take this second step and deepen your knowledge."

When I bring up the critique of space syntax that it reduces people into bodies that doesn't take into account for example territoriality or intentions of the person "the researcher" says:

"So what information is relevant when designing buildings, urban environments and cities? What I mean is that one needs to identify what information is relevant. Of course detailed information may be highly relevant but still you need to design artefacts that can work for many, many years, and support many different uses over time."

Regarding the intentions of the people using the spaces she adds: "those intentions might not be the same in 50 years. What do we know about people in 70-100 years?" She adds:

"By understanding the properties of urban spaces we understand the conditions better and the potential which we have been able to show with a lot of research, over and over: yes, the distribution of movements at large, 80% of pedestrian movement will follow a certain pattern. And then there are people who want to walk in zigzag, who are lost or who want to hide, fine."

civil servant - other civil servant

OUR TOOL VS THEIR TOOL

During my interviews the relation between different fields within the profession, expert to expert or civil servant to civil servant in another municipal department, came up in discussions. Especially the tools of the traffic planner versus the tools of the urban planner came up: the traffic analysis and the space syntax analysis, focusing on vehicular and pedestrian movement respectively. The analyses are similar in the sense that they show a hypothetical flow in a system, but the traffic analysis generates a specific number of cars and the integration analysis gives a relative value traditionally translated into colour ranges.

“The consultant” (personal communication, February 12th, 2019) describes the difficulties of interpreting and understanding a space syntax analysis containing an “explosion of colour” compared to a traffic model that can put a specific number of cars on a street:

If you compare it to a traffic model that is a big black box that no one understands but that somehow comes to the conclusion that there will be 3000 vehicles on this street. That is something that anyone can understand, if you know more or less what 3000 vehicles mean. But in this case we get a colour explosion of “plockepinn-lines”. Of course it leaves the field open for interpretation in a completely different way.

He says that it could be interesting for traffic planners to also use space syntax as a tool since the goals of many traffic strategies are to increase walking. He means space syntax could be a platform for urban planners and traffic planners to come together.

Also “the strategic planner” (personal communication, March 5th, 2019), who is a civil servant, describes the similarities between a space syntax analysis and a traffic model. He means the traffic analyses have more weight in discussions, perhaps because of their ability to use specific numbers. He says it would be desira-

ble to use space syntax as a complementary tool to a traffic model, that takes into account pedestrian flow and bicyclists as opposed to only the flow of cars, to be able to “look at it from two directions.” He means the traffic models “feel very scientific” but question if both models are in fact made up of similar levels of assumptions and insecurities, but the traffic models are presented with more weight and credibility so the results feel more like a “truth” than they are.

I’m thinking the traffic models are a bit similar but they are being put forth with such weight and credibility that it feels like a truth is coming out. But maybe that’s not the case, maybe it’s actually the very same level of probability or weight in them? (...) But they (the Traffic Department) say ‘23 482’ cars and we say ‘okay.’ And the people working with space syntax are perhaps more consciously and sensibly cautious.

civil servant - politician

FOLLOWING POLITICIANS

“The politician” (February 19th, 2019), has a view on the relation between civil servant and politician that differs from that of for example Westin (2010), who means architects and planners can never be regarded “neutral” or “objective” as described in chapter 3.

“The politician” argues that civil servants should (and that it is possible to) only follow the political will and not try to impose their own will or values. He underlines that it is one’s responsibility as a citizen with “special skills” as an architect or planner to engage politically in their free time, but this should not be confused with one’s professional role as a civil servant. He describes the civil servants as follows: “They should be knowledgeable, hopefully, and then do as they are told by politicians [laughter], which means follow the political will but with their professional knowledge so the job gets well done.”

"You should follow the political direction that is established in democratic elections when you are a civil servant"

He continues:

So I would say it’s that responsibility you have, not AS an architect, but if you ARE an architect you have an extra responsibility as a citizen with special skills to actually use them. That’s my view on the matter. I think a problem is often that those people, it doesn’t just apply to architecture, it can be other areas as well, but that you don’t recognise this difference and believe you

should be able to realise somehow you political ambitions as a civil servant, if you know what I mean.

Further he adds:

It’s not your job. You should follow the political direction that is established in democratic elections when you are a civil servant. On the other hand, as a citizen, you are a part of shaping what then becomes what you are to work with as a civil servant. Because there’s no point in you, somehow, fooling the will of the people.

POWER AND RESPONSIBILITY

As described above, “the politician” emphasises the importance of following the way the democratic system is built up and describes how you shouldn’t confuse your role as a civil servant with your political ambitions. When I describe this view to “the social scientist” (personal communication, March 1st, 2019) she means this is a rather utopian view of how it works in reality. She doesn’t agree with the notion that you “leave all your political opinions and values at home”, she means planning is paradoxical and is always about priorities and ethical decisions that need to be made. “Should we just follow this? Should we follow Mammom or the need of the people?” and means one needs to “stand up for those without a voice” as a planner.

Both “the strategic planner” and “the spatial planner” describe how the political will is not always as clear and easy to “just follow” as perhaps described by “the politician.” As in the example in the text from Spatial Morphology Group (Chalmers University of Technology, 2018) it can be up to the civil servant to present interpretations of rather broad visions.

“The spatial planner” (personal communication, March 7th, 2019):

"I believe we have a very big responsibility, and power too. Even if it is not us who make the decisions. They provide us with tasks, the politicians. From our profession and knowledge, we show how. The politicians are responsible for *what*, we are responsible for *how*. How should we do this to be able to create a sustainable city, for example."

She adds: "But the power we have is via the politicians." "It is important that we give the right basis for decisions, so they can make right decisions, good decisions." She means it is the responsibility of the planners to show consequences of different decisions to politicians, to make them understand the effects from different perspectives.

"The politicians are responsible for what, we are responsible for how"

"The spatial planner" says: "It is our responsibility that it [the planning process] is being carried through in the right way." "To balance the interest of the public against the interest of the private, that's our role." She adds: "Much of everything we do is a taking of responsibility for the whole picture and like, the future. We build for the future people and cities."

THE BAD CONFIDENCE OF THE ARCHITECT

"The social scientist" (personal communication, March 1st, 2019) talks about how the way architects view themselves and their knowledge has changed. She refers to a course for architects where she was giving a lecture, regarding the difficulties of the architectural profession. In a survey many mentioned the difficulties of "making yourself heard" and that one is easily "run over" by contractors:

"It felt like it was filled to a large extent with bad

self-confidence, which I can understand since it is partly the effect of Jane Jacobs critique. Architects have become so self-critical that they've almost watered themselves down. They think that, since they got so much shit in the 70's after what they had done, by Jacobs and here in Sweden, planning turned so... 'We should become more like someone who goes out and listen to citizens,' 'the grass roots know best.'"

"Architects have become so self-critical that they've almost watered themselves down"

She further refers to a researcher describing that "the architecture profession has lost self-confidence after Jacobs," who urged architects to "straighten up - you know spatial planning! The citizens don't always know best, because they care about their perspectives. Someone needs to dare to deal with these big visions." She describes that in her lecture she wanted to instil some confidence in the architects. "You are the one's who know architecture."

COMPLEXITY OF POWER

"The social scientist" further discusses the notion of power and the complexity of the concept. "I think planners have less power, but also an experience that can enhance the feeling of powerlessness."

"Power is complex. To feel powerless is very subjective. In a sense, you *take* power." She refers to people who have changed history and gone against the current routines: "I'm sure they were annoying people!" "You have to be a bit annoying."

She also lifts the discussion to a psycho dynamic perspective about realising one's power:

"You walk around complaining that you don't have power, but actually, when you realise what incredible power you have, then it get scary. So it's quite double. In a way, it can be nice to be a cog [in the wheel]."

She aims to show the complexity in power. Do we really want more power? "You're capable of wanting both, unfortunately [laughter], that's the way humans are."

case study

The case for this master thesis is actually several projects relating to the same geographical area, all of which are ongoing processes at the time of writing. I have interviewed two people relating to the case, “the strategic planner” who is working with a comprehensive plan and “the spatial planner” who is working with a program. With regards to it being an ongoing project, I will not specify which projects I’ve used as my case study, which is also why literary sources are not referenced.

Apart from an “in depth comprehensive plan” (“fördjupad översiktsplan”), there is a program and several development plans going on. I’ve chosen the project because it gives examples of many of the themes discussed in the previous chapters. It is also interesting because it is one of few projects where using space syntax as a method is specified in the suborder (“avrop”), resulting in an urban structure analysis (“stadsstrukturanalys”) made by a consulting firm.

PROGRAM

The program area is affected by a planned development of the public transport system in Gothenburg, where one aim is to increase the speed of public transport from the outer areas of the city and in to the city until 2035. In some cases this means separating the tram tracks from the rest of the street, with the need to put up fences or have plan differences at crossings. The increased speed and fewer stops for the tram decreases the distance on a larger city scale but can increase the distance or barriers more locally for pedestrians and bicyclists.

The program was commissioned by the Building Committee (“Byggnadsnämnden”) to the Urban Planning Department (“Stadsbyggnadskontoret”) in 2014, and was in 2017 re-commissioned with the aim to “more clearly show how the proposed urban development

doesn’t make difficult the possibility to fulfil the goal” for the proposed public transport development in that area. After the re-commission the project leader was changed, and the decision to order an urban structure analysis was taken, to form a basis for changing the program proposal that is currently underway.

IN DEPTH COMPREHENSIVE PLAN

Central in the comprehensive plans geographical extension is a big motorway (“trafikled”) that connects to the central areas of the city. It is the re-development of this motorway into a more urban connection that drives the comprehensive plan. “The strategic planner” (personal communication, March 5th, 2019) describes how the political idea of this re-development has been around for about ten years. The task was first given by the City Council to the Traffic Department but later shaped into a comprehensive plan for the Urban Planning Department to take into account a larger area of urban re-development. “The strategic planner” describes that the process of the comprehensive plan was cut shorter than usual because of the risk of political change at the municipality at the end of 2018. He means the politicians saw a risk of the parties not being able to make decisions for months in the new constellations.

CHAPTER 7

examples in a case

This chapter uses a case study to exemplify some of the issues I’ve discussed in this thesis, based on studies of the project material and interviews with people involved in the projects.

(LACK OF) POLITICAL VISION

“The strategic planner” describes there not really being a specific political vision for the area in the comprehensive plan: from the politics it was more formulated as a question: “Can we do something here?”, so it is up to the project group to define what type of development is suitable in that area. “Is it possible to do a boulevard here? And is it possible to do something next to it? The vision for the area we’ve tried to define ourselves.”

In the suborder for the analysis for the program, where the task is presented to the potential consultants, the aim is described a bit differently than in the phrasing from the Building Committee:

“The analysis should give input to how alternative urban designs (“stadsutformningar”) adjusted to [the public transport vision document] affects the urban life potential (“stadslivspotential”) with a socially sustainable urban development and a well-functioning urban life in the area.” (my translation).

“The spatial planner” (personal communication, March 7th, 2019) describes how she chose to change this formulation, instead of the program showing how the plan *doesn’t* hinder the goals of the fast public transport she intended to show *what consequences* different levels of goal fulfilment for the public transport have for the urban values, like how easy it is to cross the street, number of streets crossing etc.

“There I chose to turn it around a bit. An urban track (“stadsbana”), what type of consequences does that give for the urban development? The different alternatives that were made, what type of consequences do they give for the urban development? For example an urban track with a high goal fulfilment, meaning that it is a public transport that is fast, with shorter travelling time, what does that mean for the planned urban development and the structure and potential and so on?”

CONFLICTING INTERESTS

In the biggest part of the program area the tram tracks are separated from the streets, but in a certain section of the main street running through the program area,

the tram tracks coincide. In the urban structure analysis the main street is described as “the core of the program proposal.” The authors describe it as the street with the best potential to establish commercial or other types of public activities, and question the placement of a fast public transport track there. As a basis for the urban structure analysis a traffic investigation was made, resulting in four different plan variations at this section of the street. The authors of the analysis describe the situation as follows:

“... with the proposed development the question of how the tracks should be drawn in relation to the other content of the street is brought to light. Here, the question of the interests of the city versus the public transport are more clearly set against each other than in many other places.”

They further describe the competing interests as “the need for a fast and efficient public transport and the wish for a lively, event filled and safe street environment.”

PARALLEL PROCESSES

On top of the in depth comprehensive plan and the program, at the time of writing there is also several development plans taking place in the same geographical area. “The spatial planner” describes that several development plans were started up in 2016/2017 when they thought they were about to go to consultation (“samråd”), which turned out not to be the case. Both “the strategic planner” and “the spatial planner” mention difficulties with this type of situation, as mentioned in the previous chapters.

“The spatial planner” describes the difference of interest and drives between the program and the development plans. The development plans are under more pressure due to time and the economic interest and will of the developer. “The strategic planner” describes how the economy of the Planning Department is dependent on the production of development plans.

“The strategic planner” means it is important to recognise the specific places where decisions on a local scale could have a big impact on the structure on a

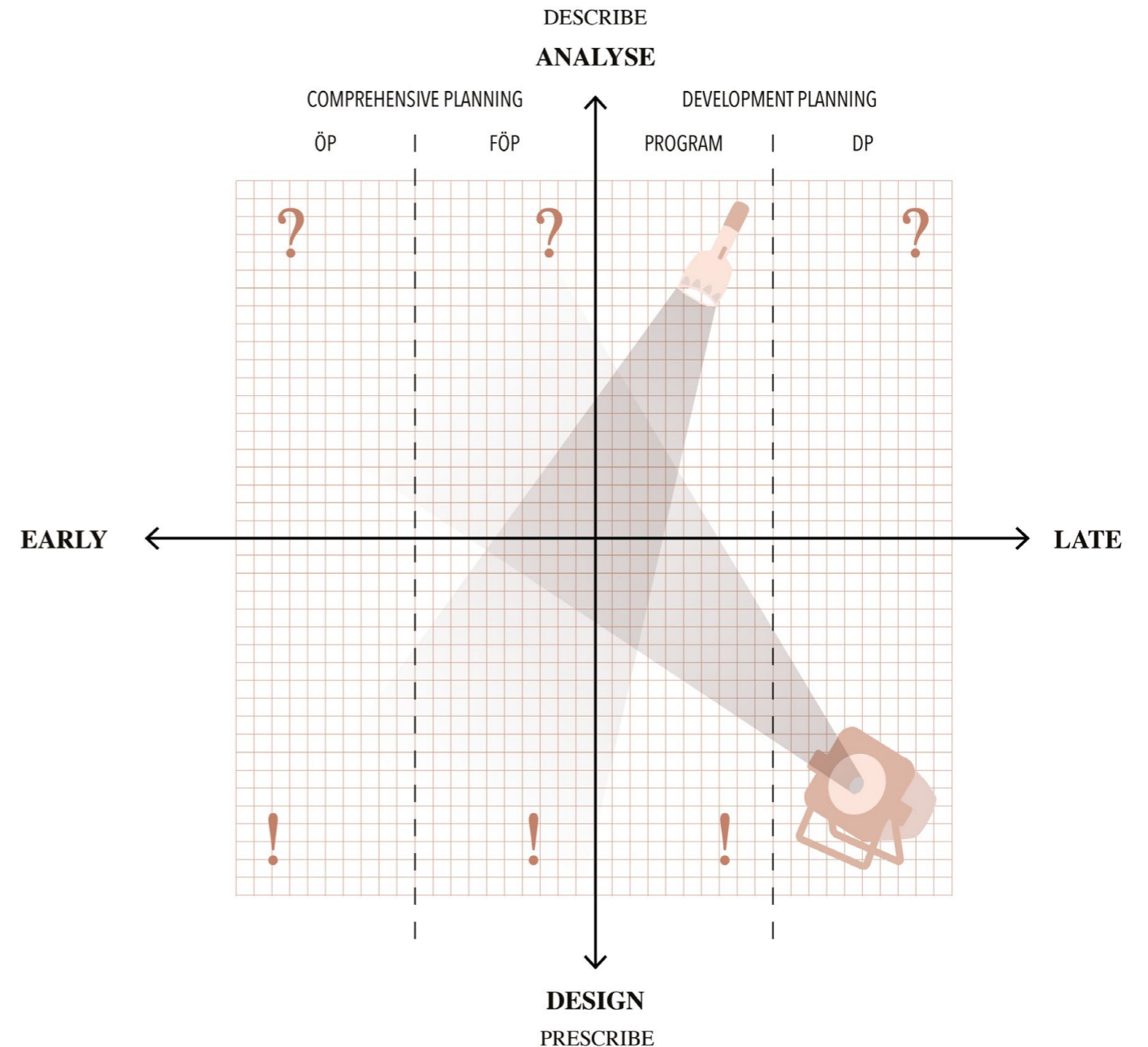


Illustration planning process. The legal framework in relation to the descriptive (analysis) phases, where space syntax analyses are used, and prescriptive (design) phases. The flashlight can illustrate the way issues related to systemic questions are attempted to be handled within the program area, while they relate

to a scale that is relevant for comprehensive planning. The spotlight can represent the risk with parallel processes that designs in development plans become structuring over issues important on a comprehensive planning level.

larger scale, in the comprehensive plan perspective. He uses as an example how the size of the building plot (to maximise built land or simply make a reasonable block size) could make a street too narrow to hold a metro bus line that is important for the public transport system in the city. He means it is important to identify these places where a development plan could render impossible an idea on a strategic level and means this sets high demands for the internal collaboration at the Urban Planning Department.

This problem is recognised by “the spatial planner” who describes how when the development plans are further ahead than the comprehensive planning it creates an inter-dependency between the different plans. There is a risk of the development plans not getting input on important strategic connections in time and therefore become more governing in the process.

“The strategic planner” describes how the comprehensive plan is struggling to have time to get into the level of detail that they wish for. He describes the issues with the public transport routes that are dealt with at the program level, which are actually part of a bigger system that relates to the comprehensive plan scale or even bigger. “That is a question that the program is trying to deal with, but is struggling to deal with because they only have one part of the distance within their area.”

“The spatial planner” describes how the four alternative designs of the street with the public transport track were made as an attempt not to “lock” anything structural down too soon, since they are hoping to be able to get support in the issues regarding the larger scale and the public transport from the comprehensive plan.

In the urban structure analysis, the consultants mean that the current and ongoing development plans are pointing in another direction than the vision of the program. They focus especially on the content of the ground floors, which they say would need to be filled with a bigger mix of functions than what is indicated now, and that the character of a “housing area” is likely to remain, although the shape of the buildings might change into a more urban looking block structure.

MEANS - ENDS

In the program from 2017, the vision and goals for the area are described using words like “dense, town-like (”stadsmässig”),” “urban” and “mixed.” An example from the text: “The current program for urban development aims for town-like, safe urban environments with the intent to create mixed environments with good accessibility for walking, biking and public transportation.” The authors describe how for example “Demands for activities in the ground floors creates conditions for a lively urban life.”

The program refers to the goals from the budget from 2017 where it is stated that “in urban environments perimeter blocks with a high level of exploitation is preferred” and the “ambition to build the city dense, green and mixed.”

“This results in the proposal coming across as a ‘wish-list’ of everything that makes a lively urban environment”

In the urban structure analysis, analyses are both made for the whole program area and the four alternative designs of a street section where the public transport track is integrated. The report is rather critical towards the proposal from 2017 as a whole, and claims it does little to try to reach the high set goals for the area.

The program proposal sets as its goal that the area will be transformed into a mixed urban environment based on diversity. But it doesn’t pose the question as to how this shall be made possible, and takes few concrete actions to identify the basic difficulties that are found along the way. This results in the proposal coming across as a ‘wish-list’ of everything that makes a lively urban environment, with dense streets, mixed spaces and functions and a swarm of people that during a great part of the day populate streets and squares in the area, but that doesn’t leave any essential clues

to approach or implementation that make the image credible.

The authors mean that it will be difficult to reach the mixed urban environment that is sought after by only making changes within the program delimitation. They mean larger structure changes are vital to be able to reach them and better integrate the neighbourhood with the rest of the city. The authors describe how more than the proposed density would be needed and that the area itself needs better connections both within the neighbourhood and to the surrounding neighbourhoods, which are separated by large motorways. They describe that it is only when the barrier effects of the surrounding motorways are eliminated that the high set goals for a livelier urban environment can be reached.

The majority of the new developments are focused along the main street and a larger square. The authors mean the way the area is dispositioned makes it difficult to create the sought-after urban life. “This will be a great challenge, since it from a pedestrian perspective is long and narrow surfaces, without any ‘urban support’ behind them other than current housing areas.” They describe how for example the active ground floors in the central areas of the neighbourhood will be limited due to the lack of connections.

The authors also direct a general critique towards how many urban development projects are made today, and see a risk of the same happening if one would follow the plan proposal from 2017. “With the large focus on building housing that is currently prevailing we keep seeing urban development projects being made where there, like in (the program area) is talk about mixed city (“blandstad”) qualities, but the result is purely blocks of housing with the obligatory preschool as the only other activity.”

They direct criticism towards the plan proposal not proposing new connections or doing significant changes to the structure to reach the goals for the area. They write: “In the text (of the program from 2017) a number of ‘town-like’ factors that are to appear in connection to the proposal are mentioned (...) But this matches to a little degree with the proposal, which rather seems to answer the question of how 6000 new dwellings can be created on current parking spots, without having to approach or change the underlying urban structure.”

They describe that the proposal doesn’t increase the integration between neighbourhoods:

The program proposal doesn’t imply any major difference, which is not surprising considering how little of the street structure is changed. There are a few cross connections added over (the main street) but when these aren’t prolonged through the area it doesn’t have an effect on the integration between neighbourhoods. In that way there’s no reason for other than the local inhabitants to go there, and the area is reduced to being a local matter, contrary to the intentions of the program.

“... the area is reduced to being a local matter, contrary to the intentions of the program”

The result of the analysis of the four proposals for the street section are summarised as follows in the urban structure analysis: “the differences between the four proposals are almost negligible. This despite the fact that the number of crossings for pedestrians along the street section vary from three to eight.” They describe the reason for this being that the cross streets to the main street have such a short reach, meaning changes have very little effect on the system as a whole.

Regarding the result of the urban structure analysis “the spatial planner” says: “I think I had expected to more clearly see the differences between the different alternatives. But as I understand there wasn’t a very big difference in the analysis of the current proposal.” She adds that she is pleased with the result as a whole.

KNOWLEDGE TRANSFER

“The strategic planner” poses an open question about the analysis made for the program:

Did we get answers on what we thought we would get answers on or did we get answers on what we thought we asked? Did we think we asked about one thing and they [the consultants] thought something completely different? Did they understand what we were asking but felt they weren't able to answer it, so they took the opportunity to answer something else instead?

"How we should ask the question is for me a bit of a mystery right now"

"The spatial planner" describes how she would like to have a wider base knowledge to be able to understand better when for example an analysis is presented.

"It is also a bit of a learning process for me, because I'm not so experienced with the method. I got to learn something from it, about how to think, or what gives what in a way. And that the structure is a pretty important factor to support what you want to do." On the question on whether she would like to have more knowledge she says: "I wouldn't say I have the ambition to immerse myself very much in the method, but I would like to have a good base knowledge about it, that I can use when I get it presented, understand it better."

"The spatial planner" also mentions the need for the consultant to be pedagogic when communicating the results of the analyses, and using a language related to the audience:

"It requires of the ones presenting and using it that they don't talk for their own, because if they want to reach us, urban planners and the municipality, they have to use a language, I think, that makes it understandable. Otherwise it doesn't reach very far."

"The strategic planner" says he would like a deeper knowledge of space syntax to be able make better use of it. He describes how he right now has a hard time to see the value of it, because of his lack of knowledge. Regarding using space syntax in some way in the in

depth comprehensive plan he says:

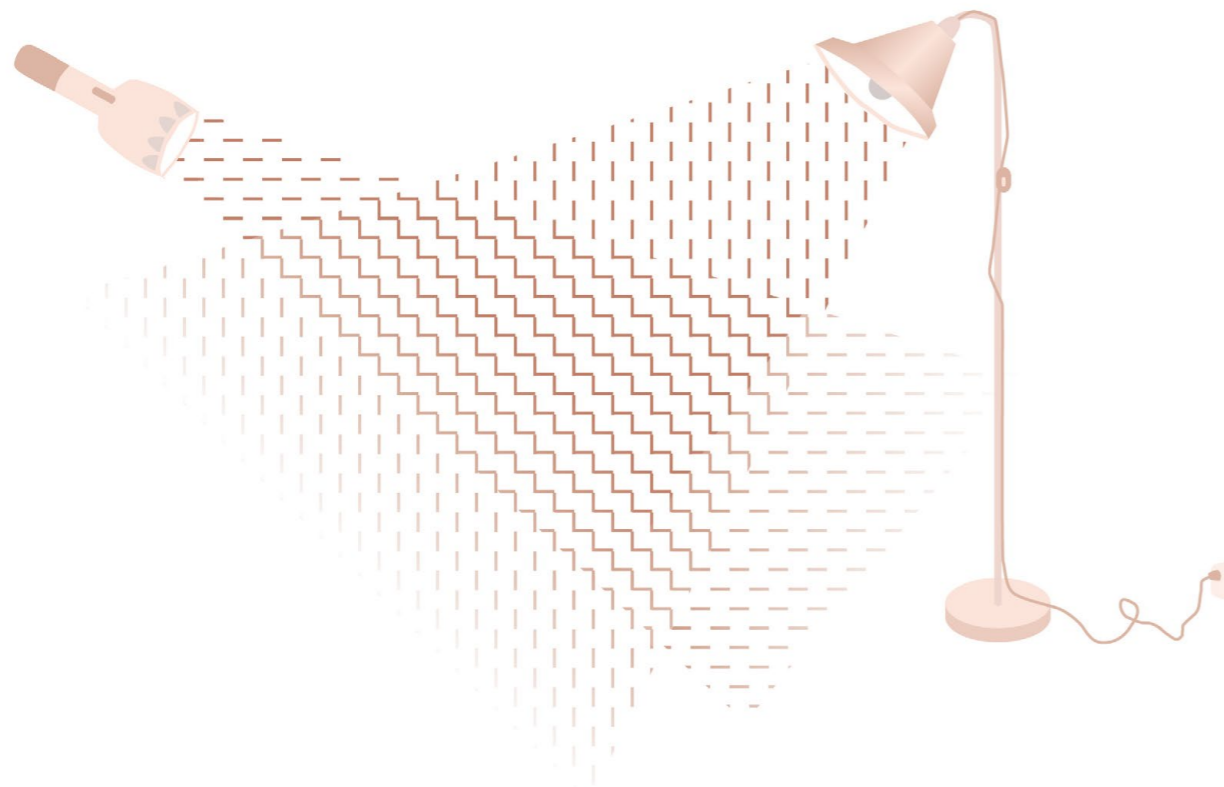
I struggle to understand both the question and the answer [laughter]. Because right now I don't really understand how we should ask the question, and what answer we are really after. What do we want answered? And how we should ask the question is for me a bit of a mystery right now. And it might lead to this uncertainty, that I can't handle neither the question nor the answer. That might mean there won't be any analyses made. In that case I put the money on something else, that might happen. And it might be that we miss out on something, or not. I don't know, that's where I need help. [...] And that's what's so difficult with space syntax, it feels really good and useful in a way, but I don't really see how I can use it because I don't have enough knowledge.

CHAPTER 8

the synthesis: the conclusion

Here I summarise my findings from the literature review as well as the interviews, and draw connections between my three themes, space syntax, the profession and the planning process to answer my research questions.

summary of findings



RELATION BETWEEN RESEARCH QUESTIONS

In this master's thesis I am aiming to answer these questions:

What is a balanced attitude to have towards space syntax?

How does one's view on the profession affect one's attitude towards space syntax?

How does the legal framework effect the use of space syntax?

Based on interviews, literature and my experience I have been trying to discern different attitudes towards

space syntax and how this affects the use of the method, in order to better understand the role of the method in academy and practice today.

What I've found is that your attitude towards space syntax is comprised of many different factors, all of which cannot be answered within this thesis. My quest to try to find different attitudes and understand the reasons behind them has lead me to questions about the profession: how we define our professional knowledge and our subject: the city. It is also related to the planning process, which makes it easy or difficult to use the method to its full potential.

It is a complex system of relations between these factors, influencing each other, one being a possible (par-

tial) explanation to the other factor. They are also reinforcing each other in different ways. I have been using diagrams as a help to structure my thoughts. Since the different attitudes are interrelated, but the text needs to be linear, there might be some repetition in my argumentation and reasoning when explaining the connections I'm making.

With presenting a diagram like what I am to present, my aim is not attempt to describe the world in its entirety, or map all different ways of seeing space syntax and all possible explanations for them. A full understanding of the relation between different views on the profession, the knowledge and how that effects the use of space syntax does not fit within the scope of a master thesis, and I question if it is even possible.

DIALECTICS

Throughout the process I have used opposing concepts to structure my thoughts, what I refer to as *dualities*. Apart from being personally attracted to the idea of exploring opposite or paradoxical concepts, this can be found in my using of axes, a line representing a difference or a scale between something and something else. One quick assumption (that I've found myself guilty of making) is to assume that being in the middle is best. But, inspired by dialectics - the notion of exploring a thesis and its antithesis to find a synthesis, this is not the point I aim to make.

I'm using the metaphor of lamps shedding light from different perspectives which, when they meet, together create something new. Space syntax is not black or white, but neither is it grey, it might actually be pink!

STRUCTURE OF CONCLUSIONS

I am presenting my conclusions according to my three themes, and research questions. First I am summarising views on the planning process and how it affects

the use of space syntax, helped by a diagram. After that I am summarising different views on the profession: our knowledge and how we define the city. Here I am also helped by a diagram, which I then combine into a new diagram describing different attitudes towards space syntax. From this I distill four different "extreme" positions which I exemplify and illustrate, describing possible consequences of them in practice.

the planning process

HOW DOES THE LEGAL FRAMEWORK AFFECT THE USE OF SPACE SYNTAX?

With a deeper understanding of the city as a system, the way that space syntax describes it, one might see the legal framework with fresh eyes, and better see how it, or the process around it and the roles within it, could be become more balanced.

TRAFFIC - URBANITY

As described not least in the case study, a recurring problem in many urban design projects are conflicts of interest between traffic planners and urban planners, who are often separated into an urban planning department and a traffic department. In my view, space syntax could help balance the discussion between traffic planners and urban planners in the ever lasting conflicts of interest between cars and people. In the first step, space syntax provides us with a visual tool, compared to the traffic analyses, that can give us more weight in discussions, highlight the pedestrian and cyclist perspective which is a goal in many planning documents today. As discussed by "the strategic planner" and "the consultant", the traffic analyses are brought forward with more weight and the results are a bit untested, even though they might be made up of the same level of uncertainties as space syntax analyses. Here, space syntax's strength as a visual tool comes forward, as a way of arguing for perspectives traditionally not visible. It is easier to discuss something on a map - maps which are the central tools or urban planners and designers.

However, seeing it as "our tool" compared to "their tool" might not decrease the gap between traffic and pedestrian interests. Here, one still sees traffic planning and urban planning as two separate professions, often operating under different departments, relating to different perspectives. But, in reality, in our cities,

traffic is not separated from "urbanity", in a street there are cars, people, bikes, shops, vegetation, animals and insects. As described by "the consultant", using space syntax analyses for pedestrian and bicycle flow together with vehicular movement, cars and public transport could mean giving these two professions a common platform, and contribute to decreasing the gap between the professions. I would however like to add that a risk with equating a traffic analysis with a space syntax analysis could be that you might see the city as a complicated rather than a complex system. After all, people do experience and move differently through a city than cars.

Of course it is not only the traffic and the pedestrian system that can be fruitful systems to combine. Our cities and societies are made up of countless financial, ecological and social systems, and many interesting research and advancements are made relating to how they can draw from each other and be combined.

SEPARATING SCALES

As the theory describes the city as a system where changes in one part effects the whole one could say it works in "all scales all the time." The separation of projects into different scales, as the compartmentalisation of different legal documents, will of course affect how one works with the interplay between these scales. Since there is no definitive legal definition of the content of the projects (apart from the development plans) there's a risk of some confusion as to what aspects need to be dealt with on what level. This can lead to some questions being left out early in the process, or simply not recognised as issues until a later stage, which can mean one needs to handle systemic questions on a scale where that is not possible.

The grey loops between the different scale levels in the

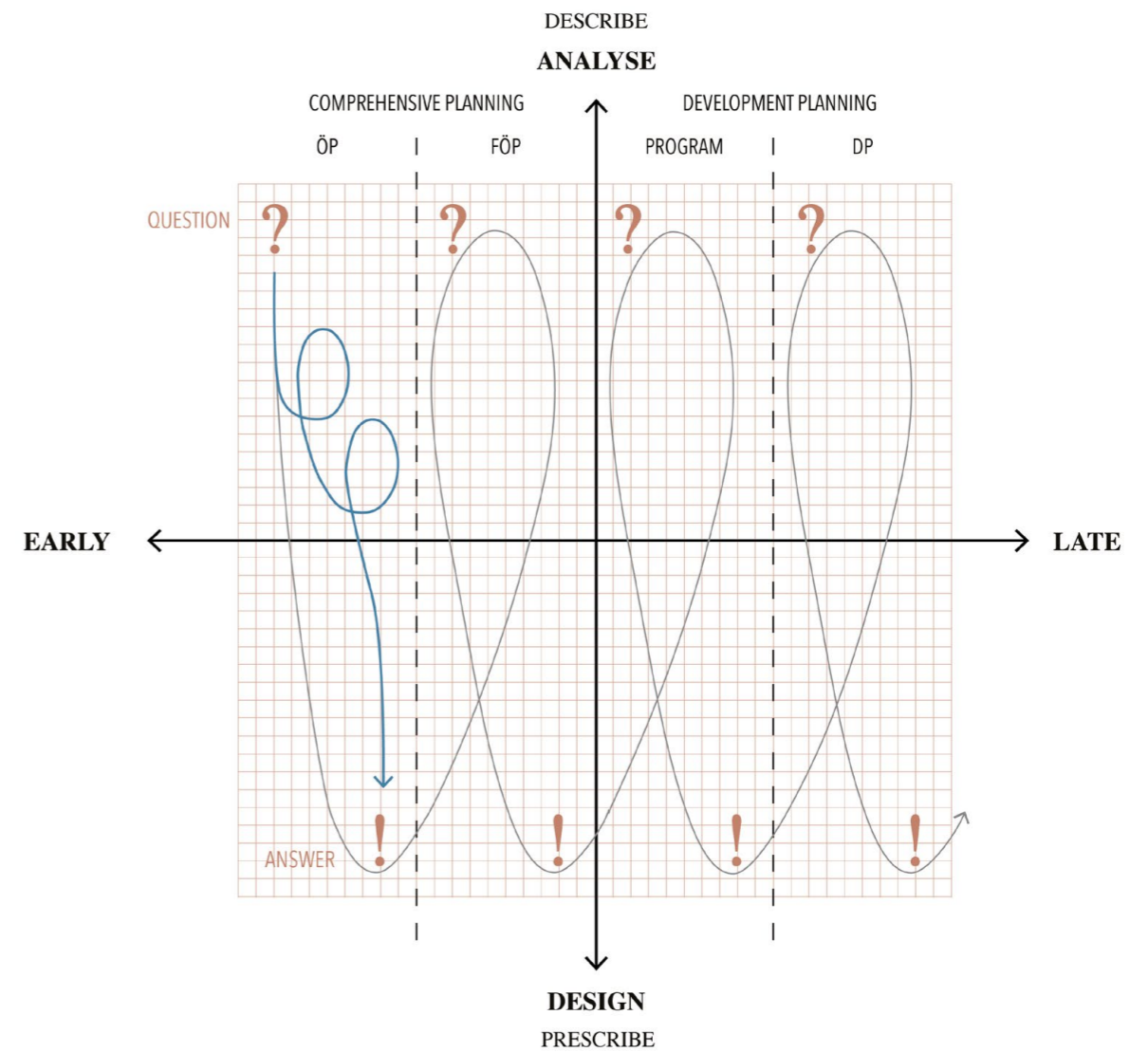


Diagram legal framework. The separation of the urban planning process into projects can make it difficult to use space syntax in a dynamic way, seeing it both as

an analysis tool and an input for regular design work - a way of thinking.

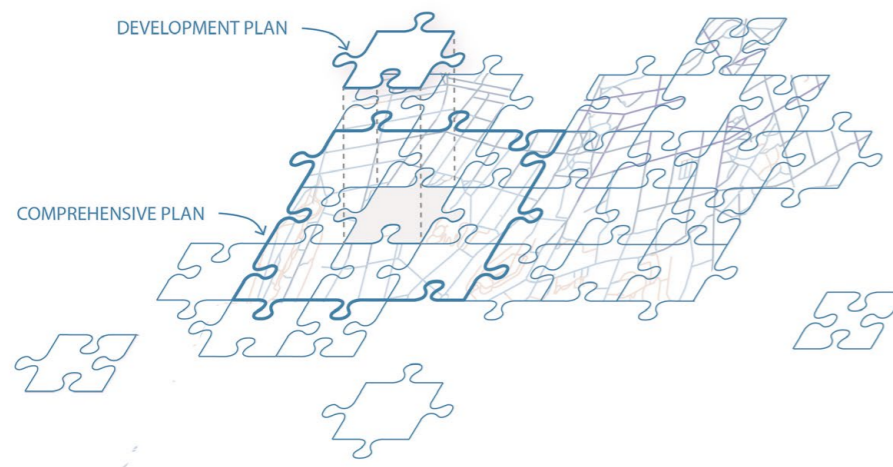


Illustration planning puzzle. The lack of having an overall plan for the city, and planning one part at a

time could be illustrated by seeing the city as an urban planning puzzle.

diagram on the previous page illustrates an ideal view where input from one scale informs the next, so that there's a cohesion between all the different scales. This is how the different legal documents in the planning process *should* relate to each other, but the reality is always more complex. Firstly, this assumes that one really manages to deal with appropriate questions on appropriate levels, for example that the design outcome of the comprehensive planning is concrete enough in pointing out which strategic connections and paths are most important on that level, which the development plans then have to organise around.

Secondly, this assumes that the x-axis in the diagram represents both time and scale in a linear way. But as we know, parallel processes are not uncommon in planning practice. In this situation, the grey loop becomes a big mess, and as illustrated by the lights in chapter 7, might lead to systemic questions being handled in a limited plan or that the development plans render

impossible certain strategic connections. Using space syntax at this point might lead to it not really saying much, or pointing at another scale level, as in some of the conclusions of the case study. The risk with this is that the comprehensive becomes more of a reactive than a proactive matter.

A deeper understanding of space syntax leads us to better understand which questions can be asked on what level. I think that is the most important contribution space syntax offers in relation to the planning process. For example, a space syntax analysis saying that none of the plans proposed in a project fulfil a certain goal, because you need to take into account a larger area, is a way of telling us that we are dealing with issues on the wrong level. One can not expect a semi-central location to have the same day and night-life as the inner city just by placing urban looking buildings there without making large changes to the street network and connections relating to a much larger area. An area with very high

density without mixing functions and adding public spaces doesn't in itself make "lively streets." Putting something on a map makes it easier to discuss: space syntax could make important strategic issues relating to the physical structure of our cities visible in an earlier stage, and help us structure what types of issues need to be dealt with on what level.

IN-HOUSE TOOLS

As described by "the strategic planner" and illustrated in the diagram, the relation between civil servant and consultant can become static when the separation between question and answer, analysis and design is very large. Since the design process is not a direct line between analysis and design, like in the grey loops, but rather consists of many iterations and design- and analysis loops illustrated by the blue line, the bureaucratic procedure of the procurement can hinder using space syntax in a dynamic way. This does not mean saying expert knowledge in the form of consultancy is not needed, but rather that by making it more easy to use space syntax as a sketch tool, the question to experts can be better phrased and space syntax is put to better use. As expressed by "the strategic planner", having the competence in-house at an Urban Planning Department could make it easier to discuss and develop the question for an analysis to answer.

Making the tools more accessible could also make it easier to use as a sketch tool, not only something coming in as an expert input at one specific time, but, as expressed by Hillier and several of my interview subjects, something to think with.

BALANCING POWER RELATIONS

A general remark about the power relations between different roles is that more knowledge about space syntax could help balance some relations. In the case of the civil servant towards the expert (like a space syntax consultant), having the competence in-house at a municipality could make the relationship more dynamic.



Illustration. Space syntax could help balance the urban planning practice towards a more concrete comprehensive planning as well as balance the power relation between civil servant and consultant as well as towards other civil servants in relation to politicians.

Questions could be better phrased to experts. And as described above, it could make arguing for "urban" perspectives compared to "traffic planning" perspectives easier, and the balance between these perspective more balanced. This also relates to the relationship between civil servants and politicians, where, as described by "the spatial planner," a space syntax analysis could be a way of showing consequences of different decisions to politicians, making aspects visible that are otherwise difficult to talk about.

In the bigger picture, making the knowledge more wide-spread will make the risk of over-interpreting, or even manipulating data, decrease. It could also lead to a more well-informed public that could, in the interaction between the municipality and the public, see through proposals who "say one thing and do another."

BALANCING THE PLANNING

As described by many people in my interviews, the planning process as a whole can be said to be unbal-

anced between strategic and comprehensive planning, where space syntax perhaps has its most important role to play. For different reasons, the development plans are more in focus and a common critique is that we are planning one area at a time, not taking in the bigger picture. This lack of seeing the city as a system could be described by seeing the city as an "urban planning puzzle," something that can be solved. Here one looks at one piece at a time, trying to fit it in without having an overall plan. This could also be a metaphor for the municipality reacting to investors coming with a building proposal that one tries to fit in to the plans, instead of the other way around.

A deeper understanding of space syntax could in that sense contribute to shifting the balance between comprehensive planning and development planning. As many references point out, what is lacking in many projects is an early binding structure, pointing out main connections and strategic points, that consists of actual streets and not only "arrows" or expressed in words. Here, space syntax could help in forcing one to be concrete in strategic planning. Using space syntax as a tool can make it easier to see the city as a system, because using space syntax in an isolated puzzle piece, doesn't give a lot of information.

views on the profession

HOW DO VIEWS ON THE PROFESSION AFFECT ATTITUDES TOWARDS SPACE SYNTAX?

From literature and based on my interviews I'm describing different views on our professional knowledge: as artistic or scientific, which relates to viewing our role as focusing on product or process. To describe different views of viewing the city I am describing it as a complicated or complex system (or not a system at all).

ART OR SCIENCE

The scientific view on the profession relates to seeing it as a natural scientific profession in the sense that decisions are based on theory and empirically founded research. Seeing the professional knowledge as art/artistic means it is based on more of a tacit knowledge, experience and intuition. Someone who has this view might not see a need for theory in architecture.

As described by "the politician" and Marcus (2000) a reason for a sceptical attitude towards space syntax is believing it aims at describing architectural knowledge as purely scientific, and therefore wants to replace the type of knowledge that describes the profession more as an art. While Marcus (2000) as well as Hillier (2007) point out that both types of knowledge are required, but its a matter of knowing when to use what knowledge, "the politician" seems to argue that this knowledge based on experience should be replaced by something that is evidence-based and can be "proved." He is very sceptical towards knowledge that is not scientific, which he describes as based on "feeling" and traditionally found in architects.

It is interesting that all three references are enthusiastic about space syntax, and have a base in the same cri-

tique of a lack of theory within the profession but differ in the way they see space syntax as a solution, one can say what they see *in* space syntax differs.

To describe the need for both types of knowledges, artistic and scientific, within architecture I want to bring back the metaphor of the soup from chapter 3, and the thermometer from chapter 1.

Having artistic knowledge can be represented by being able to make a soup, without necessarily understanding the process, the "chemistry" behind it. One could in this case talk about an inherited knowledge of sorts, the art of making soup. Having scientific knowledge doesn't imply knowing how to make the soup, but understanding it and being able to describe the processes, the science behind it. To be a good chef, to be able to make different types of food, change or enhance the recipe, or cook another type of soup, one needs to combine these types or knowledges. And in that sense, being a skilful architect means having both abilities and knowing when to use what knowledge- which aspects can be quantified and which can not. As an urban planner, one might need to base decisions on scientific principles but intuition needs to be applied in the individual case.

The thermometer is useful as a metaphor in the sense of also explaining that the temperature in isolation is not telling "the whole story" of what is wrong with the patient. A high temperature is only an indication that *something* is wrong but doesn't explain exactly what is wrong, but together with other symptoms and the experience and professional knowledge of the doctor a diagnosis can be made. In the same way, the result of an integration analysis is not directly translatable into a social outcome, but put together with other aspects and types of knowledges one might get a better idea of the "situation."

A thermometer is useful in the sense of being able to put a value on the temperature, which can then be compared to the temperature after trying to cure the sick-

ness. An analysis made on two different plan proposals, or seeing in what way a plan changes conditions compared to the present, can in the same way compare the integration values to get an indication on in which way they plan changes the conditions.

But one needs to be a bit careful when using this metaphor. A fever going up indicates that efforts are not working and is considered bad while the fever going down is something good. A temperature within a certain degree span is considered healthy while being above it means you are ill. This differs from the values in an integration analysis, where the specific numbers in themselves do not have a value in terms of good or bad. One needs to have an aim defined to be able to say if the proposal manages to fulfil it in a more or less good way, otherwise you can only say the values are higher or lower relative to each other, but a high value does not equal good or bad without a goal defined. This

metaphor is interesting to discuss because it is one I have heard being used by several different people, but with different objectives.

Seeing space syntax as a thermometer can in that sense lead one to believe it is a normative and not an analytical theory, and miss out on the fact that it doesn't aim to say a certain form or design is better than another.

PRODUCT - PROCESS

Relating to the roles and how they developed over time there have been differences in focusing on the product or the process. The focus on the process can be seen as a moving away from developing core knowledge and seeing architects and urban planners as experts, and instead moving towards more of a collective role. Having this view in combination with seeing the profession more as an art might mean seeing space syntax as one input out of many, to be weighed against many other factors. Here, space syntax is seen as an input coming at a certain time in the process instead of seeing it as something more fundamental, something to think with.

A risk with this view on the profession is that space syntax is not prioritised, or that when the method is used, it comes in at a late stage in the process, making the analysis not being able to give very valuable input, which in itself can be a reason for scepticism.

As always, a balance is needed between the two ways of looking at our professional knowledge. Space syntax enthusiasts argue for the need of developing our core knowledge, and making it a "profession in its true sense" by using a well-grounded theory where it is needed. Since knowledge about urban form and spatial relations is not the responsibility of any other profession than ours it is important to develop our internal knowledge, adding a set of skills to our repertoire, while of course also making sure the planning process is just and takes into account other perspectives.



Illustration. Seeing space syntax as a thermometer might lead one to believe it is a normative and not an analytical theory.

COMPLICATED OR COMPLEX

Seeing the city as any type of system means realising that it is made up of interrelated parts where changes within the system affects the whole. As described by Spatial Morphology Group (2016) the way the modernists placed buildings, functions and neighbourhoods implies a lack of this type of thinking. And this can be recognised in the way we are placing perimeter blocks in a grid structure, expecting "lively" and "urban" without understanding the importance of the context.

What is interesting is that at a shallow glance, one might believe space syntax is a way of describing the city as complicated and not complex. But with a deeper understanding of space syntax we know this is not the case. As described by "the social scientist" there's a risk of people being seduced by space syntax seeming to present a simple universal answer to things that are in reality very complex. What is interesting is that the built form, our physical structure is in itself not a complex system. It is something built in stone that doesn't behave unpredictably. Someone who has a view on the profession as overly complex, impossible even, and is therefore sceptical towards a method using quantification, might be helped by seeing the physical structure described in this way.

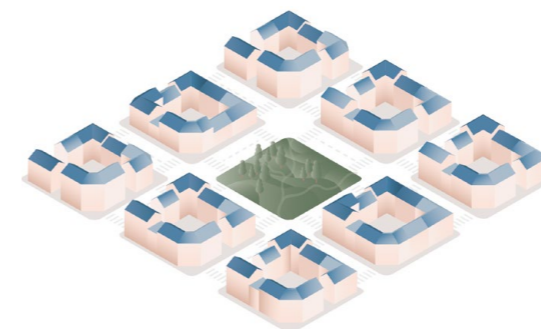


Illustration. A modernist way of placing out buildings in "urban shapes" implies a lack of systems thinking in urban planning.

profession diagram

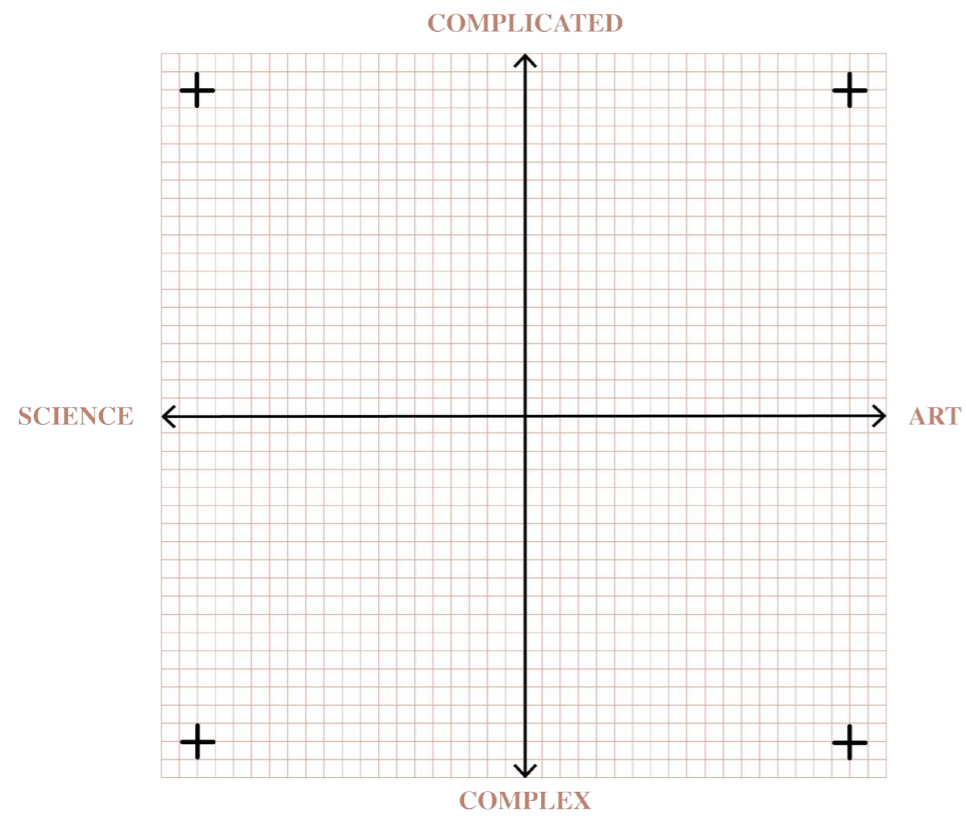
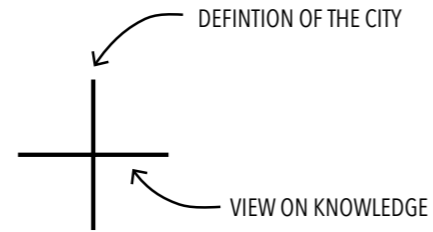
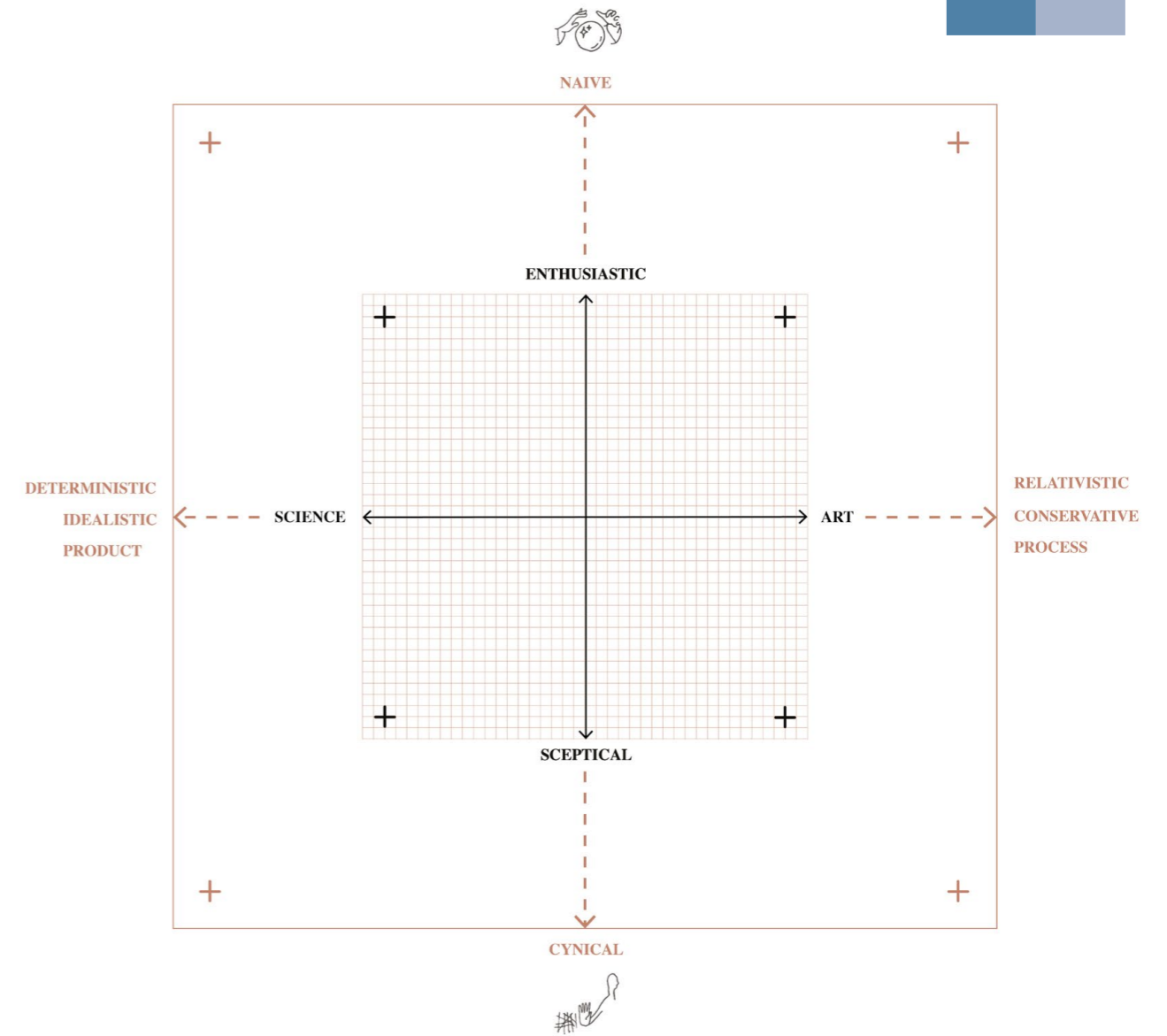
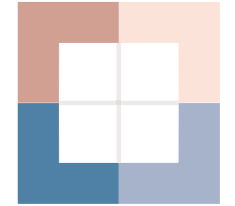


Diagram views on the profession. This diagram summarises attitudes towards the profession: dualing views on the professional knowledge (artistic or scientific)

on the x-axis and different ways of seeing the city, as a complicated or a complex system on the y-axis.

attitudes towards space syntax



Combined diagram. This diagram shows how different ways of viewing the profession affect one's attitude towards space syntax, towards an enthusiastic or a sceptical

attitude. The combination of different attitudes create more "extreme" attitudes in an outer diagram.

explanation of diagram

The inner diagram shows how different ways of viewing the profession affect one's attitude towards space syntax, towards a more enthusiastic or sceptical attitude.

ENTHUSIASTIC

If one sees the city as a complicated system one might be more prone to having an enthusiastic attitude towards space syntax. As described in the previous pages, at a shallow glance, or without a deep understanding of space syntax, one might be fooled to believe that space syntax does aim to describe the city as a complicated system in the sense that an analysis can figure it out, or "solve" the city. One might see it as a difficult task, but still something that is possible. Space syntax is here seen as something that can give valuable input.

SCEPTIC

On the other end of the scale, we find a more sceptical attitude towards space syntax. If one sees the city as a complex system, one's reaction might be to doubt that space syntax, using quantification methods, can capture something so complex. Like "the consultant" describes, some might be sceptic towards space syntax because it aims to capture how we experience the city, and experience is made up out of so many interrelated factors that can't be measured. Another reason for scepticism is not seeing its usefulness in practice, because of reasons relating to the legal framework described in the previous pages.

OUTER DIAGRAM/EXTREME ATTITUDES

The elongation of the x and y-axes in this diagram form a new, outer diagram, comprised of more "extreme" attitudes.

The point I want to make is that being within the boundaries of the inner diagram can be described as professional, while the outer edges of the diagram are not. Here, the different positions on the x and y axis respectively have "tipped" over into something different. It is not so controversial to place oneself in the inner diagram, however, if one's has a too "black or white" view on the profession, one's attitude might turn into something that could be described as more extreme and less professional. The combinations of different "extreme" attitudes form the outer diagram, that can be separated into four different sections or positions.

NAIVE

An overly enthusiastic attitude towards space syntax could, combined with a view on the city as a complicated system might give one a naive attitude towards space syntax.

CYNICAL

A sceptical attitude towards space syntax, together with a view on the city as overly complex, nearly impossible even, might turn into a cynical view on the theory.

CONSERVATIVE-RELATIVISTIC

A categoric view on architectural knowledge as artistic might be described as conservative or relativistic. Here, I have struggled to find one specific term to describe the attitude I am looking for. I am using conservative in the sense of relying on artistic, tacit and inherited knowledge and not seeing a place for "new knowledge" like space syntax in the profession. Relativism is a philosophical standing point that focuses on setting everything in relation to something else, that all knowledge is relative. One could use the word relativistic in the sense of being against scientific knowl-

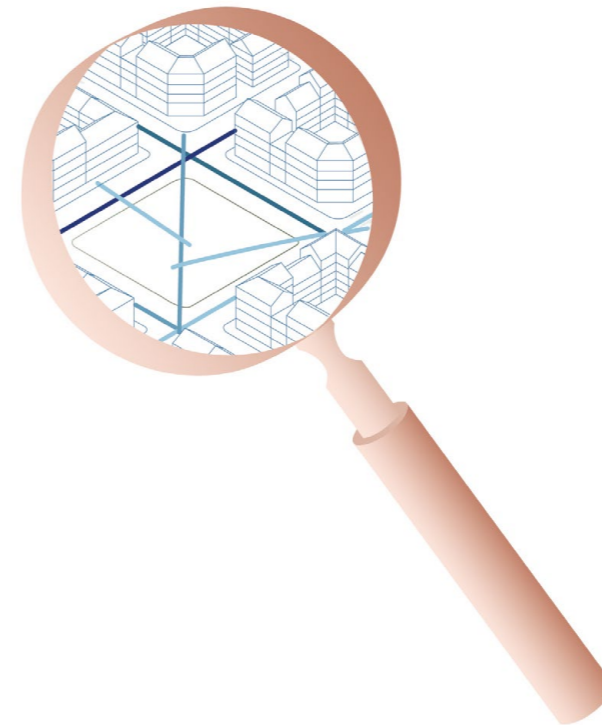


Illustration. Having a categoric view on architecture and urban planning as a science could mean one might get snowed in in believing that the "second form" (as described by Marcus (2000)) that is "unveiled" by a space syntax analysis tells you everything, and that what is outside of that "other world" can be explained

edge, that rely on general principles, in architecture. Conservative is used in combination with someone who has an enthusiastic or naive attitude towards space syntax, while relativistic is used for someone with a sceptical or cynical attitude.

IDEALISTIC-DETERMINISTIC

A view on architecture and urban planning as a purely scientific profession can be described as having an idealistic or deterministic view. I am defining it as idealistic in the sense of wanting a perfect theory to describe the world in its entirety and deterministic in the sense of thinking a theory can give unambiguous answers. A deterministic view relates more to someone who is overly enthusiastic towards space syntax, while someone with a more sceptical or cynical view can be described as more idealistic.

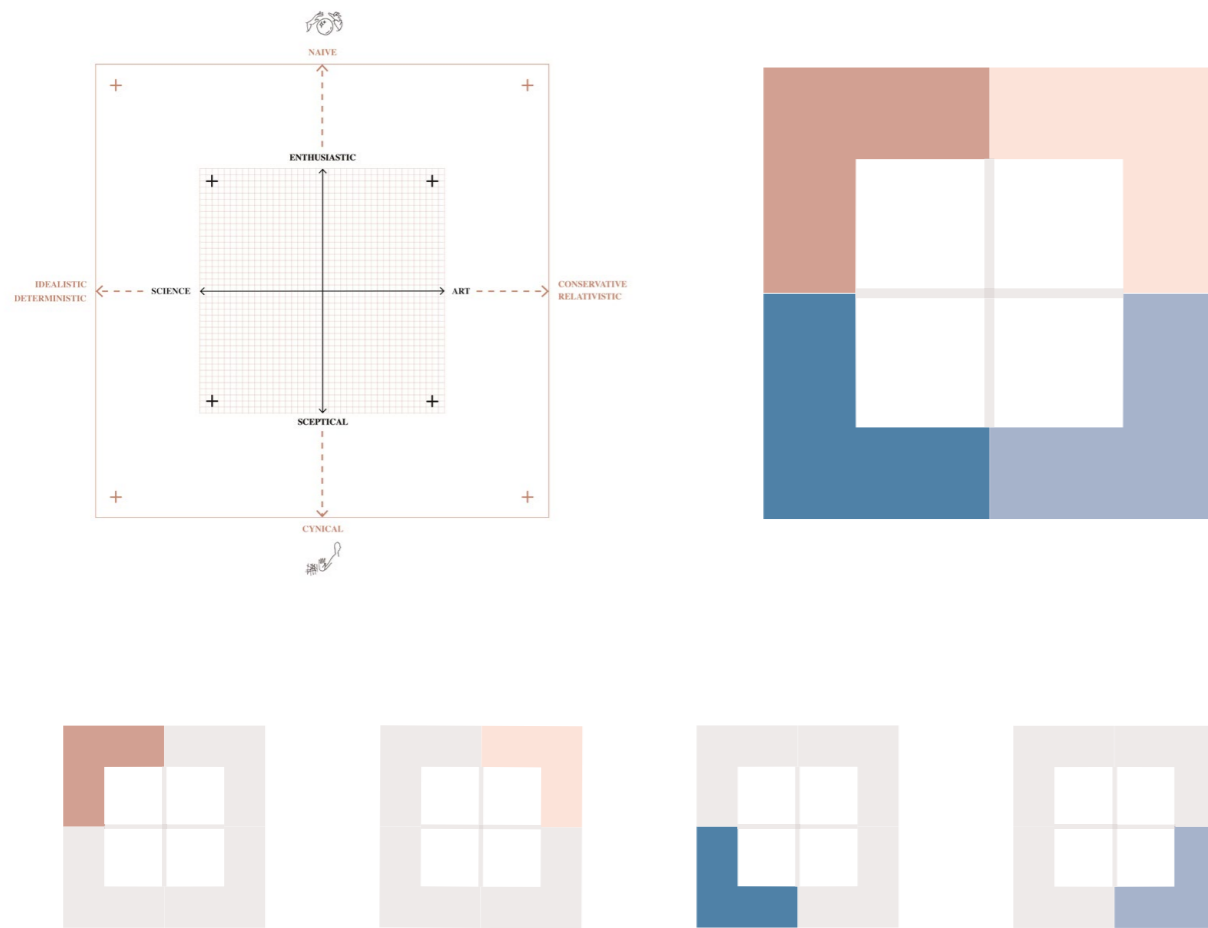
PROCESS-PRODUCT

A relation could be drawn between the above mentioned sets of dualities and a difference in focus between product and process, between focusing on the architect's role as experts with our own set of skills on the left end of the axis and the moving away from this role into a more humble listening role focusing on taking in many perspectives in the process on the right end of the axis.

fully by the theory.

On the other end, if one doesn't believe that a theory like space syntax has much (or anything) to do with architecture and urban planning, one is in a way ignoring "the second form" completely.

combinations



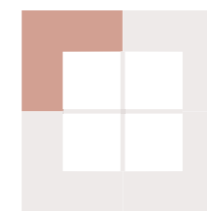
The combinations of these "extreme attitudes" forming the outer diagram can be separated into four different sections, described in next pages.

The extreme positions found in my outer diagram are views and attitudes described by my interview people as well as drawn from my own experience. I want to be clear that I am not saying they are descriptions of my

interview people.

Note that in my examples I am writing "people with this combination of attitudes" but it could also be described as a collective way of thinking, a tendency within a group of people, a project or an organisation.

"it's rocket science"



NAIVE - DETERMINISTIC- PRODUCT

The upper left corner of the diagram is an attitude that sees the profession as a science, the city as a complicated system and a naive attitude towards space syntax.

This combination of attitudes could mean seeing the profession as a predictive science where space syntax offers absolute and unambiguous answers. The metaphor of cities as rocket science can be used here in the sense that thinking it's possible to create something that is very complicated, and has many parts, but that the result can be calculated and predicted.

In working academically this could mean believing everything can be measured and quantified, social as well as spatial aspects, and that space syntax can explain the processes in a city fully. This means an over-belief in results, like drawing direct correlations between the results of an analysis and the outcome in the form of social processes taking place for example. So in a way, being deterministic about the analysis results and not realising it does not claim to explain all aspects. This very isolated view does not realise the need for combining the knowledge with other aspects to get a full picture.

In a way, it is like seeing space syntax as a crystal ball that can predict the future. As described by "the social scientist", one might be seduced by space syntax, seeing it nearly as magic.

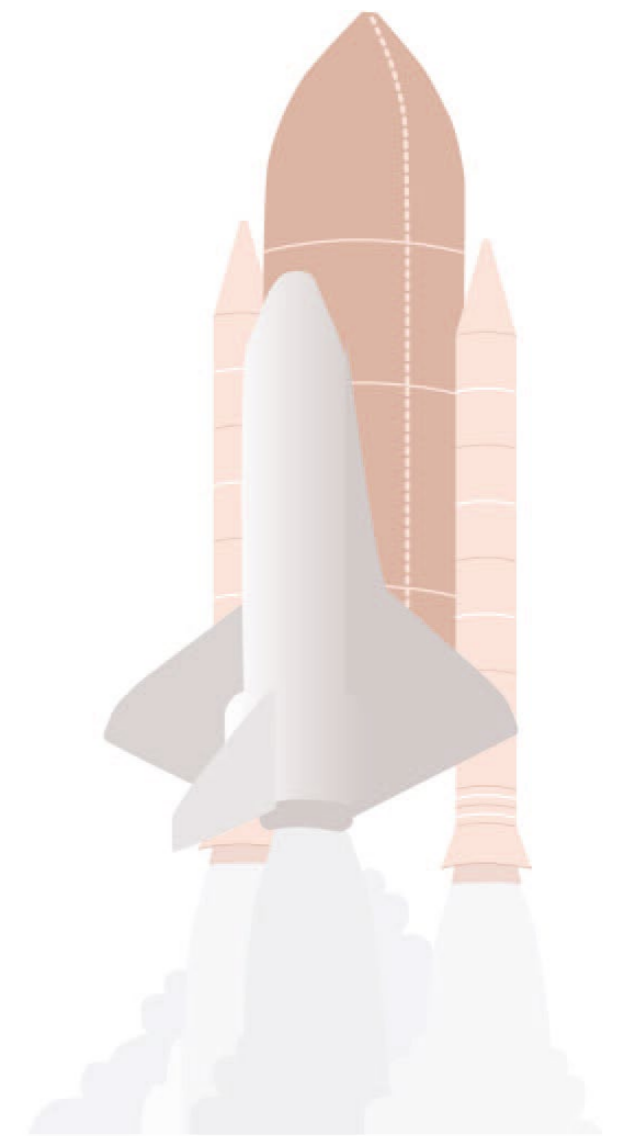


Illustration. Having a naive view on space syntax and viewing the city as rocket science, something that can be solved and calculated.

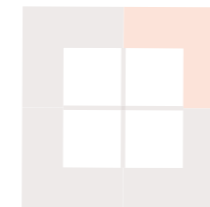
As a researcher, this might imply being disdain from reality, and focusing on research that is very narrow and looking at aspects so much in isolation that they are not relevant in practice, which is always influenced by factors that are unpredictable. It could also mean that if research results fail to explain something and doesn't correlate, one is certain that more research will be able to explain it. Here, the focus is very much on the architectural product, and little on the process.

As a practitioner this attitude means making designs based on results of a space syntax analysis, expecting the outcome to be determined beforehand.

In an analysis, a dense grid structure is the best way to create high integration values in an analysis. But a grid with a high local integration does not per se imply that the area as a whole will be 'lively' but rather that other factors will determine the hierarchy of the streets, and not the configuration of the grid itself. In the analysis, the grid can be said to be self-generating a high value. An example of a naive attitude is thinking that a design of a grid will automatically imply "lively and urban", without much other insight into what makes up these factors.

What holders of this attitude might need is to be balanced more towards the diagonal end of the diagram. This means insight into the complexity of the profession and into the realities of planning practice and what makes up "urbanity" or other goals with urban planning. It also means a deeper understanding of what space syntax can and cannot answer, and the importance of weighing together factors, quantifiable and not, to get a fuller picture of our cities. It is important to see the city as a complex system, where space syntax can help us to better understand how the spatial system relates to and influences many of the other systems.

"it's complicated"



NAIVE - CONSERVATIVE

This combination of attitudes is perhaps a bit odd and difficult to "wrap your head around," but I will give it a try.

I'm defining it as having a naive attitude towards space syntax together with a conservative view on the profession could mean for example using conclusions from a certain analysis as a way of arguing for what you want, in a sense, using space syntax in an pseudo-scientific way. Because there might be other reasons for wanting to use a certain typology, and the result of an analysis is always related to the context and the goals set. In that sense, one is claiming that the design, like a certain typology, is based on scientific grounds to get one's ideas across, but in reality conclusions are drawn too quickly, or contextual conclusions are used as general "truths." Although not directly related to space syntax, this attitude can be recognised by Westin's (2015) description of modernists using science as a smokescreen to hide an artistic vision.

In this sense, one does not recognise that space syntax is an analytical and not a normative theory, and sees it as prescribing a design that is constituting "good" urban design. As illustrated below by a "magic grid carpet" one might use perimeter blocks in a grid formation as a way to create "lively" and "urban" because thinking (or wishing) that is the message that space syntax conveys.

One views the city as complicated in the sense of using symbols for urbanity, that are more related to the expression and design than the context. "It looks urban so it should be." It might very well "work", but when a plan fails to deliver on the goals one lacks understanding for why.

This way of using symbols to create urbanity, as described in chapter 3, and arguing for them having a basis in science threatens to diminish space syntax's credibility, and can lead to further critique for seeming to prescribe universal design solutions to every context. In that sense space syntax is abused, and could be used as a power tool, without a deep understanding (or will to understand) the depths of the theory.

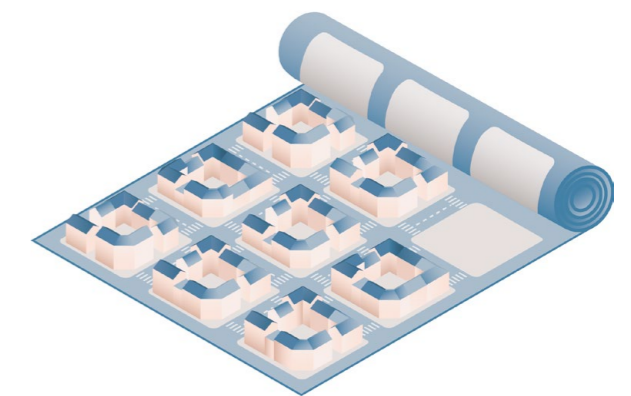
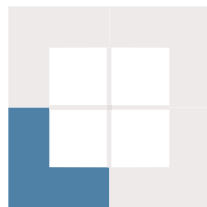


Illustration: Magic grid carpet representing using space syntax to argue for a certain typology for example.

"it's impossible"



CYNICAL - IDEALISTIC

This combination of attitudes I describe as someone who views the profession as very complex, impossible even. As described by "the social scientist", someone who focuses on the difficulties of capturing urbanity, and drawing any type of conclusions. The profession is full of unpredictability and the planner full of paradoxes. This could be described as a more critical and philosophical view who's scepticism towards space syntax has turned into cynicism. One discards space syntax because it can never give a true representation of reality. Every model is a reduction and you focus on this. If you lack insight into practical reality you might fail to see how a not "perfect" theory could still help in the planning process.

As someone focusing on theoretical knowledge, one is overwhelmed, "stuck in theory" and trying to find the perfect one, but also cynical in the sense of not having hope of finding one that truly captures our experience of a city. One might see space syntax as a good effort, but since it doesn't go all the way, there's no point in trying.

This critical position, doubting you can ever create knowledge without influencing it yourself, leads to a paralysation, leaving you unable to make any decisions or take any action, and as described by the "social scientist" risks never getting anything done.

To balance this attitude one could use a bit more prag-

matic view on the use of theory in practice, as described by "the researcher", and insight into how space syntax can help in the design process. Because even though it is a simplified model, it is well-grounded theory and (much) better than other alternatives.



Illustration: *Overwhelmed doubters armchair*

"it's hopeless"



CYNICAL - RELATIVISTIC- PROCESS

Here, one views one's professional role not as an expert, focusing on product, but rather as someone taking in many perspectives and weighing them together, focusing on a just and democratic process.

One is overly sceptical towards space syntax in the sense of not seeing the use for it in practice, or doubting it can "bring much to the table." You see it as one input out of very many others, which might lead to it coming in at a late stage and therefore not being able to contribute much to the process, further enhancing one's scepticism.

A cynical view towards space syntax could be related to seeing urban planning as hopelessly difficult. It doesn't really involve core knowledge, spatial thinking, it is something else. You are very far into the complexity of the profession, trying to structure the process in a good way. But the collaboration between actors, managing interests and so on might overwhelm you.

Contrary to the attitude describe on the opposite side in the diagram, the feeling of overwhelming complexity and cynicism might not leave one paralysed, instead one is actively trying to manage all interests and take in perspectives. As described by "the politician" it might result in having many meetings and workshops but struggling to reach decisions. The risk of this position is that one doesn't get to the point, or the process gets hung up on the conflicts of interest. If one is working with comprehensive planning this position has rather

big implications. Because if the comprehensive plan fails to reach conclusions and to give concrete input, something else will steer the process. Because the thing is, the end product, our built environment, always ends up as *something*.

Interestingly enough, one might make a "jump" in the diagram, from a more neutral or enthusiastic view towards space syntax into a cynical one. "The strategic planner" who to my understanding has a basically positive view towards space syntax, is interested in it and believes it could give valuable input, describes that he has a hard time to see how it could be useful within the current legal framework in the example he is using. This feeling is also to some extent described by "the politician", who describes all the juridical and organisational obstacles, making it irrelevant how "enlightened" you are relating to these questions.

This view of thinking something in an ideal world could be useful or important but not seeing how it could work in the current system could be described as a cynical attitude, a feeling of hopelessness and frustration. This relates to the discussion of power, and feeling of power. The difficulties of making changes in a very slow and large organisation can increase a feeling of being a cog in the wheel, and that actions are futile. In that sense, the issues with the planning process and the diagram illustrating this, very much influence positions in this diagram.

I can recognise this frustration in people I've met in practice. In an extreme way it could perhaps be de-

scribed as a collective losing of faith in the profession, the planning process or our knowledge. What is needed to balance this attitude could be instilling some faith in one's role and core knowledge as architects and planners, which space syntax could hopefully contribute to doing.



Illustration. Endless workshoper's table illustrating a feeling of frustration and difficulties of reaching conclusions, focusing on the taking in all perspectives in the process, not seeing the use for space syntax other

than as possibly one input out of very many, or seeing its importance but not having hope of it being used within the current system.

outro

In this master's thesis I have aimed to explore how space syntax can be better used in practice today. I have found there are different attitudes towards space syntax, different expectations on what it can do and deliver and I wanted to understand the reasons for the different attitudes. How do different views on the profession (our knowledge and our subject: the city) affect attitudes towards space syntax? And how does the legal framework affect the use of it in practice?

My explorations have led me to see that the static legal framework of the planning process, the lack of seeing the city as a system, together with what can be described as a losing of faith in our professional knowledge are clues to different attitudes towards space syntax, affecting how we use or don't use it. And in my view, space syntax is not used to its full potential. I have therefore proposed ways in which a deeper understanding of space syntax could make us use it better, and described the opportunities this has for our profession, the development of our knowledge and skill as well as the relations between the roles within the profession. Because I believe that space syntax, and the type of thinking that it represents, has an important role to play in helping us deal with the complex issues facing our cities.

But as we've seen, space syntax isn't a miracle cure. It doesn't present universal answers, nor does it aim to. It is something that can help us think, help us structure complex situations and make aspects visible that our traditional tools have not. And these aspects, as shown by a long tradition of research, are very important for our understanding of the city and the processes taking place there: how the physically built form is structuring for many other socio-economic processes.

As we've seen, the legal framework and the planning process has an important role to play in this story, in the sense that it can hinder or make it easier to use space syntax in a dynamic way. Some questions relate to issues with the management of large organisations,

some with a lack of competence found in the profession (due to it not being a big part of our education), and some with the actual legal framework itself, and the lack of binding legal documents outside the development plan scale. With a deeper understanding of the city as a system, the way that space syntax describes it, one might see the legal framework with fresh eyes, and better see how it, or the organisation around it and the roles within it, could be balanced.

Of course, one doesn't need to be enthusiastic towards space syntax to see the need for a different kind of planning. This thesis might to some sound like another way of preaching space syntax as the solution to all problems, and is in itself rather enthusiastic towards the method. But - and this I've learned not least while working at the City of Gothenburg, space syntax enthusiasts are not the only ones directing criticism towards the planning process being too focused on parts and not the whole, of trying to solve system questions on a too small level or the comprehensive planning lacking concreteness and being reactive more than proactive. One doesn't need space syntax to think in a spatial way, think of the city as a system, think in relations and configurations. But as I've described it does make these things easier to see, discuss and define, and communicate visually to others, which, in my view, is much of space syntax's strength. Space syntax could identify certain lock-ins, which is the first step towards changing them. And they are not only lock-ins in the planning process, but also in our views towards the profession.

Therefore I think this thesis can have relevance not only for people working specifically with space syntax, but the conclusions drawn can also be of a general importance in relation to the architecture and the urban planning profession. One could say I am using space syntax as a lens: how space syntax is approached and put to use in practice unveils how we as a profession see the city.

So, what is a balanced attitude towards space syntax?

As described earlier, one might be fooled to believe that space syntax describes the city as a complicated system, that it advocates making architecture a complete science, replacing other knowledge and presenting a universal answer to very complex questions. But with my explorations I want to argue that this is not the case. A deeper understanding of space syntax leads us to see that it doesn't aim to describe us as either artist or scientist, but both, and that the profession is neither rocket science nor impossible, it's complex. A balanced attitude could help us balance the dualities found within the profession and ourselves, embrace them even, because they are what makes us and it so fascinating.

My point in exploring dualities and collecting them in a diagram is not to put them against each other and say that one is better than the other. Nor is the objective to point out certain people as belonging to one part of the diagram or the other, but rather to use it as a way of better understanding each other and above all, making us aware of what our world view is. Because, like Westin writes, we do not operate in a vacuum, we are not neutral objects. And like Hillier argues, we do use theories of some sort in our practice, even if we might not be aware of them. What assumptions on the city are we basing our decisions on? What will the judgements be? Did we fail or succeed in creating the cities we aimed for?

What I want to argue with this master thesis is that taking a step back and reflecting on one's view on the profession is important, whether in the form of an individual person or looking at architecture and urban design as a whole. As individuals, we are dual. We are not just one thing, but can be contradictory and have different positions and attitudes depending on the situation. And I think we need to be. Certain situations require balance towards one end of the scale in the diagram and in other cases we need to balance it towards the other end. Because as people, and as organisations, we are not static, we move around the different positions. And this also relates to the interests of different roles or groups shifting the weight towards one end or the other. A diagram like this, or simply a discussion on these questions, could help us see which end we are leaning towards. It could also hopefully make us recognise our

power and shoulder the responsibility of being aware of our individual or collective views. Because as history tells us, the assumptions and theories we base our decisions on are translated into stone and have a huge effect on the way we live our lives.

For me, a balanced attitude towards space syntax is to let it help us articulate and become better at our profession, increasing our collective confidence in our knowledge so that combined with other professions we can tackle the many challenges facing us today. Hopefully it can contribute to us using this moment in time as an opportunity to create sustainable, robust cities and societies.

*"The difficult I'll do right now
The impossible will take a little
while"*

-Billie Holiday

final reflections

MY CRITIQUE

In a way, this thesis is my critique of the planning practice today. As I've described, it is a critique I started to formulate during my bachelor years. It has however changed in its expression since then. My view of the planning process has become more nuanced after getting insight into the organisation and the complex situations there. Critiquing the urban planning, especially in Gothenburg, is like kicking in an open door, and my aim is not to just join the choir of negative complaints towards the municipality, but hopefully to present a more constructive criticism and point out certain lock-ins, specifically relating to space syntax, where there is room for improvement.

The aim with the case study, which seemed to be an example where space syntax had been used but may be not managed to meet the expectations fully, was no to try to put blame on anyone for doing something "wrong," but to try to understand how it turned out the way it did. Rather than being someone's explicit (ill) will, there is, in my view, a feeling of things just happening, situations just appearing, without anyone being in full control of the processes. This can of course lead to a frustration and a feeling of powerlessness. A difficult issue with these large, hierarchical organisations is that there are so many steps between the people who are drawing and the people making decisions. Because of this, the organisation can be rather slow to changes, and it's hard to feel that one has power, and the responsibility that comes with it. But I wouldn't say that the people working there are not themselves aware of many of these problems. In my view, the Urban Planning Department is filled with very competent and skilled people in an organisation where the competence is not being used to its full potential, which is a shame.

CHOICE OF METHOD

The method I chose as my main material in this master's thesis was new to me, but turned out to be a very rewarding choice. The fact that it was a rather exploratory approach gave me a lot of material to work with, but was perhaps a bit overwhelming. It ended up taking much more time than I had anticipated to listen through, sort out, translate and figure out how to present the material. I think it was a quality that the interviews turned more into open discussions but it also meant some conversations drifted off into things that were interesting, but not relevant for this specific thesis. Each time I went back to the material I found new aspects and details but I ended up having to sort out a lot in my end material. I think this shows that the subject is engaging and definitely not "exhausted" with my explorations.

As described, I've conducted a selective approach, both in my choice of literature, case study and interview subjects. It is interesting to reflect upon where my thesis would have ended up if I had chosen other interview subjects. Or, if I had based it on other literature, for example not using Westin's work.

In retrospect it would have been interesting to interview someone with a very sceptical attitude towards space syntax and quantification in urban design and planning, perhaps in the form of a consulting architect, to balance the more enthusiastic views. I reflected on this also during the process, after having conducted most of my interviews, and had contact with one person. Due to lack of time this was unfortunately not possible, and the very critical position was instead described more with "second hand" information.

FOLLOW THE PROBLEM

As I've described, my approach to this master's thesis is to follow the problem where it leads me. My first idea was about looking at knowledge transfer in the planning process, to study one or several projects where space syntax was used, all the way from first idea to finished plan and see how the knowledge is communicated and kept during the process and between all different actors. As I was working with space syntax at the City of Gothenburg, I saw a need for finding a way of working with space syntax in-house at the municipality. When should it come in, how and by whom should it be used? How should the models be updated and the maps drawn? This related more to the method and the technical tools, since the Urban Planning Department seemed eager to use them. But there I started to think about the "risks" of using the tools before knowing why one is using them. Could there be a risk of them not being used in a good way, if there's not enough knowledge about or room for the way of thinking that they represent first? What type of cities might we create if we just suddenly jump into using a tool without a deep understanding of it first?

I saw these misconceptions and the mystery relating to space syntax and I recognised some obstacles to using it as a way of thinking in the planning process. Since a lot of my work there became a pedagogic exercise, my objective with the thesis then turned into wanting to make a guidebook or a manual, explaining the theory and how it can be used in different ways and what to think about from the perspective of different roles.

Since I think it is in my nature to question and reflect, and perhaps take a step back and say "but wait, we need to clarify this first, before we can jump into that," I started exploring the underlying ways of seeing the profession. Because if we are going to use space syntax in a fruitful way, I think we need

to have a basic understanding of the city as a system, and a balance between different types of knowledges. We need to understand why we are using it, otherwise it might just become another point to check off a list in the process, and will not help us understand the city better. And therefore I wanted to explore the reasons for different attitudes towards space syntax, and how a balanced attitude could help us in the urban design and planning practice.

AIM

This master's thesis is a lot of things. It's a story about space syntax, a story that can be told in many different ways, depending on who is telling it. But this is my story of space syntax, as well as a story about me becoming an architect, and finding my place within the profession.

Even though this is a reflective text where I have related issued back to me and my own experience, it doesn't have to mean it cannot have relevance for others as well. Just as my explorations have made me say "This reminds me of...", my hope is that others can look at the diagrams and read my texts and do the same. Maybe we see things in ourselves or in the people or groups we work with. I think the diagrams do spark some or these thoughts, as they have in me and the people I've presented them to.

The aim of this thesis could, funny enough, be explained with two questions I scribbled down on a post-it-note during the preparatory course for my master thesis. The post it that I meant to throw away somehow got stuck to the back of my notebook, and the message on it has kept coming back to me (and who doesn't love seeing symbolism in everything?).



*WHO AM I?
WHAT IS A CITY?*

Who am I - in my professional and my private role. And What is the city - how do we describe and define the subject of our work?

During this master's thesis I have reflected on very large questions surrounding our professional knowledge, power and responsibility and even the creation of knowledge itself. I have taken on a rather ambitious task which became more abstract and theoretical than what I imagined. The process of writing academically has made me realise a lot about my own creative process, and the way I think, which tends to be circular rather than linear. In summary, it has been a challenging but also, I would say, a really good experience.

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Figure 1. Image from: The City of Gothenburg (2016). *Analys av Västra Göteborg*. The Urban Planning Department, Plan group 2.

interview questions

All interviews took place in Stockholm or Gothenburg (except for one telephone interview) between February and March of 2019. Due to difference in time constraint (and lack thereof) the interviews varied in length between 40 minutes and nearly 2,5 hours.

- "The consultant"- Feb 12th: Stockholm, 1h 45 min
- "The politician" - Feb 19th: Rådhuset, Gothenburg, 2h 20 min
- "The researcher" - Feb 28th: Chalmers University of Technology, Gothenburg, 40 min
- "The social scientist" - March 1st: Telephone interview, 1h 45 min
- "The strategic planner" - March 5th: Urban Planning Department, Gothenburg, 1h
- "The spatial planner" - March 7th: Urban Planning Department, Gothenburg, 1h 30 min

The interviews were conducted in Swedish. I had a similar set of questions to begin with, with some differences between them. I prepared around 20 set of questions before each interview, however, in almost all the cases the interviews were more of a qualitative discussion (often the interview people simply got engaged and started talking) and the themes in the questions I had prepared came up naturally and led to interesting follow up questions. Since the interviews were more of discussions I won't account for all the questions I asked and in what order, but I will give examples of themes and questions and how they varied.

BACKGROUND

My first question related to asking the interview subjects to describe their background and their role.

What is your background and role here at X? What have you done before this?

To the politician I asked some more specific questions

on why he was interested in politics and what the task of The Building Committee is.

How did you come across space syntax? Why were you drawn to space syntax? (For someone working specifically with space syntax)

or *How have you come across/worked with space syntax? (to "the spatial planner" and the "strategic planner" who mostly worked with it relating to the case study)*

To "the consultant" I also asked how the consulting firm works most commonly with space syntax, who are the contractors, what type of projects and scales.

How do you work with space syntax? Can you describe a typical project? In what phase in the planning process? Who is the contractor?

Since "the politician" has a special interest in urban design and planning issues, as well as space syntax, I asked him about this, and how much he would say he knows about space syntax compared to for example other politicians in The Building Committee.

What is your knowledge of space syntax in relation to other politicians?

LEGAL FRAMEWORK

I also asked questions relating to the planning process, the legal framework and how decisions are made. I asked about views on the way the municipality is organised as well as views on the legal documents in comprehensive- and development planning. This I particularly discussed with "the politician."

What is your view on the way the municipality is or-

ganised? What do you think of the legal documents in comprehensive and development planning?

With "the spatial planner" and "the strategic planner" we talked about the legal framework in relation to the parallel processes, and the task of interpreting visions from politics.

PLANNING PRACTICE

I discussed the current planning practice mostly with "the social scientist", "the politician" and "the consultant."

What is your critique of the planning practice today?

With "the social scientist" I for example discussed the difficulty of interpreting urbanity.

VIEWS ON SPACE SYNTAX

I asked the interviewees to describe space syntax's strengths and weaknesses, as well as if they identify any threats with using the method, and what kind of opportunities they see the method bringing to the profession.

How would you describe space syntax?

What are the strengths, weaknesses, threats and opportunities that you see with space syntax?

I prepared questions to all interviewees except "the social scientist" about what they think about using space syntax as a tool in-house at municipalities.

What are your opinions on using space syntax as a tool in-house at municipalities?

To "the consultant," who has worked with space syntax in relation to different contractors and municipalities I asked if he saw any differences with working in different settings.

Is there a difference in working with different municipalities?

To "the researcher" and "the social scientist" I asked their views on the relation between research and practice, on a more abstract level with "the social scientist" and specifically about implementing space syntax theory into practice to "the researcher."

I also had questions about my interview subject's views on space syntax in relation to the general quantification trend in society.

For the people immersed in the theory (the consultant, the social scientist and the researcher) I asked what they see as the most common and the most relevant critique of the theory, and asked them how they view certain critique, like for example that one is reducing people into bodies or not taking into account intentions or aspects like territoriality.

What is the most common and relevant critique of the theory in your view?

To "the consultant" I also asked:

What is a critique you usually get?

What are common misconceptions about the method?

How do you work with communicating results to your contractors? How do you work pedagogically?

To "the spatial planner" who has been working with the urban structure analysis made by space syntax consultants, I asked about her views on how results were communicated in the analysis.

VIEWS ON ROLES

With "the politician" I asked how he defines the role of the civil servant in relation to the politician and as well how he sees the responsibility of the politician.

For example I described "the politicians" view on the

role of the civil servant in relation to politicians to "the spatial planner" and "the social scientist" who could then comment on this.

With "the social scientist" our discussion related a lot to her view on the role of the architect and the planner from the perspective of someone coming from another profession. We talked a lot about the (theoretical) power of the architects and planners, also in relation to space syntax.

CASE STUDY

As described, "the spatial planner" and "the strategic planner" also were asked questions specifically relating to the case study.

What lead up to this project? What happens next?

How was the task from politics phrased?

What is the reason for the geographical delimitation?

What is the reason for the parallel processes?

Why did you chose to use space syntax in this project? (the program) or Why did you not use space syntax in this project? (the comprehensive plan) Are you consider using space syntax? How do you prioritise?

What were your expectations on the analyses? What do you think of the result?

Are you interested in using space syntax again? Would you like to have more knowledge of space syntax?



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