

CHALMERS



Rearranging the townscape

A study that shows how the townscape affects pedestrians' movements

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Omstrukturering av stadsbilden
En studie av hur stadsbilden påverkar fotgängares rörelsemönster
CAMILLA E. LINDSKOG, 1983

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Front page:

The picture is a montage of the map on page 11 and a drawing based on an integration of Göteborg by
Camilla Andersson, 2002.

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Abstract

The purpose of this report is to examine how the townscape affects pedestrians' movements. Five theories and views on the townscape are examined, and applied to Gustav Adolfs Torg and Kungstorget in Göteborg. The report shows that the usage of the squares is not as extensive as it could be, and points to some specific measures to take to make them more suitable for pedestrians.

Keywords: townscape, movement pattern, spatial theories, Gustav Adolfs Torg, Kungstorget, Gehl, Hillier, Sitte, Cullen, Lynch, Nolli

Sammandrag

Finns det ett samband mellan hur en stad är uppbyggd och hur den används? Syftet med den här rapporten är att undersöka hur stadsbilden påverkar fotgängares rörelsemönster, och för att ge en heltäckande bild innehåller rapporten fem olika teorier och synsätt som var och en för sig ger en bild av relationen mellan människa och stad. Sammandrag av de fem teorierna som behandlar hur, var och varför folk rör sig i en stad, var och varför de är benägna att uppehålla sig, samt hur staden upplevs när man rör sig genom den beskrivs i första delen av rapporten och länkas därefter samman för att appliceras på Gustav Adolfs Torg och Kungstorget i Göteborg.

Rapporten visar att torgen inte används i den utsträckning som de har potential för, främst eftersom de är avskurna från sin omgivning och kontakten med vattnet av trafik. Dessutom pekar rapporten på några särskilda åtgärder att vidta för att göra de mer lämpliga för fotgängare, till exempel fler sittplatser på andra ställen än där de finns idag.

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1. Introduction

Is there a connection between how a town looks and how people use it? The purpose of this report is to examine how the townscape affects pedestrians' movements. In order to do so, I have studied several theories and views of how a town works and interacts with its people. This report aims to combine the examined theories with a survey of public places in Göteborg. The study could be valuable to commercial house-owners since it may help them to evaluate the 'right' price/rent on their estates and/or show how more people could be attracted to coming to their premises. The Town of Göteborg could also benefit from this method as more places for gathering will mean a more attractive city and this will lead to an increase in tourism. Trafikkontoret will have the opportunity to see how traffic diversions will influence the pedestrians and if the intended effect is attained.

This report contains summaries of the basic ideas of five studies of how cities work. Every theory has a different approach to the townscape, and by combining them a fuller understanding of how a town interacts with its people will be obtained. The theories deal with how, why, and where people move in the city, where and why they tend to linger, and how they conceive the city while moving through it. But why do we want pedestrians in cities? I believe that it is mainly because we need people around us; the more people, the more comfortable and secure you feel, an area left unoccupied will feel dangerous and unsafe. Of course, pedestrians also contribute greatly to commerce in cities, having the opportunity to stop wherever and whenever they wish.

This report also deals with Giovanni Battista Nolli's survey of Rome's public places, done in the eighteenth century, where he uses black and white to distinguish private from public. There are three degrees of publicity in a public place, determined by who owns it. When owned by the municipality, it is called a general public place; if a corporation owns it, it is a public place; while it is called a public premises if it is privately owned (for instance a restaurant). Even interiors of buildings are conceived as public if the public has access to them. Nolli's method is used on two of Göteborg's squares, Gustav Adolfs Torg, which is surrounded by buildings owned by the municipality, and Kungstorget, which is surrounded by buildings mainly owned by private persons. Is there a link between how the public places are used and pedestrians' movements?

2. Theories and views on townscapes and places

There are several different ways of experiencing a city when living in and moving through it. In this chapter five architects' views are presented, starting with the Dane Jan Gehl who has studied the patterns of people's rest and movement in Scandinavian cities. Second is the Briton Bill Hillier who has developed a method to analyze the pattern of streets and spaces in cities by means of integration. Then follows the Italian Camillo Sitte who has focused his studies on the pattern of public places and the buildings surrounding them in Italian villages and cities. The fourth is the Briton Gordon Cullen, who studies the townscape as a series of pictures. The chapter ends with the American Kevin Lynch's opinions on how a good city should be.

2.1 Gehl – where people linger and what makes them go there

In this chapter, the information and views are gathered from studies done by Jan Gehl (if nothing else is stated). See 'Works cited and consulted'.

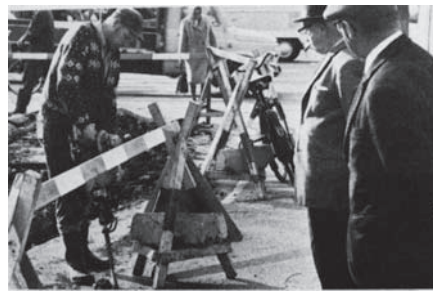
The free space in cities is traditionally used for gatherings, markets, and communications. In cities where most journeys take place on foot, there is often a good balance of these three. In industrial societies however, most aspects of everyday life take place in private spheres, in private houses, in front of private computers, in private cars, and in private working environments. This means that the free space in cities has acquired a new position as a public place and a place of gathering.

2.1.1 "One plus one equals three – at least" (van Klinger)

Life in public spaces is a self-amplifying process – something happens because there was something happening, and then something else happens because there was something happening... This means that when activities and people are gathered, the different events will stimulate each other and create even more activities. Participants of one situation are given the

opportunity to experience and participate in other activities.

The reverse case is also true – if there is nothing going on, then nothing else will happen because there was nothing happening in the first place. This leaves the street with the character of a deserted no-man's land that nobody wants to use. This promotes vandalism and crime, leaving people even



Activities as attraction.
Pictures from Gehl, 1980, p 18 & 20.

more reluctant to linger in that particular area.

People are attracted to places where other people are, or where there at least will be an opportunity to see others. If the choice were to walk down a deserted or a populated street, most would choose the street with people. When there are meeting points, life and activity in the city's public spaces, there are also opportunities to ramble amongst other people, to see, hear and experience other people in different situations.

2.1.2 People in movement

"Even on busy streets there is a tendency to choose shorter routes over safer ones. Only where the streets are crowded with traffic, the streets are very wide, or the crossings are extremely well positioned, will the crossings be made the best use of. A combination of heavy traffic, traffic lights, and limited abilities to cross, will generally lead to a series of irritating detours and restriction for pedestrians." (Gehl, 1980, page 129)

When the destination is visible, people always strive to take the shortest route, a short cut. You walk diagonally across a square, cut across a lawn, and so on. However, even though you want to see your



Short cuts.
Picture from Gehl, 1980, page 127.

destination, it is tiresome to see the entire distance. In planning, this means that routes where distant destinations are not visible, but the overall direction is maintained, is preferred to direct routes. Furthermore, there should be a great respect for the short cuts that are used when the destination is in sight.

One of the most important demands on a well-functioning road network for pedestrians is that the roads are organized in such a way that they connect the most natural destinations. Slightly bent or broken streets make the stroll more exciting. A net of footpaths passing through alternating small and large spaces will have the psychological effect that the walk is experienced as shorter than it actually is since it is divided into surmountable parts.

There are three kinds of activities in a city:

- Necessary activities, which include everything that has to be done: go to school, wait for the bus, buy groceries, go to work, and so on. These tasks take place even if the surroundings are visually unexciting, unsafe, or worn out, simply because they



Slant across a lawn.
Picture from Gehl, 1980, page 130.

have to be performed.

- Elective activities, which are the kind of activities that one is tempted to do if the weather, the place and the circumstances are rewarding: to sit, look, or just to be in the city. These activities only take place in spaces of high quality.

- Social activities, which are those that take place everywhere you may encounter other people: to experience other people, and to take part in activities, actively or passively. A city of high quality should offer a wide range of opportunities for both social and elective activities.

When passing large spaces it is generally more pleasant to skirt around its outer regions than to cross a large open space. The edges give the opportunity both to experience the space at its full, as well as the details of the façade you are close to. For public spaces and walking areas to function after dark, good lighting is required. After dark, pedestrians tend to leave their pattern of shortest route possible in favour of the route best lit. In most housing areas, pedestrians prefer the well lit streets to the footpaths, in spite of the risk of being hit by a car.

2.1.3 People at rest

"Cities well suited for lingering have projecting façades and a large number of resting points in their spaces." (Gehl, 1980, page 145)

'Rest' and 'movement' are not two separated activities; the boundary between them is indefinite since it is the same people involved in both. The activities have a strong tendency to weave together – when given the opportunity. Many activities, such as playing, lingering, conversing, and so on, actually commence as you were doing something else or going somewhere.

When standing, people tend to position themselves along the edges of open spaces, in shelter but with a good general view of the surroundings. You keep yourself from exposure and out of the way by standing near a tree, by a fence, or leaning on a pillar.



Leaning on pillars, Piazza del Campo, Siena.
Picture from Gehl, 1980, page 143.



Unconventional seating.
Pictures from Gehl, 1980, page 25.

When it comes to sitting in public spaces, it is almost every time about enjoying the view, therefore the view and the positioning of seats are of great importance. Seats should face areas where there is a lot going on, or else they are not used, or used in a somewhat untraditional way. If there are few or inferior seats, there is no choice but to keep walking, so good seating opportunities are a necessity for lasting stays. In addition, good seating opportunities open up for many other activities, which in turn makes the space even more attractive. This means that the simplest way to improve the quality of a neighbourhood is to create more and better seating, preferably along the edges of open spaces at a place of intimacy and security.

By positioning seats facing each other, the conditions for conversations are greatly improved, even between total strangers. If in addition to this there is a table, or another flat surface, further employments

of the seats can take place, for instance having a cup of coffee.

Seats in front of day-care centres, schools, hospitals, factories, offices and old people's homes will be much used simply because of their position in the middle of everyday life. This will mean an increase of activities in the area, and thereby a valuable contribution.

2.1.4 Proportions

"Most often, it's more interesting to travel through small spaces, since you can see both the whole and its details" (Gehl, 1980, page 87)

The connection of distance and intensity, closeness and warmth in different situations is an important link to how pedestrians interpret architectonic dimensions. In cities with modest dimensions, narrow streets and small squares; buildings, details and people are experienced at a close range and with high intensity. The cities and their spaces will then be conceived as warm and personal. The reverse is true in areas with huge open spaces, wide streets and high-rise buildings, which are often conceived as cold and impersonal. Areas built on a large scale, with right angles, and elongated perspectives, are generally not very suitable for people travelling on foot.

A well-functioning city has a nice blend of functions in the city-centre. For crime-prevention and the experience of security downtown, it is important to have buildings for residential purposes – even in the city-centre. Resident means that

there is a certain group of people with a direct connection to, and interest in, that specific area, and this means that children, youths, and the elderly can contribute to the creation of a versatile, and thereby better, city. Education centres, universities, and colleges can also contribute with a valuable addition of life and vitality to the district.

2.2 Hillier

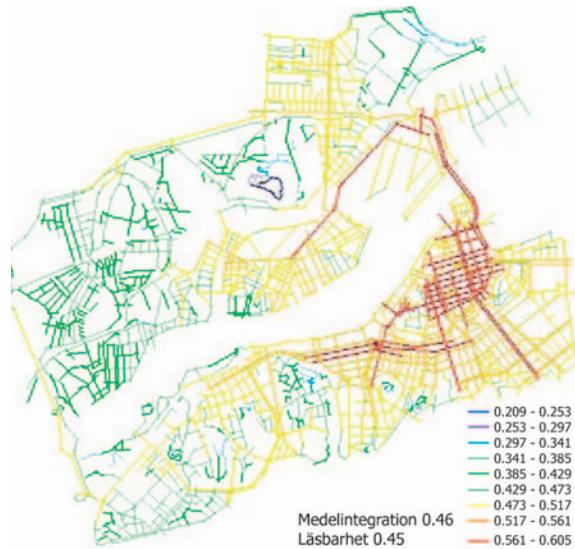
”Architectural theories are about how the world should be, in the light of how it is believed to be” (Hillier, page 59)

Hillier’s theory, Space Syntax, is used to describe and predict how and why the townscape is used. A city’s topological pattern, street network’s structure and relations between buildings and blocks could all be analyzed in this theory. The urban pattern is described as the relationship between local connections and global structure. The city is often characterized by boundaries, separating public from private, local from global. In Space Syntax, both the private local streets and the global continuous street network are of great importance for the city’s life.

2.2.1 Integration

“Patterns of movements in urban areas are strongly predicted by the distribution of integration in a simple line representation of the street grid.” (Hillier, 1996, page 132)

If you were to conceive pedestrians’ movements in urban areas as random, then some streets and places would have a higher intensity of people because they have numerous links to each other and to the network as a whole. To move from one line or place to another, one must pass a number of intervening lines. In Space Syntax, this movement is thought of as ‘depth’. ‘Depth’ is not a function of distance, but could be described as every time you change directions, for instance turn a corner (Andersson, 2002). This means that every line has a

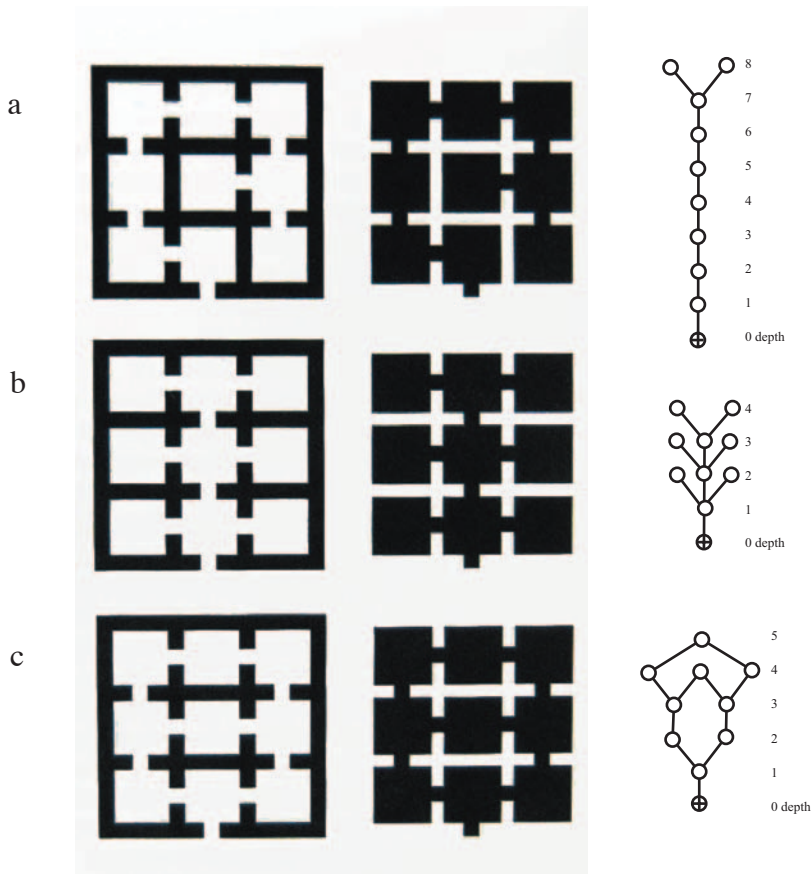


minimum ‘depth’ from all other lines in the system, and the less ‘depth’ to all other lines, the more integrated the line is and the more movement. By extending strong lines and linking them to others you get an integrating site and good intelligibility. The lines’ integration in the system could be shown in colour code on maps. The scale stretches from red, for the most integrated lines, to blue, for the most segregated. This is shown in the map of Göteborg, above, made by Camilla Andersson 2002.

A city plan or a design for a building could both be described as deep or shallow, where the shallow pattern means that one can move directly from one room to all the others, while a deep pattern means that one has to pass a number of intermediate rooms. Movements can thus be governed by the structure of the network, an example shown on the next page where all displayed structures have the same number and size of spaces, but the links between them are positioned in different places. The first column shows the pattern of physical elements of the building. The corresponding figures in the second column

show the corresponding pattern of spatial elements. The basic physical structures of (a) and (b) are the same, both have the same pattern of adjacencies between the cells and the same number of internal and external openings. The difference of the location of the cell entrances is enough to make the configurations, or spatial patterns, as different as they could be. This would make a dramatic difference to how the layout would work as, say, a domestic interior. For example, it is very difficult for more than one person to use a single sequence of spaces (a). It offers little in the way of community or privacy, but much in the way of potential intrusion. The branched pattern (b), offers a definite set of potential relations between community and privacy, and many more resources against intrusion. These differences are inherent in space patterns, and would apply to whole classes of human activity patterns (Hillier, 1996, page 31).

Deep tree-like forms seem functionally inflexible and unsuited for most functional patterns since they limit the sight lines and make it difficult to take one’s bearings, while



depth minimising forms seem to be flexible and suited to a large number of possible functions and are easy to find one's way through.

2.2.2 Movement

"Movement tends to be broadly from everywhere to everywhere else." (Hillier, 1996, page 161)

How the urban system is put together is the source of everything else. The structure of the urban grid accounts for much of the variation in movement densities and give rise to something called 'natural movement'. This is the proportion of movement on each line that is dependent solely on the structure of the grid instead of the presence of specific attractors or magnets. Natural movement, or at least the potential of it, is foreshadowed in the 'depth'-maps. However,

because the integration of each line is dependent on its position in the whole urban grid, an area covering at least 30 minutes (Andersson, 2005) in all directions from the point you want to analyze, must be included in the analysis in order to get an accurate result.

Cities can be described by a two-point logic, wherever you go there is usually a point from which you can see where you have come from and where your next point might be. This means that if you diverge from the main grid, the next diversion will take you either out of the back area again or to some significant spatial event. The effect of this is that even the back areas of the urban grid become naturally and normally used for movement.

If cities are 'mechanisms for generating contacts', then some locations have greater potential

than others, depending on the structure of the grid and how they relate to it. Such locations will tend to have higher densities of development, which in turn will have a multiplier effect. This will in turn attract more buildings and be used to take advantage of the multiplier effect. It is this positive feedback loop which gives rise to the urban buzz. A well functioning city also has open spaces used for stopping and enjoying oneself where the primary activity is to watch others pass by. For this, areas close to (but not actually lying on) the main lines of movement are optimal.

2.2.3 Space

"In its raw state, space already contains all spatial structures that could ever exist in that space. It is in this sense that space is the opposite of 'things'. Things only have their own properties. Space has all possible properties. When we intervene in a space by the placing of physical objects we do not create spatial structure, but eliminate it. To place an object in space means that certain lines of visibility and movement which were previously available are no longer available." (Hillier, 1996, page 345)

Movement in cities occur because of space. One might see cities as buildings in a certain relation to each other, but it is in fact the space and places between the buildings that form the city as we know it. How the space is organized in configurations is the key both to the form of the city, and how human beings function in them.

2.3 Other views

As a contrast and complement to Gehl and Hillier, who both have extensive theories that cover large areas and are much used and tested, three other outlooks on good city form are presented in the following chapter. First is Sitte, who views the city as through a camera, studying its proportions. Then follows Cullen, who studies cities a series of pictures. Lynch, on the other hand, focuses on the mutual relationship between a city and its inhabitants.

In this chapter all facts and opinions are from the authors' own books. (See 'Works cited and consulted')

2.3.1 Sitte – proportions in cities

“In townscapes, everything is about proportions, and the actual size of an object is of less importance.” (Sitte, 1909, page 44)

Closure is what creates actual places of open spaces in a city. A space left unoccupied is not automatically a place. Closure can be created even if wide streets mouth into the space by placing the entrance away from the corners. Generally, all streets should be kept from the corners, thus creating the illusion of no streets leading into the space, and a place comes into existence.

The larger a place is, the less effect it has. Spaces which are too wide leave you with a sense

of exposure, and makes many people avoid them, thus leaving huge open spaces unused. Great buildings become more impressive when seen towering over a small place, crammed in between other, smaller, buildings. Even though a small open place in front of large buildings may not present the building in the right way, too much space is even worse since it reduces the impression the building makes. In proportioning places and their main buildings, depth-width-proportions should be taken into account. If the place is deep, i.e. the main building is positioned at one of the place's short ends, then the main building should be tall (a church, for instance), thus both building and place enhance each others' proportions and the maximum effect is created. The opposite is valid for wide places,

where the building should be long and low (as is often the case with court houses).

A monument or statue should be placed in a neutral environment, close to a building, so that its great proportions and its magnificence are showed off in a suitable manner. Placed in the middle of an open place, it will seem to decrease in size and will not create the effect of amazement intended by the artist. Furthermore, by placing a monument asymmetrically, it is 'out of the way', and will not disturb the flow of traffic or the line of sight. The monument will then not block the view of other important buildings in the same area – this would detract from both the building's and the monument's value.



Neue Markt in Vienna forms a closed room in spite of quite wide streets mouthing into it. Picture from Sitte, 1909, page 39.

2.3.2 Cullen – perception of the townscape while in movement

”The city comes alive through the drama of juxtaposition”
(Cullen, 1971, page 9)

The city is perceived in three different ways: (1) serial vision, which means that when moving through the city at a uniform pace, your trip is illuminated by a series of images, and so the city is brought to life; (2) here and there, which means that dividing elements make the city more interesting, anticipation is created as the city hints of infinity and mystery; (3) this and that, which is the fabric of the town, its colour, scale, style, character, personality and uniqueness.

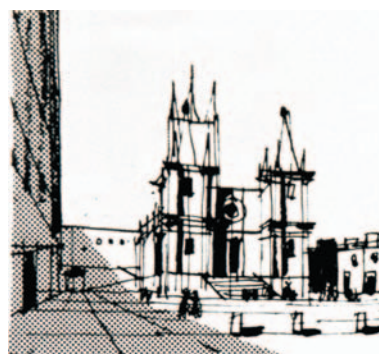
A long straight road leaves little or no impression since the first view is soon digested and the rest of the stroll will feel quite monotonous; the human mind reacts to contrasts, the difference of things, and only when there are two images or more (maybe a park by your side and a church in front of you) being processed at the same time, does the city come alive and acquire depth. To walk in a city should be as a journey through pressure and vacuum, a series of shelter and exposure, of restraint and rest. Only then will the city become truly alive.

Closure transforms a line into a surface, a road into a place, or a town. Some of the best townscape effects are created by closure, the distinct difference of ‘here’ and ‘there’, maybe coming from a plaza, entering through a small gate, and suddenly finding yourself in a large park.

A city made up of closed rooms needs some kind of joining, a unifying element, or else all the city will ever be is a great number of isolated rooms. This joining element is the floor. The floor leads you through the city and makes it a connected whole. The pedestrian network in particular creates the human town and offers continuity and access.



Serial Vision
To walk at a uniform pace through the townscape will provide a sequence of revelations. Each arrow on the map to the left represents a drawing. Read left to right. Images from Cullen, 1971, page 17



2.3.3 Lynch – theory on good city form

“The quality of a place is due to the joint effect of the place and the society which occupies it.” (Lynch, 1981, page 111)

A city or settlement is good if it enhances the survival and continuity of the culture of the people who inhabit it. It should also provide a sense of connection in time and space as well as permitting and even spurring individual growth. A city should stand for development within continuity, via openness and connection.

Cities might be analyzed by their ‘performance dimensions’, which should primarily refer to the spatial form of the city, be applicatory to any culture, be usable where values differ, be identifiable and measurable, and be independent of each other. There are five basic performance dimensions: (1) vitality – it should support the vital functions, biological requirements and capabilities of human beings, and above all protect the survival of the species; (2) sense – it should be clearly perceived and structured in time and space by its residents and match their values and

concepts on a cultural level; (3) fit – it should match the pattern and quantity of actions that people engage in; (4) access – there should be ability to reach and access other persons, activities, resources, places, and so on – there should also be high quality and diversity of what is accessed; (5) control – the use and access of spaces and activities should be controlled by those who use, work, or reside in them. “So what is good city form? /---/ It is a continuous, well-connected, open place conducive to development.” (Lynch, 1981, page 235)

3. Public places in the townscape

“With the shape of the physical environment we can promote the City Centre’s role as people’s meeting place and create arenas for the theatre of life.” (Cityplan97, part 2, page 16)

This chapter deals with the city’s existing physical environment, beginning with the most well known map of matter and void in a city, the Nolli map. Then follows short texts on what a public place is, and how the Nolli map has influenced following generations. The focus then shifts to Göteborg and two of its public places, the squares Gustav Adolfs Torg and Kungstorget.

3.1 Nolli and his map of public places

If nothing else is mentioned, all sources on the subject agree on the facts stated in this chapter (see ‘Works cited and consulted’).

”The document is a wonder of information that combines a sophisticated iconographic schema, a precise technical scale and accurate north arrow, illustrative cartographic symbols, detailed numerical indices and textual labels that provide an exhaustive explication of Rome and its social, artistic and scientific context.” (Ceen & Tice, 2005)

3.1.1 What is the “Nolli map”?

Giovanni Battista/Giambattista Nolli (1701-1756) was an Italian architect and engraver. The “Nolli map” was the result of seven years (1736-1748) of measuring and recording by a group of surveyors, supervised by Nolli himself. The map shows the Roman network of medieval and baroque streets, and divides the city in private inaccessible areas (in black) and public areas (in white): streets, pathways, lobbies, courts, and interior public spaces of buildings. The map, called *Pianta Grande di Roma*, commissioned by pope

Clement XII (and completed for pope Benedict XIV), was initially prepared for tax assessment (<http://web.comhem.se/~u13117202/introduction.htm>), and became the basis for a new administrative division of Rome into fourteen wards (*rioni*) (Ceen, A & LaFoe, M).

The Nolli map was the first to provide a detailed and accurate image of Rome. The result gave the opportunity to study not only one building, but whole sets of buildings and their relations to each other, thus linking the city together to form a unity, rather than being built up by isolated blocks and monuments.



The Nolli map consists of 12 plates, with total measurements of 176 cm by 208 cm, illustrated by Giovanni Battista Piranesi (1720-1778) with ancient Rome in the lower left corner and modern Rome in the lower right. The scale of the original map is approximately 1:2,900. (Ceen & Tice, 2005) Picture from <http://nolli.uoregon.edu>

3.1.2 What is a public place?

“Public space is a place for exchange of individual and communal issues; and provides ground for personal and political rights, it is an integral part of formation and confirmation of social groups. Public space is built for city image, for public welfare and political demonstrations.” (Mostowska, 2001)

There are three different kinds of places open to the general public: (1) general public places, which are places owned by the municipality, such as Gustav Adolfs Torg; (2) public places, which are owned by a corporation, such as Arkaden; (3) public premises, which are privately owned but the public has access to them on the owner’s terms, such as a restaurant or a bar (Elofsson, 2005).

The city’s great duality lies in the relationship between the public versus the private. This is a contrast in what is revealed or hidden, open or closed, collective or individual, state administrated or privately owned.

3.1.3 The Nolli map and its importance for following generations

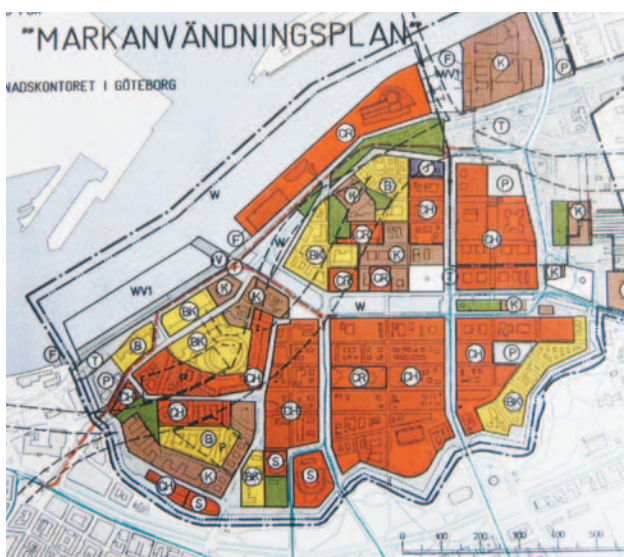
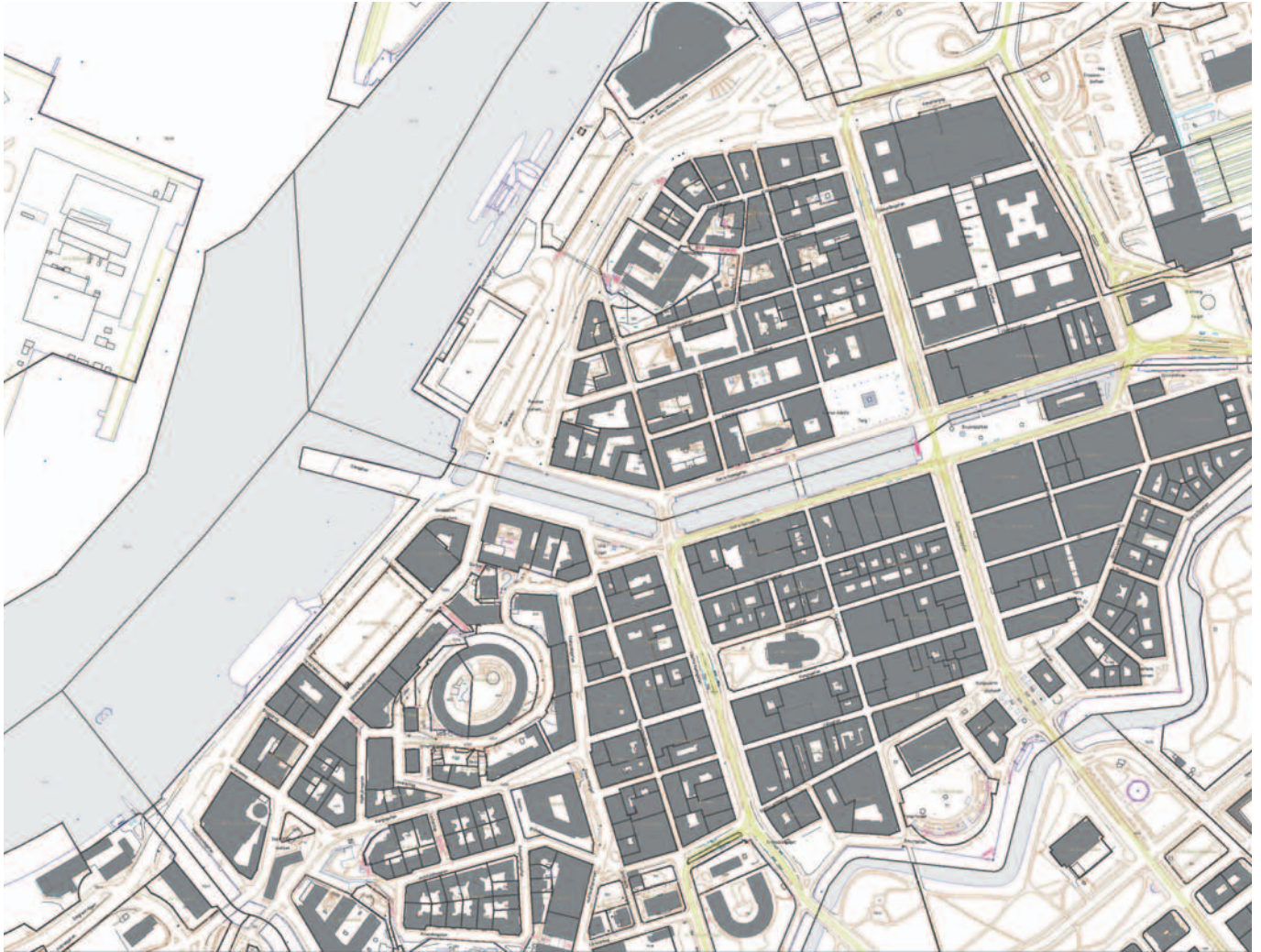
Before Nolli, the most common way to represent cities was with a view-map, which shows important buildings and monuments as pictures. After Nolli, the figure-ground (the principle of the Nolli map) has been a standard convention ever since the eighteenth century, used by planners and architects to study the relationships of built

structures. In this kind of map, the eye is drawn to the negative space – the space between the buildings. This effect is used for studying how buildings frame open spaces, building density, relative building size, and building placement.

The Italian government used the Nolli map as a base for maps of Rome until the 1970s, and architects worldwide still point to the map as the ideal figure-ground image for urban representation (Ceon, 2005). Furthermore, Nolli was the first cartographer to make the distinction between true north and magnetic north, and his plan was used as a model for nearly all maps of Rome for the following 150 years. But his greatest contribution was perhaps the identification of semi-public space; churches, theatres, courtyards, entries, and stairways.

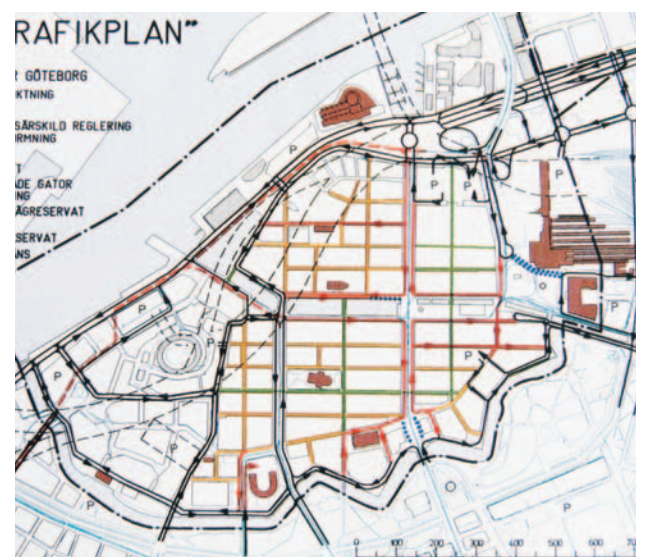
3.2 'Nolli map' of Göteborg

This map shows built and unbuilt areas, matter and void. The buildings around Gustav Adolfs Torg and Kungstorget have been more carefully studied in the following two chapters and their public areas have been marked out according to the principles of Nolli's figure-ground map.



Land usage plan

Yellow - residential and office area, Orange - trade, culture, education, mixed with residential areas, Purple - Industrial, Brown - offices, hotels, Green - parks. Picture from Cityplan97, page 99.



Traffic plan

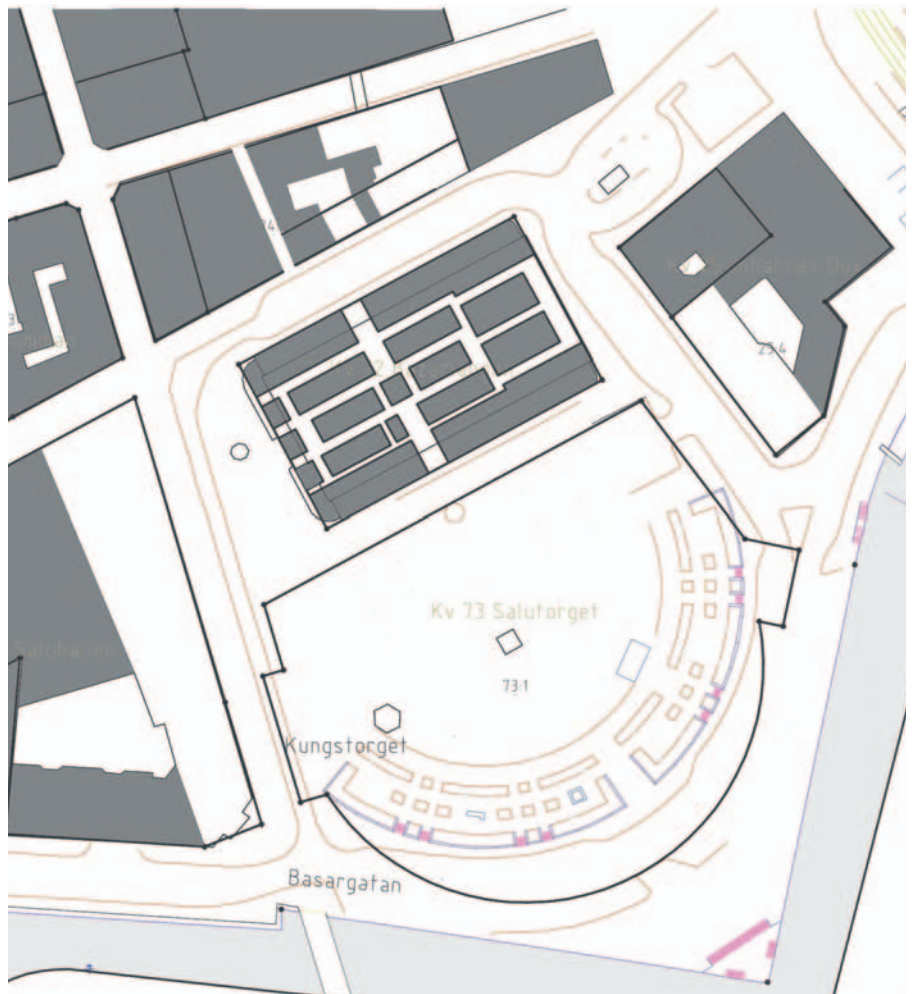
Shows the traffic regulations in Göteborg. Black - ordinary street, Yellow - 13 km/h speed zone, Red - special regulations or design, Green - pedestrian street. Picture from Cityplan97, page 151.

3.2.1 Kungstorget

Kungstorget is an important place in Göteborg. For generations, the square with its market hall has been the largest provision market in Göteborg and environs. Kungstorget plays an important part in strengthening and vitalizing the city centre as a place of meeting, due to the provision market and everyday street life that appeal to us all. The architecture and variety of booths in the market hall are tempting for both tourists and Göteborg's inhabitants.

The bastion point is one of three reminiscent of the old city wall. The point is invaluable in terms of cultural history and must not be affected. In terms of townscape the point also has a considerable value with its view of the moat and Kungsparken (Cityplan97).

By the east end of Kungstorget open air restaurants benefit from the evening sun, while the west side consists mainly of shops. The provision market dominates the scene with its wide range of food. The bastion point with its view of the moat is left unpopulated because the area between it and the square is occupied with traffic. The area by the trees is also left unpopulated, closed in on all sides by cars.



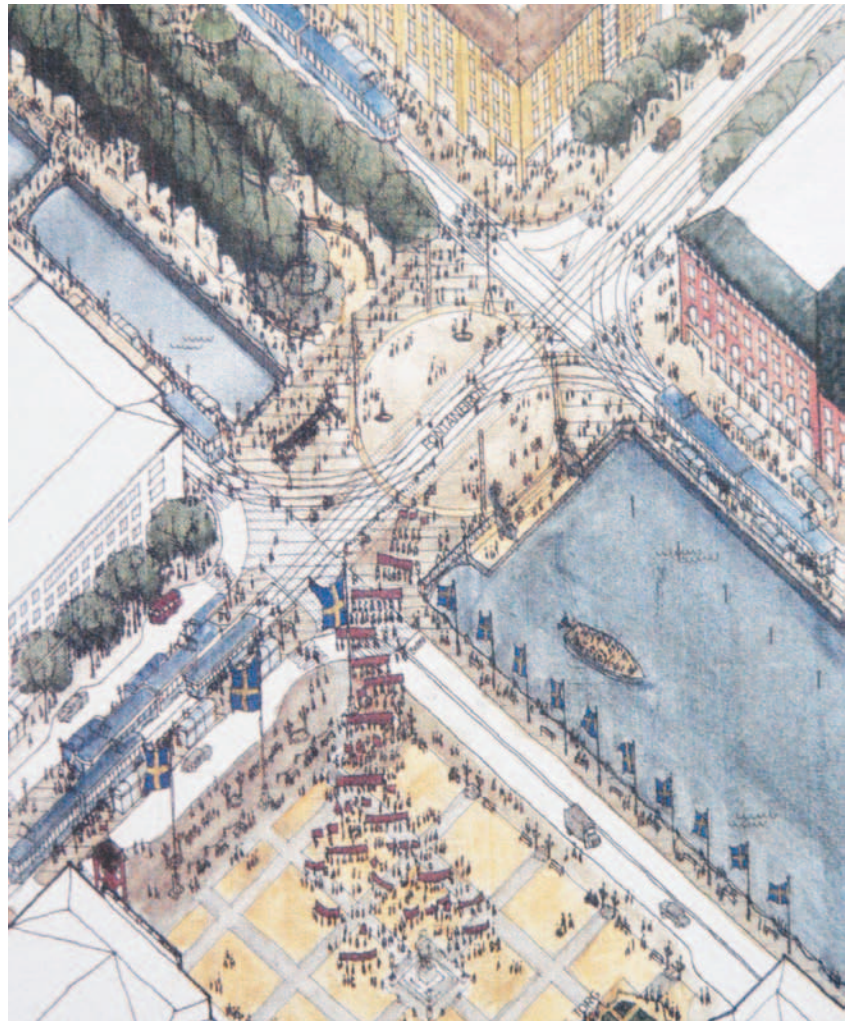
3.2.2 Gustav Adolfs Torg

Gustav Adolfs Torg is situated in the heart of Göteborg with the canal floating by on one side. The square, formerly known as Stora Torget (the Large Square), was originally Göteborg's market place but is now a parade square in front of the city's Court House and Exchange.

During demonstrations and manifestations the square comes alive; it is a square of power and gathering, where you can express your political beliefs. State visits and festival days are celebrated here.

Gustav Adolfs Torg is not in everyday use, but is a rather quiet and tranquil square. The square is sometimes called 'the City Parlour'. At the Town Planning Office this is regarded as a quality worth protecting and preserving – it is one of Göteborg's advantages that not every square is seething with street life and that not every façade has shop-displays and open-air cafés or restaurants. (Cityplan97)

Different parts of the square have different functions: the statue with its base and the steps of the houses around the square have the function of secondary seating, benefiting from the location and the sun; the seats and plant by the tramstation serve as a waiting area; the furthest corner, inbetween the buildings, is left unoccupied; and the area closest to the cross section is mainly used for short cuts.



4. Discussion of theories, and conclusions

In this chapter, the common traits of the different theories and outlooks will be discussed. First I will look at how to compose an interesting and well functioning road network for pedestrians. Secondly I will look at the relation of closures and barriers, apparently the same, yet contradicting. Thirdly I will look at magnetism, what it is that attracts people to, or repels them from, certain places. Finally the traits are applied to Gustav Adolfs Torg and Kungstorget to show in what ways these places are well disposed or could be improved.

4.1 Composition of pedestrian network

A road network should be just that: a network covering the entire city with its streets, alleys, and footpaths. For Lynch this is in fact one of the most essential qualities of a city, that it is continuous and well-connected. But the network should not only be continuous, Cullen suggests that it is also important that it is coherent, while Gehl adds that it should be connected in a way that makes it easy and logical to find one's way through the city. Hillier agrees, and his studies of movement shows that deep tree-like forms, that is where from each location you can only reach one other if not going back in your own footsteps, limit the sight lines and make it difficult to take one's bearings, while it is easy to find one's way through a city composed of areas linked in numerous ways.

Gehl also feels that one of the most important demands on a well-functioning road network for pedestrians is that the roads are organized in such a way that they connect the most natural destinations. Again, Hillier agrees, and argues that cities could be described by a two point logic where wherever you go, there is a point where you can see both where you have come from and where you are going, which means that most significant spatial events can be reached in two steps.

Cullen states that a stroll through the city should be as a journey through various experiences since the human mind reacts to contrast. A long straight road or a large open place leaves little or no impression at the same time as it leaves you feeling exposed. Sitte believes that this feeling of exposure causes people to avoid those kinds of places if there are other options. Moreover, Gehl points out that slightly bent or broken streets make the stroll more exciting. If the footpaths pass through both small and large spaces, the walk will be experienced as shorter than it actually is since it is divided into surmountable parts.

Conclusions: if you can see too far in the direction you are going, the walk gets tedious, but if you cannot see enough you will get disoriented; the route should offer a variety of sceneries.

4.2 Closure and barriers

Sitte claims that closure is one of the most important things in a city since it is what makes an open space into an actual place. A space just left unoccupied is not automatically a place. Therefore, after creating a place it is important how you furnish it. Gehl points out that when standing, people tend to position themselves along the edges of open spaces, in shelter but with a good general view of the surroundings, on seats,

by trees or pillars, or along the facades. These kinds of objects promote activity in a city when used correctly, but placed at a bad location or in abundance, they will instead become a barrier. Hillier means that since space already contains all spatial structures that could ever exist in that space, every physical object that is placed in it is an intrusion that eliminates spatial structure by blocking lines of visibility and movement.

Cullen writes that when creating a closed room, you need some kind of joining element, otherwise the closure will become a barrier and the city will be made up of a series of isolated rooms. Lynch feels that one should have the ability to reach and access other people, activities and places in a city, but by means of closure that access should be controlled by those who use, work, or reside in them.

There are many kinds of barriers in a city, both in terms of movement and in terms of view. Gehl points to two of the movement barriers: traffic that inhibits pedestrians' movements, especially in cases of wide streets and/or heavy traffic; and lighting, or more specifically, lack of lighting which is a barrier that makes pedestrians avoid certain places after dark in favour of the well lit areas. Barriers blocking the view could be almost anything, a house, a tree,

a monument, a tramstop...

Conclusion: closure creates a place where people can be, while a barrier shuts people out.

4.3 Magnetism

Hillier's studies show that some locations have greater potential than others, depending on the structure of the grid and how they relate to it. These locations will tend to have higher densities of development, which in turn will have a multiplier effect, according to the 'one plus one equals three'-principle. Gehl suggests that one of the most attractive traits of a location is its view, either of nature or, more preferably, human activities. Therefore, when it comes to seats in public places, the view and the positioning of seats are of great importance. Hillier suggests that areas close to the main lines of movement are optimal for this. In addition, good seating opportunities open up for many other activities, which in turn make the space even more attractive.

Lynch states that the quality of a place is due to the joint effect of the place and the society which occupies it. Gehl also points to the fact that people are attracted to places where other people are, or where there at least will be an opportunity to see others. If the choice were to walk down a deserted or a populated street, most would choose the street with people.

Shops, exhibitions, and market places are all types of attractors. These are in general put where most people have their natural

movement patterns, but in some cases the attractors themselves cause people to move in that area and without them the area would become unpopulated and die.

Conclusion: magnetism is a self-amplifying process that originates from a combination of surroundings and convenience.

4.4 Application to Göteborg

In this chapter, the topics described in previous chapters serve as starting points for a short discussion of Kungstorget and Gustav Adolfs Torg.

4.4.1 Composition of pedestrian network

The fact that the squares are spread out over large spaces also means that there is no creation of closed rooms, and without the feeling of a room, the squares are just wider areas of the street, a place that you pass on your way to something else, not somewhere you want to stay for long. This is true especially with Gustav Adolfs Torg, and since there is in addition no variety in the activities offered at the square, it is left unpopulated. Kungstorget is however a bit better, being closed in on three sides with houses and water on the fourth, at the same time as it provides numerous ways to spend your time.



Top two right : Wider areas of the street, Gustav Adolfs Torg

Following two right : Wider area of the street, Kungstorget

Bottom right : A closed room i created at Kungstorget, but is cut of from the rest of the square by parked cars, see top picture on next page.



4.4.2 Closure and barriers

Both Gustav Adolfs Torg and Kungstorget have undefined borders and float into their surroundings, which is a problem in many ways. It means lack of shelter for people lingering in those areas. Plants, separating the seats from the trams, give some sort of shelter at Gustav Adolfs Torg, but better circumstances would be obtained with seats lining the buildings, which would also mean provision of a better view of other people, instead of turning your back towards them. Different positioning of the seats would also mean that that area of the square could be used for short cuts, thus possibly attracting more people to use even the rest of the square. The trees at Kungstorget also provide some shelter, but offer no connection to the rest of the place.

The squares are cut off from their surroundings by traffic, especially Gustav Adolfs Torg that is like a separate island in the townscape, blocked in two directions. From Kungstorget you overlook the moat and Kungsparken, but the square is separated from this by traffic, a barrier that blocks the access to the water.

Below : Barrier at Gustav Adolfs Torg



Above : Barriers at Kungstorget in 5 (!) steps



Above: Lack of closure on Gustav Adolfs Torg



Above : Some of the attractors at Kungstorget (along with a bearrier)



Above : Seating opportunities at Kungstorget...



4.4.3 Magnetism

Kungstorget is close to events with numerous people coming and going at the market place and other attractors, but if the attractors were to move away, the square might become totally deserted since it is located a bit to the side of the natural movement-lines. Gustav Adolfs Torg, on the other hand, is highly integrated in the townscape and has a great potential to attract people simply based on location, but since there are no attractors in the square, the potential is left unused. The square's street life would probably increase with the addition of a restaurant or café, in particular since it is surrounded by beautiful scenery with some of the grandest houses in Göteborg and the canal.

Below : The base of the statue (at Gustav Adolfs Torg) is during sunny days used as seats.

Below left : The potential of Gustav Adolfs Torg close to the water and beautiful buildings



5. Slutord

Det ursprungliga målet för den här rapporten var att ta fram två Nolli-kartor över Göteborgs innerstad, en i nutid och en som speglar hur Göteborg såg ut för 50 år sedan, för att sedan analysera dessa i ljuset av de olika teorierna om hur fotgängare använder städer. Ganska snart stod det dock klart vilket enormt arbete det vore att sammanställa en fullständig Nolli-karta över Göteborg, och på grund av tidsbrist beslutade jag därför, i samråd med min handledare Magnus Persson samt Rune Elofsson på Stadsbyggnadskontoret, att koncentrera mina ansträngningar till Gustav Adolfs Torg, omgivet av offentliga byggnader, och Kungstorget, omgivet av privatägda byggnader.

Nästa omläggning av inriktning kom när jag insett att på just de här två platserna har det inte hänt så mycket under de senaste 50 åren som skulle synas på en Nolli-karta, vilket skulle innebära att en jämförelse mellan de två tidsepokerna vore relativt ointressant. Det man däremot hade kunnat utvidga undersökningen med, om tid funnits, är hur (och om) den ökade trafiken har påverkat fotgängarna i dessa områden. Kungstorget fungerar nu i stort sätt som parkeringsplats, medan det förut har varit ett marknadstorg. Gustav Adolfs Torg är idag omgivet av gator trafikerade av kollektivtrafik, och används som gårdsgata, tidigare har det varit parkeringsplats, och innan dess marknadstorg.

Tyngdpunkten av arbetet har kommit att skifta från analys av kartorna till beskrivning och analys av olika teorier om hur fotgängare rör och uppehåller sig i städer. Detta har skett delvis på grund av ovanstående skäl, men också eftersom jag ju mer jag trängt in i de olika teorierna funnit dem alltmer fascinerande då de har förändrat mitt sätt att se och uppleva en stad.

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