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Street development

Report in the History of Landscape Architecture theory

Index

Intoduction

The purposes of the street traditionally have been traffic, the exchange of goods, and social exchange and communication. All three are inseparably related to the form of the street. If the correspondence of the two cannot be perfectly syncronic, it is because the frame of the street is more permanent than the uses made of it. We are concerned with the urban street – with roads when they are in a settlement defined by buildings.

The early development

There was a time before the streets. In Western Asia in some places all pedestrian movement was made on the roofs of buildings, and social interaction might have taken place in the courtyards (Catal Hüyük, picture 1). At present it may be possible to locate the first street in history at Khirokitia (6 millenium BC). This was built of limestone and raised above ground level. Delimited surface becomes central to the early development of the street and the conception of street hierarchies (4).

Picture 1. Catal Hüyük (5)

Sumerian times

In the 2nd millenium BC the street network was dense and did not have a system. It was probably formed in the ancient times and fixed for many years with the landownership. Only one wider street was found that was directed to the temple campus, it was important for the organized priesthood to arrange procession. Living streets were narrow and twisted, mostly 2, rarely 3-4 meters wide. The edges of the streets were always round, otherwise the cargo-carrying donkeys would have wounded themselves. There were a lot of short dead end streets. The area under the streets probably belonged to the city. The sewerage under the plots ran from one courtyard to another. Most of the waste was removed together with the sewage, but the garbage was put on the street. Thereby, the streetlevel was growing fast, that made it important to renew the buildings every now and then. Each house had only one hole on the street side, a door with high threshold. That was supposed to stop the dirt from the streets to get to the house when raining.

The streetview in the Sumerian cities seemed to be quite monotonous, barely appropriate for streetlife. Winding rough walls of the buildings and the edges between different buildings gave some differences in light and shadow (picture 2). There were also some small shops which windows opened to the streets. Most of the trading was done in the special market streets, the most ceremonial events were held on the stairs (picture 3). The Sumerian streets were differentiated, there were main- and side-streets, procession, living and business streets. And there was a way to heaven, each city claimed higher then the previous one, because each city had its own god and all the gods had to be at the highest (1).
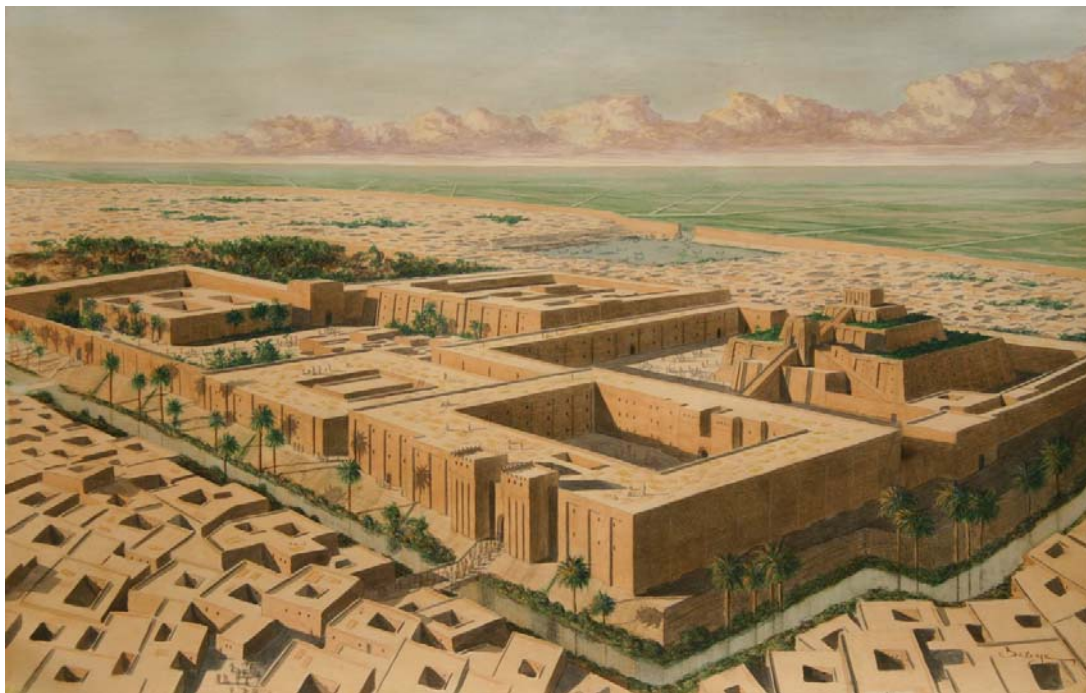
Picture 2. Sumerian city Ur (6)

Picture 3. Ur ziggurat (2)

Indus valley

The city culture was of high level in the Indus valley. The cities Mohenjo Taro (picture 4) and Harappa (picture 5) were planned cities, because they had an orthogonal street structure. There were more than 40 000 people living there during its glory days (1). The streets were unpaved, yet they were equipped with brick drains (3).

Differences with Sumerians: the street network was more diferentiated, the courses were straight, the main streets were 7,5-10 meters wide, and the building line was strictly given (1). In Beycesultan (picture 6) there was a differentation of streets – the street separating the two hills was major street and the streets within residential areas were local ones (3).

Similarities with Sumerians: the buildings were densely close, the walls were on the sides of the main street, there were no holes on the first floor, enterings were on the side-streets. The streets were expressed with balconies and attics. In the evenings the streets were probably used for promenade or something else that could be viewed from above. The walls without the windows added security in the tropic night. The street walls were often covered with different types of lianas. Drainage was managed with ceramic tubes into the sewage system that was situated under the paving of the main streets.

Family life was mainly lived in the closed inner yards. Market streets played an important role in city life (1).

Picture 4. Mohenjo Taro (7)

Picture 5. Harappa (8)

Picture 6. Beycesultan (9)

Ancient-Egyptian city

There were two different worlds in Ancient-Egypt (picture 7) – one was the world for the work-day citizen and the other was the world of eternity for the Pharaoh. Priesthood processions took place between the walls of the temple castle, the mortal citizens could watch it behind the gates. The procession was held between the columns of stone. Outside from the temple there were alleys, on both sides of the procession road there were sphinxes (picture 8). There are a lot of findings of these prospects from the 14th century BC when the area between two sphinxes was 20 meters, behind them there were rows of palmtrees. There is no information about the buildings on the roads (1).

Picture 7. Ancient Egypt (10)
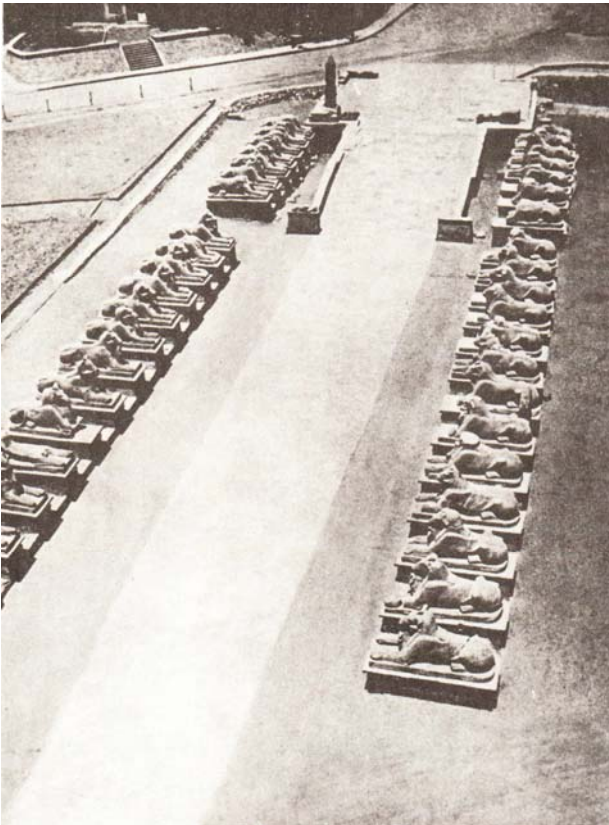
Picture 8. Sfinksid Amoni templi ees (1)

Babylon city

The oldest street in Babylon, procession street (pictures 9, 10) was built 2500 years ago during the reign of Nebukadnetsar II. The processions were respected, especially in New Year's Eve, when these were used for celebrating. During that time the main god was Marduk, his wife was Sarpanitu and the god of love was Ištar. The heraldic animals for the first two ones were bull and dragon, for the last one lion with flowers. The images of these animals decorated the Ištar gate that was in one end of procession street. The procession streets were very beautiful and well built because the Pharaohs thought of themselves as the substitutes of gods on Earth trying to please the gods like that. All the celebrating on the streets were held also to please the gods. There was enough space for participators of the procession, spectators, thieves and living and lifeless goods on the wide procession streets. Next to the procession street there was the holy castle, winter residence, summer palace and the New Year's hall of Marduk, Ištar and Ninmah. It was approximately 3 meters long. The street also had a political meaning to show the power and control the people. It was not created to satisfy everyday needs, it was built by the power. The procession street was actually just a small peace of the labyrinth of the Babylon clay walls (1).
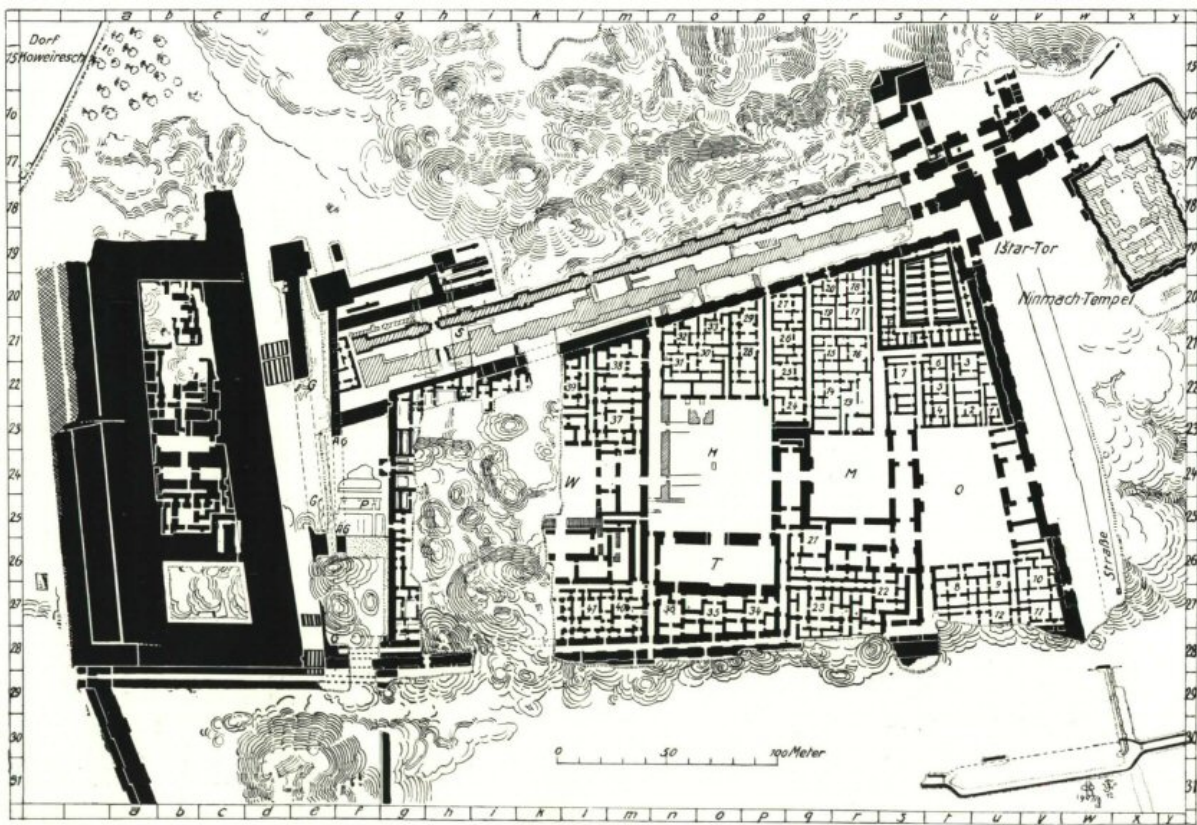

Picture 9. Babylon procession street (11)

Abb. 44: Gesamtplan der Südburg.

Picture 10. The map of procession street (12)

Antique world

The streets in Babylon and in the entire antique world were similar to Sumerian times-narrow, crooked, rarely paved and cleaned. Usually they were built of random available materials. The main streets started changing at the glorious times of the Roman Impire. At that time the antique world was at the head of its development in a mean of trading and city building.

The ideal of a Greece architecture was an avenue with colonnade on both sides (doric, ionia, corinthian). The crossing points of the straats were marked with triumphal arches. Sometimes there were fountains in the streets and oli lamps gave light at nights. After many single buildings the yards, market places and agoras were built. So there soon was a need for connecting them, mainly in bigger trading centres like Miletus (picture 11). Alexandria and Atinokia were able to built main streets with the squares and castle complexes on the sides. In Rome there were already raised pedestrian stripes along the street (Etruscan Marzabotto) (1).
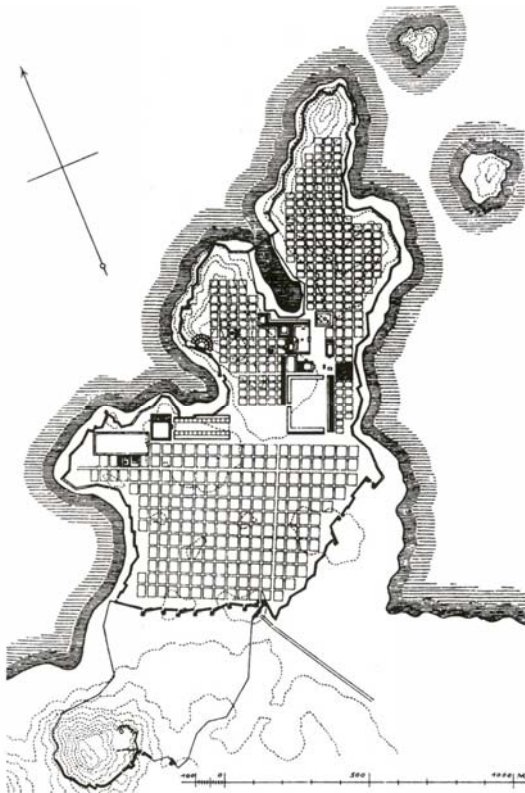
Picture 11. Miletus (13)

Medieval streets

In the 12. century carcase houses (picture 12) were simple and serious looking. They had many balconies, the light and shadow varied so the streetview was not boring. To gain a great density of buildings the plots were streched out the narrow side to the street. The high gables of the houses situated on the streetline. The streets were crooked so the looks of the street changed a lot during the changing of the sun.


Picture 12. Medieval street scene (14)

In the 16.-18. century the carcase houses were often very colourful and had very multiplex facades. The narrow crooked streets between the houses are colourful, quiet and homey. Nowadays there are not very many caracade house complexes extant, because of the World War II.Trading played a big role in medieval times. As the waterways were very important many of the main streets were rivers and canals (for example in Lübeck) (picture 13) (1).

Picture 13. Medieval Lübeck (15)

In Tallinn the streets were so crooked and narrow the carter men had to put bells on their horses to prevent bumping into each other. Streets quirk and cross with each other but they are never parallel or with the same width. The windows and doors of the street side are probably included later and they are scattered around. Before the windows of living rooms opened to the yard. Only the hatches of storerooms opened to the streets to make the movement of the goods more convenient. There were laterns hanging above the street. Monotonous facades were decorated with wind arrows and wall anchors. In spite of that the street still looked very gloomy (1).

The main concernes of the Medieval streets were congestion and exposed sewage. The few underground sewers into which the gutters might drain were leaky were clogged easily. Waste water found its way into rivers, mouts and canals. Excrement was dumped into the same places. In Germany, Hamburg was the first to install sewer system with flush toilets in houses, taking advantage in major fire in 1842. In England this took place around 1800. Then Paris took the lead. In Paris in 1824 there was a system which carried water from the river Sane to the hydrants and was used to clean the cubblestoned street (picture 14). Also the roof gutters and drainpipes were installed to collect rainwater and channel it directly to the curb. After the 17th century the demand fo the wide streets became habitual. This has had much to do of the increasing use of coaches as it did with health matters. Narrow streets kept sunlight from reaching ground level (3).
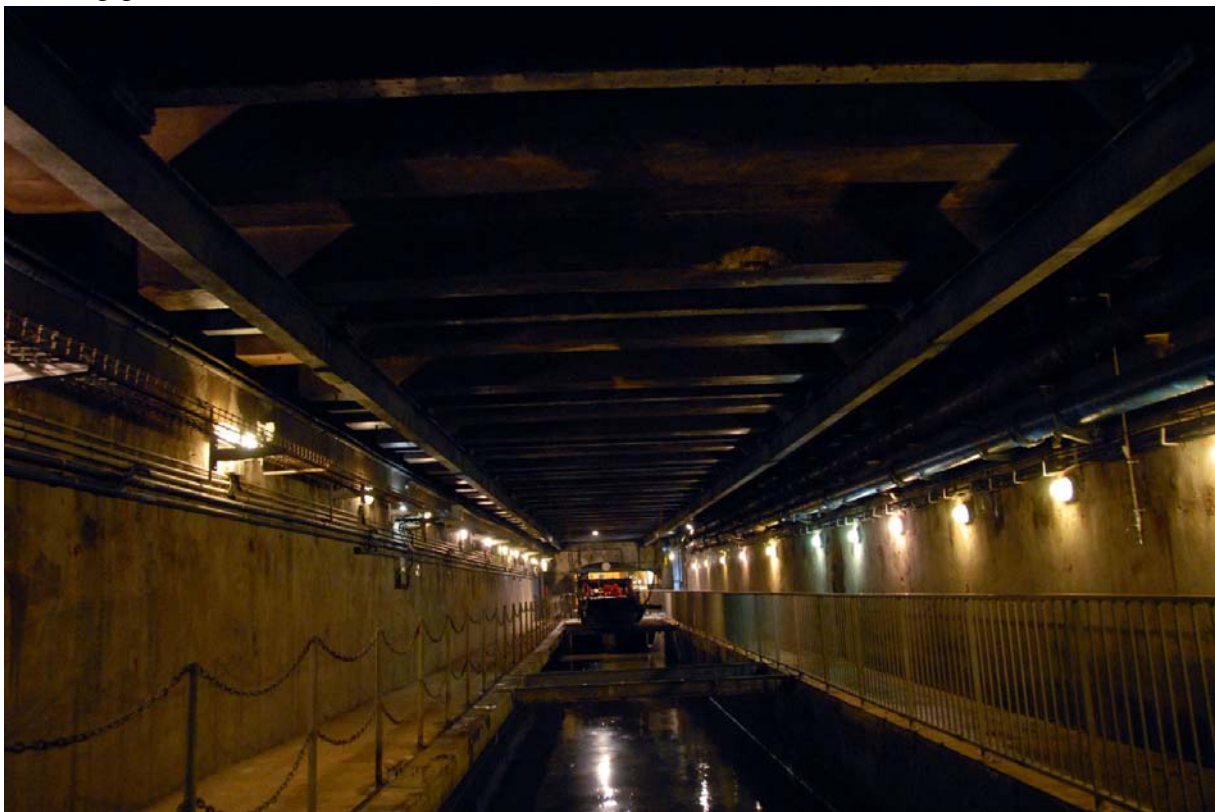

Picture 14. Paris sewage system (16)

In the mid 19th century in Germany the cult of the wide street was dominant, but the light and air of the street stopped at the building line. The private space behind the deep blocks was filled with huge buildings and the inhabitants had no light and air. The situation was made worse by regulations regarding the height of buildings. Codes normally set building height in proporsion to street width. This meant that the wide streets of Germany condoned uniformally tall buildings. Wide streets were more expensive to construct so the buildings were as dense and tall as possible. After 1880 the narrow streets were being recommended for residential areas because on the wide streets there were no intimacy. They were now seen as unhealthy because the fostered wind and dust (3).

Waterways

The subject here is rivers and canals as streets. These could be analyzed on the basis of four design criteria: the watercourse itself, the walkways on one or two sides, the surrounding buildings, and the bridges that are crossing. For example: Venice and Amsterdam. The Reneissance was much taken with the idea of canal town (Filarete´s Sforzinda) (3).

Renaissance

The streets became more fascinating and plastic which brought the dinamics of light and shadow into the picture. There were many colours and contours (the streetview of Gdansk). The only purely renaissance street ensemble is the palace of Uffiz in Firenze (picture 15, 16). The street is 140 m long, closed from one of the end and characterized by repetitions of stilish forms, straight building slhouettes and symmetry.
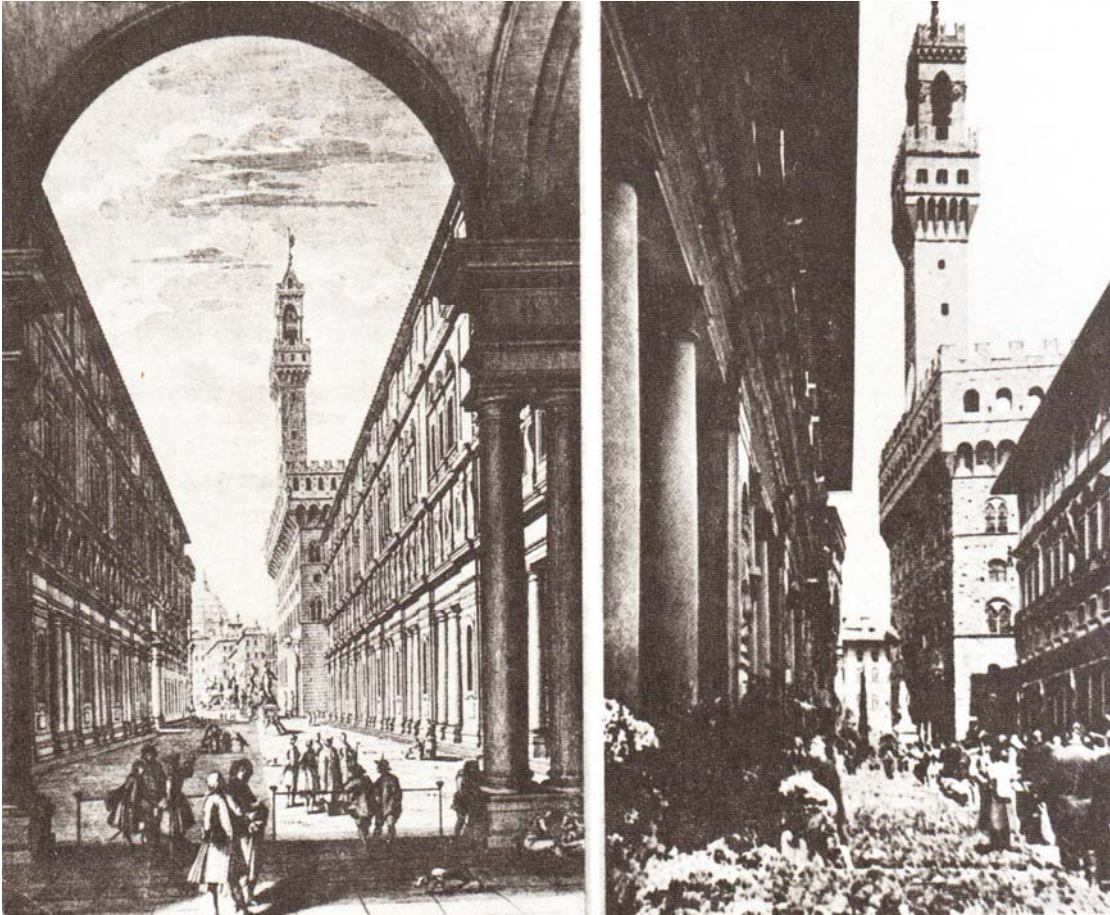
Picture 15. Uffiz (1)

Picture 16. Uffizi palee (17)

In reality the streetwiev did not changed much during this time. The streets were narrow and crooked. The density of buildings was encreasing according to growth of the population. The main interest was to develop defencive mechanisms so the everyday life of ordinary people stayed in the background.

Architect Leon Battista Alberti found that in a aristocratic and wealthy city the streets should be straight and wide to give the strangers the sense of dignity and power. In a small city the streets should be smaller and have an elbow before they enter the gate of the defence wall for a security reasons. That way the streets look longer, the city seems bigger and more diverse. It is more interesting to walk and all the houses get some sunlight in some time of the day. Smaller crooked streets prevent the wind from blowing so angrily and it turn into fresh breeze. If the enemy breaks into town he feels threatened from all sides because his views are blocked. The side streets should be straight to allow the building of rectangular rooms.

It is very important to keep the street clean. For that dogs, cats and pigs were used and the state had rules about the times the animals are allowed in the street. Despite that fact the streets were still very dirty and therefore many diseases spread (Härmson 1989).

Bridge street

Lining the bridges with houses and shops started in medieval times. In the 16th century Rialto in Venice was redesigned, this bridge was for pedestrians only and flanked by rows of shops opened up in the middle by two arches affording views of the waterway. Medieval Paris had several bridges linking the Ile de la Cite. The roadway crossing Notre Dame bridge was flanked on each side by thirty-four identical arcaded houses. This hybrid construction was technique was superficially elegant, quick and economical. A triumphal arch closed the bridge off at one end an two small towers from the other end. The houses on the medieval brigdes in Paris were demolished just before the Revolution, because og the growth of coach traffic (3).

Baroque

It is hard to find a complete spectacular baroque street (picture 17). The reason lies in a contradiction where there are very strict demands of a central power but inhabitants have no financial oppurtunities or interest to follow them. There were very specific dictations but no actual help with the building process srom the state (1).

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Picture 17. Berlin Friedrichstrasse in 1732 (4)

The boulevard

The boulevard started as a boundary between city and country. Its structure rests on the defensive wall which in the baroque period was usually an earthan rampart. In 1670 in Paris the old mouts were filled and transformed into broad elevated promenades planted with double rows of trees and accessible to carriages and pedestrians. These tree-lined ramparts eventually became a system of connected public promenades, recreational zone at the edge of the city. They were not intended as transportation arteries. First they were called remparts,but soon the name became boulevards after a former bastion the Grand Boulevard, Porte, St. Antoine. By the late 18th century the boulevards of Paris were lne with luxury stores, cafes and theatres. This fashion of changing fortifications to promenades was not wide spread in Europe until Napoleon in 19th century (4).

Classicism

Working and living places separated and the traffic expanded. There were separate areas for manufactures, shops, cultural and financial buildings.The development of motropol´s functional structure demanded a diferentiation of the streets: connecting streets, the streets from the centre to the province ect. With building the new districts the new streets were also built. For the parades there were straight wide streets. Taking Greece as an example the buildings were aristocratic. They had long facades with many repeated elements. A good example is Rivoli street (picture 18) in Paris that is 35 m wide with the 18,4 m high houses. Strictly similar facades were usually not muilt because the owners were mainly rich people who did not want to follow the dictates. The pedestrian streets were covered so the windows of the shops and commercials disappeared from the street view. Good examples are Unter den Linden in Berlin (picture 19), Regent´s street (picture 20), Nevski prospekt (picture 21) and Champs-Elysees (picture 22) (1).

Picture 18. Rivoli street (18)

Picture 19. Unter den Linden (4)

Picture 20. Regent´s street (19)

Picture 21. Nevski prospekt (4)

Picture 22. Champs-Elysees (20)

Historitsism and post-modernism

In the post-Roman period sidewalks went out of use almost entirely, they re-emerged in the modern period. In times when there were no sidewalks distinctions were commonly made between the carriageway and the pedestrian stripes. For example the midway was paved with huge shapeless rocks and the footpath with sharp pebbles for the benefit of the feet. In Sofia the streets were unpaved exept on the sides where there was a pebbled pavement fo pedestrians. In the beginning of th 18th century a series improvements were introduced in England (picture 23), this included drainage and sewers, piped water, house numbering and sidewalks (3).

Picture 23. England sidewalks 18th century (21)

Covered streets

The standard image of covered streets on the 19th century is: glass-roofer, exclusively pedestrian, decorated with symmetrical interior facades. The series of covered streets is covered with domes, lit from high small windows, or lit artificially, the crossing is raised higher that the rest and is sometimes opened to the sky. There are now almost 300 19th century arcades in the world. Famous ones are the Burlington Arcade in London, the vast galleries in Milan and Naples and St-Hubert in Brussels. In Paris they started adding shops to the arcades at the end of the 18th century, after the Revolution. It is even thought that the arcades may be the forerunners of the departement stores as well as the modern closed shopping malls (3).

Used material

Books:
1. Härmson, P. 1989. Tänavad läbi aegade. Valgus. Tallinn. 117 lk
2. Jellicoe, G., Jellicoe, S. The Land of Man. 1998. Thames & Hudson. London. 408 lk
3. Kostof, S. 1999. The City Assembled. Thames & Hudson. London. 320 lk
4. Kostof, S. 2001. The City Shaped. Thames & Hudson. London. 352 lk

Internet:
5. http://lh3.ggpht.com/tessellar/R1BLpUfNLJI/AAAAAAAADz4/VZWf0-k6YyQ/s800/Catal+Huyuk2.jpg

6. http://www.mitchellteachers.org/WorldHistory/MrMEarlyHumansProject/Images/Sumerian Achievements/SumerCityUr.jpg

7. http://www.nationalgeographic.com/history/ancient/images/sw/mohenjo-daro-ruins-285685-sw.jpg

8. http://1.bp.blogspot.com/_MYvSg9OmlAA/S9fC_KF69ZI/AAAAAAAAAEE/V0cPQtM8XUc/s1600/har_wam02.jpg

9. http://www.seslimodel.com/wp-content/uploads/2011/01/2.jpg

10. http://www.wallcoo.net/paint/David_Roberts_Egypt_Painting/images/DavidRoberts-GreatPorticoOfKalabasha_1838.jpg

11. http://upload.wikimedia.org/wikipedia/commons/9/9a/Pergamon_Museum_Berlin_2007109.jpg

12. http://www.alexanderstomb.com/main/imageslibrary/babylon/RKpalmap.jpg

13. http://upload.wikimedia.org/wikipedia/commons/f/ff/Miletos_stadsplan_400.jpg

14. http://faculty.etsu.edu/kortumr/16highmiddleages/adobejpgimages/02streetlarge.jpg

15. http://lh5.ggpht.com/yeWZhKcLFrQ/SblOQ2k8iJI/AAAAAAAABkk/E9LTU54zJdA/IMG_0101.JPG

16. http://1.bp.blogspot.com/_6sgfDVw2dYc/ReD3xyJfA2I/AAAAAAAAALg/DKsCpQ5ViXY/s1600/sewers1.jpg

17. http://www.britannica.com/EBchecked/media/34777/The-Uffizi-Palace-Court-Florence-by-Giorgio-Vasari-1560&docid=HWhoz8mS1tZr4M&w=1259&h=947&ei=LmCITvDMMMPh4QTR8eChDw&zoom=1&iact=hc&vpx=164&vpy=208&dur=349&hovh=195&hovw=259&tx=128&ty=147&page=1&tbnh=112&tbnw=146&start=0&ndsp=21&ved=1t:429,r:0,s:0

18. http://blog.paris-on-demand.com/2011/07/27/walking-in-the-footsteps-of-napoleon/&docid=MxxjFsOCpYc3DM&w=1024&h=768&ei=4mCITuLDIIjb4QTtjb2YDw&

24

zoom=1&iact=hc&vpx=927&vpy=221&dur=2970&hovh=194&hovw=259&tx=159&ty=140&page=3&tbnh=120&tbnw=156&start=42&ndsp=21&ved=1t:429,r:19,s:42

19.http://www.londir.co.uk/quadrant-regent-street.jpg

20.http://www.citypictures.org/data/media/219/Champs%20Elysees,%20Paris,%20France.jpg

21.http://3.bp.blogspot.com/-uVLc-jT6A_w/TaTTItLdUfI/AAAAAAAAOg/z9Ry2W6OLOU/s1600/IMG_1764.JPG