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Landscape Architecture

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Street analysis through history from a pedestrian point of view

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Introduction

The street can be analyzed in terms of polar qualities, the combination of which gives scope for great diversity: enclosed or open; visually dynamic or static; wide or narrow; straight or curved; and with regard to the formality or informality of the architectural treatment. Maintanace is also very important. This report includes two bigger topics. The first park gives a brief overview about how streets structure has developed and what this means to a pedestrian. The second part analyzes the streets of different times accoriding to aspects that are importatnt to a pedestrian.

The age of pedestrian cities

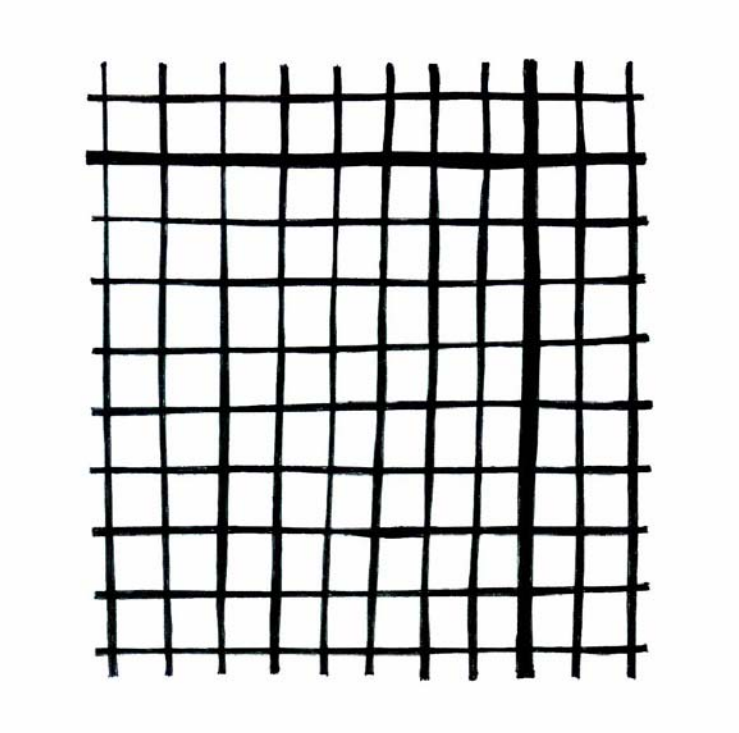
Throughout the ages streets have been of vital significance as a factor deciding the inner system of the town. In Ancient Greece the streets and squares were fields of force and tension between buildings, thus creating a feeling of security for the people walking through them. The ease of orientation in the small towns in that period no doubt made an effect of stressing axial quality unnecessary.

In Imperial Rome axial quality was stressed as the town grew indeterminately, surpassing man´s capasity of form. Pope Sexus X doubtlessly understood the spiritual significance of the townscape and created an axial system underlined by obelisks, dividing the town into areas bordered by clearly-defined routes (picture 1).

The internal form of the medieval fortress towns was indeterminate, but the clarity of the external form and generally perceptible centre dominance guaranteed the people moving about there a sense of security. The capacity for external form and the feeling it created for the people there even in a state of chaotic disorder, is comparable to getting lost on an island, which is not very frightening.

Orientation was naturally no problem in the grid plan towns that grew up as a result of the division into individual farms or as trading points at the crossroads of the traffic routes, even though the external form of these towns is in fact indefinite and there is no centre dominance.

In the towns of the Baroque era the importance of the street space was stressed to extreme, and even the buildings were designed more as stage sets for the hierarchial standing of the street rather than in proportion to the areas behind the facades. Axial street and park formations were used to create guided fields of force whose effect on the clear development of the shape of the town was significant (Kaikkonen, Moberg, Vasko 1971).



Picture 1. Axial road system

Street analysis from a pedestrian point of view

Enclosure

Great streets have definition. Streets are defined in two ways: vertically, which has to do with the height of walls or trees along a street; and horizontally, which has to do with the length of and spacing between whatever is doing the defining. The wider a street gets, the more mass or height it takes to define it. A common proportion is two (street width) to three (building and/or tree height). Noticeably, many fine streets are lined with trees, and these may be as important as the buildings in creating street definition. There is another factor important to street definition: the spacing of buildings along a street. In the end, tighter spacing is more effective than looser in achieving street definition (Jacobs 1995).

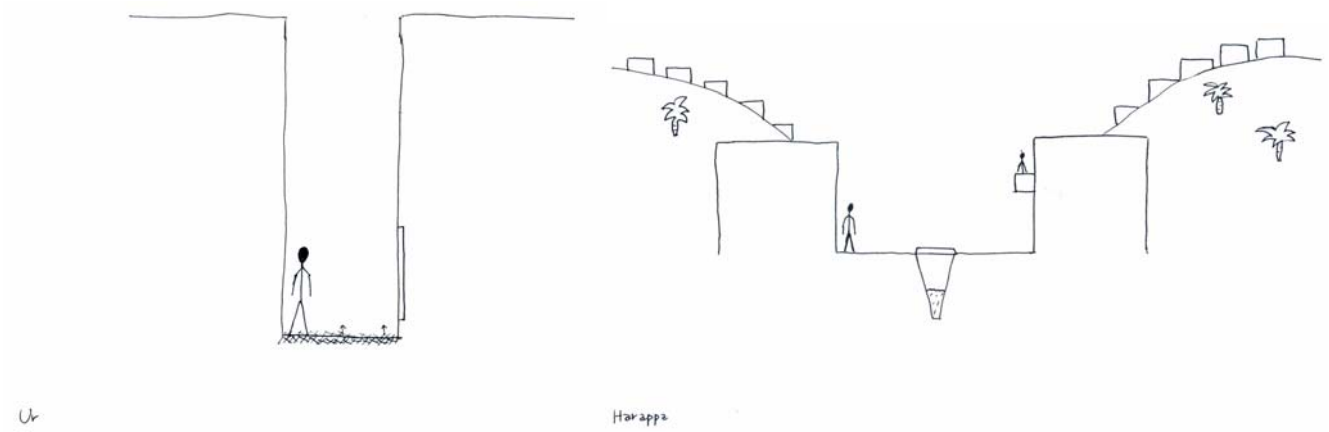
Height-to-width ratios for street enclosure

1. Unlike a square, a street has only two walls to define space. If the walls are low in relation to the street width, outward views are not sufficiently contained to provide a sense of enclosed space. In a street with a 1:4 ratio, there is three times as much sky as wall within the range of vision, giving a week sense of enclosure.
2. If the ratio is 1:2 the peripheral glimpses of sky equal the amount of visual field devoted to the street wall. The view of the sky is in the less dominant peripheral vision, so increasing the three-dimentional sense of enclosure. A ratio of between 1:2 and 1:2.5 provides a good sense of enclosure in a street.
3. A street wall height that equals the street width severely limits any sky view and gives a strong sense of enclosure. A ratio 1:1 is often considered the minimum for comfortable urban streets.
4. If the surrounding building height exceeds the width of the space then the tops of buildings will no longer be visible without looking up. Such ratios may lead to feelings of claustrophobia and will reduce light penetration into the space. In combination with other street profiles, however, they can create dramatic contrast (Carmona, Heath, Oc 2003).

In the streets with stong physical character, their volume generally takes a positive form and possesses a strong sense on enclosure. The continuity of the street wall and the height-to-width ratio determine the sense of spatial enclosure, while the width determines how the surrounding architecture is seen (Carmona, Heath, Oc 2003).

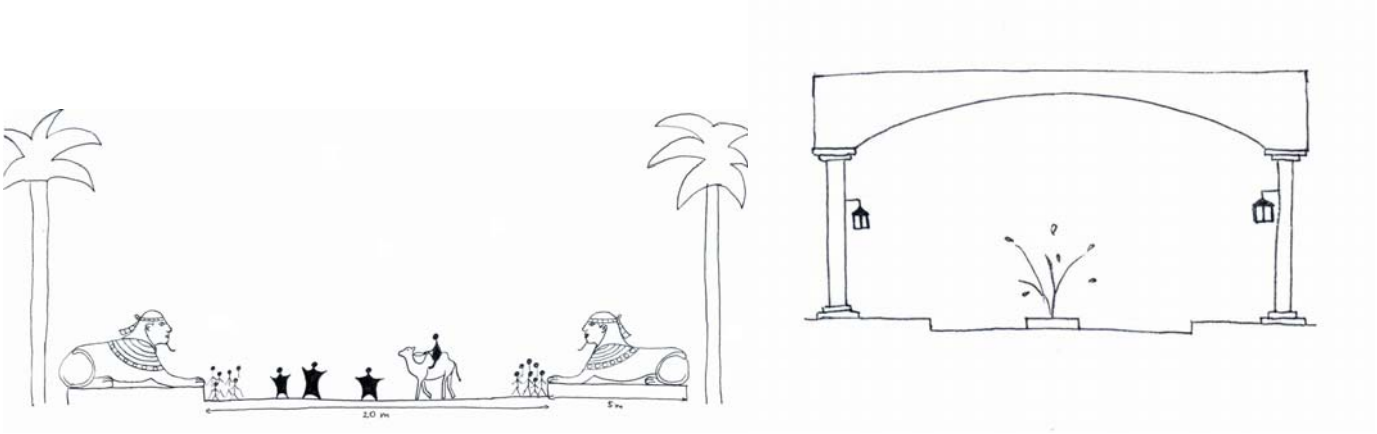
Table 1. Street enclosure through history (picture 2)

	Vertical (buildings, m)	Horisontal (street, m)	Relation (building/street)	
Sumerian times	6	2	3:1	Buildings densly close
Indus valley	5	10	1:2	Building line strictly given
Ancient Egypt	10(5)	20	1:2	No buildings; sphinxes, palm trees and columns define the street
Antique world	6	8	3:4	Often colonnade
Middle Ages	15	5	3:1	Great density, narrow sides of the buildings to the street
Renaissance	10	6	5:3	Buildings densly close, covered sidestreets
Baroque	15	20	3:4	Buildings densly closed
Classicism	18	35	1:2	Buildings densly closed, long facades



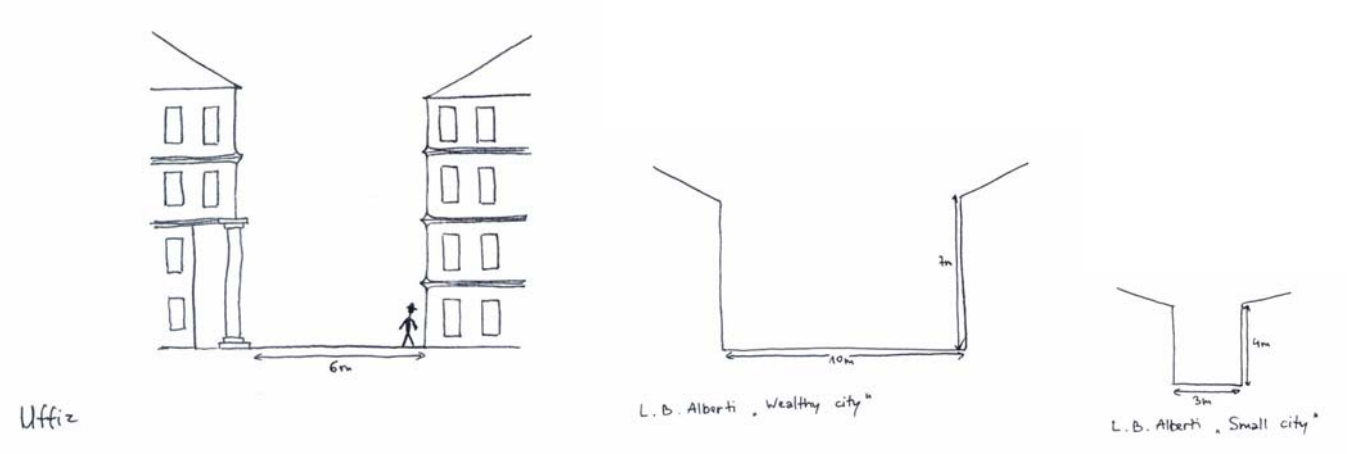
Sumerian times

Indus valley



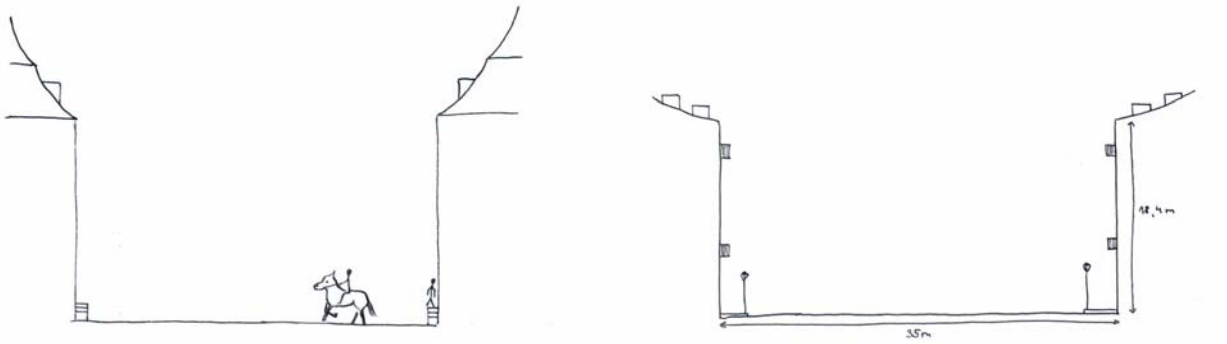
Ancient Egypt

Antique world



Renaissance

Renaissance- perfect big street and perfect small street



Baroque- Friedrichstrasse

Classicism- Rivoli street

Picture 2. Height-to-width ratios in defferent periods.

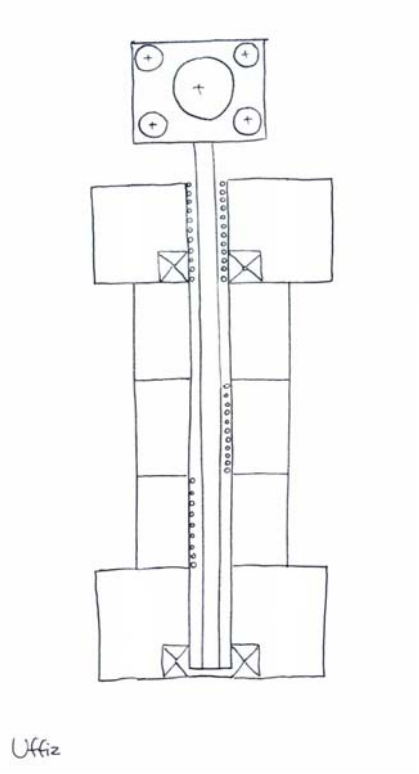
Width

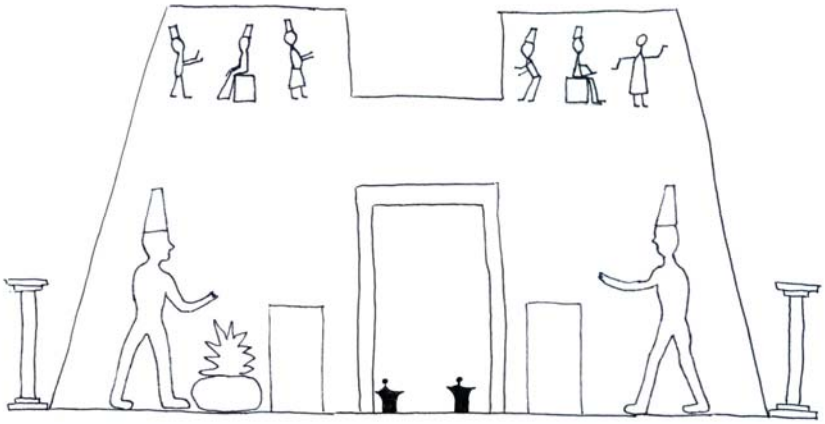
In narrow streets, vertical features become more prominent, projections are exaggerated, and eye-level details more important. The observer sees facades at acute angles and, when facing along the street, only sees parts of them.

In broad streets, the observer is sufficiently removed to see the surrounding facades as wholes, and their relationship becomes evident, while the floorscape and skyline become important elements contributing to the street´s character (Carmona, Heath, Oc 2003).

Form

Straight streets, as used in Paris, form fitting frames for the views of monumental buildings. They also extend the effect of such buildings over a far wider area than would otherwise be influenced by them, so the streets of whole districts seem to aquire dignity from the monument which is seen at the end of them (picture 3). Straight streets are somewhat stiff, formal and monotonous in character. But after all, when one wishes to go from one point to another, the obvious course is to take a straight line, where the contour of the ground or other cause does not suggest otherwise (Unwin 1994).

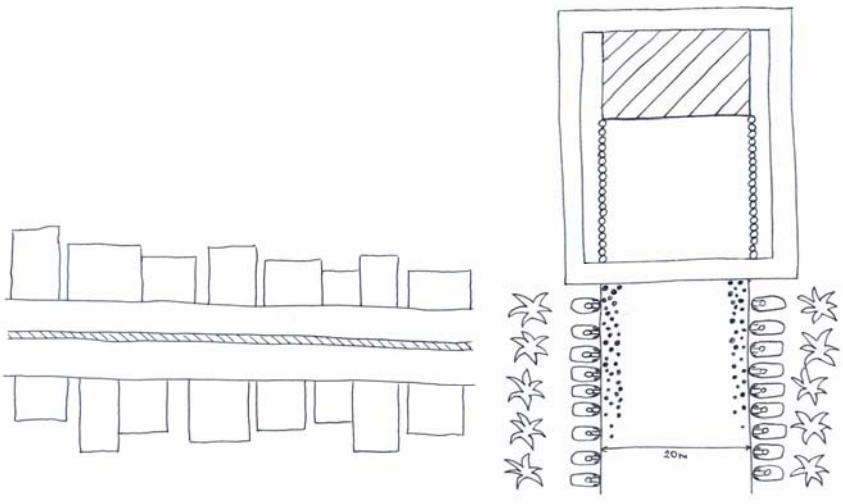




Uffiz Temple in Ancient Egypt

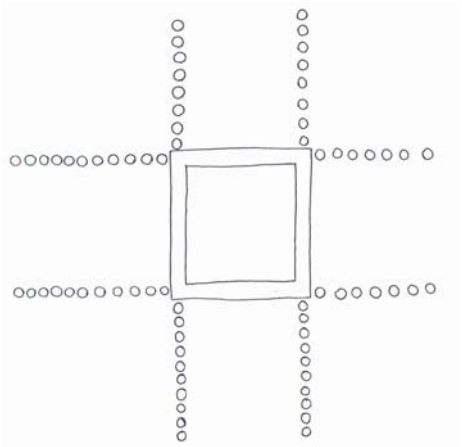
Picture 3. The monument at the end of the street.

In visual terms the successful design of straight streets (picture 4) usually depends on such factors as good proportions between length and width; the kind of stuctures which they are composed and the visual termination on a building or other features that bring the eye to rest (Carmona, Heath, Oc 2003).

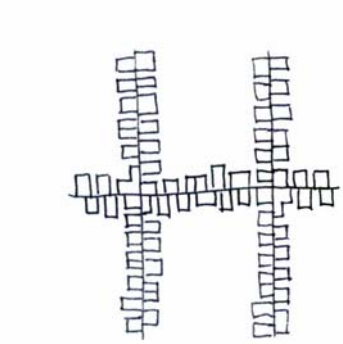


Harappa peatänav

The main street in Harappa Procession street in Ancient Egypt



Crossing point of the streets in Antique world



Perfect streets of a big city in renaissance

Picture 4. Straight streets.

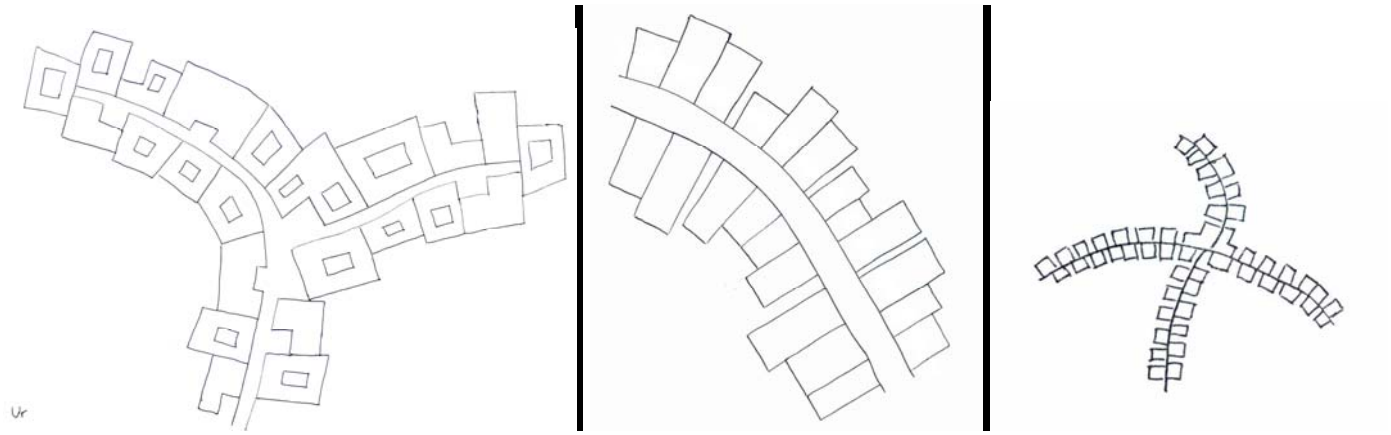
The advanatges of a straight street are: directness of access from point to point, the symmetry, simplicity of the character of the street picture produced, the convenience of rectangular buildings and building sites, the production of long vistas, which, where they can be terminated by a suitable building or view, have great charm, or where trees are planted, the avenue effect is in itself a delightful one (Unwin 1994).

The chief disadvantage of the straight street, on the other hand, is a tendency to monotony, due to the fact that the street picture remains much the same for its whole length, and that, except in the immediate foreground or in the terminal feature, the acute perspective or which the buildings are seen tends to destroy any interest which they might have, the disadvantage may to some extent be met by a judicious breaking of the building line. It will be seen by referring to photographs of any straight street, such as the Rue Soufflot in Paris, that the cross streets, which from breaks in the line of buildings, have the effect of bringing into the picture, in exchange for the portion of the vanishing perspective which is displaced by the street, part of the side elevation of the building, which is nearly square with the line of vision, and adds interest to the view. Where the purpose of the buildings will allow of such treatment, it is possible, by judicious variation of the building line, to build up a street, in which a long vanishing perspective is very largely replaced by portions of the sides of buildings seen in front of elevation, and in this way quite picturesque street effects may be arrived at (Unwin 1994).

A curved road in contarst offers an ever-changing picture (picture 5), a new grouping of buildings coming into view at every point. Streets that wind or have irregular frontages enhance their sense of enclosure, and provide a constantly changing prospect for the moving observer (Carmona, Heath, Oc 2003).

Table 2. Street form through history

Sumerian times	Unplanned, crooked, short, many dead-ends
Indus valley	Planned, orthogonal structure, straight
Ancient Egypt	Straight
Antique world	Straight
Middle Ages	Crooked
Renaissance	Long, straight, closed form at the end
Baroque	Long, straight
Classicism	Straight

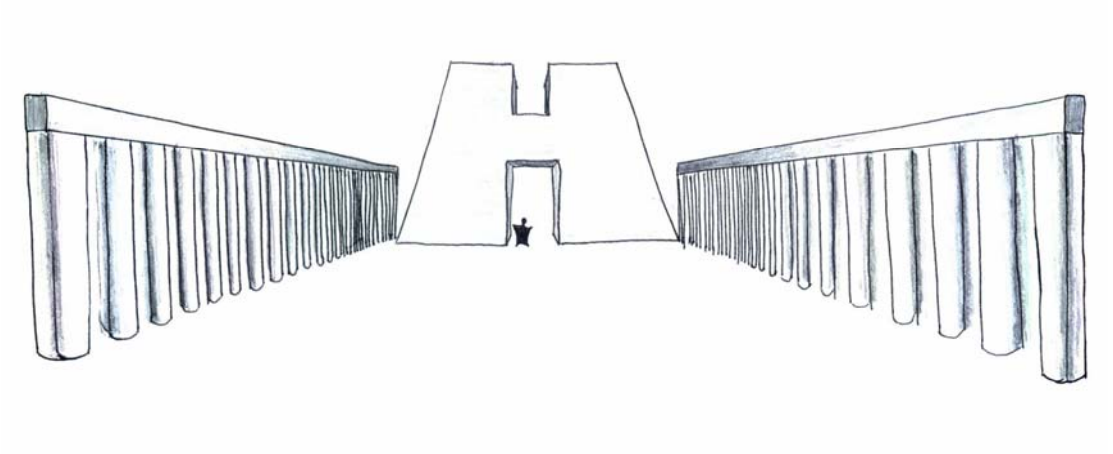


Sumerian times Medieval times Perfect small town street in renaissance

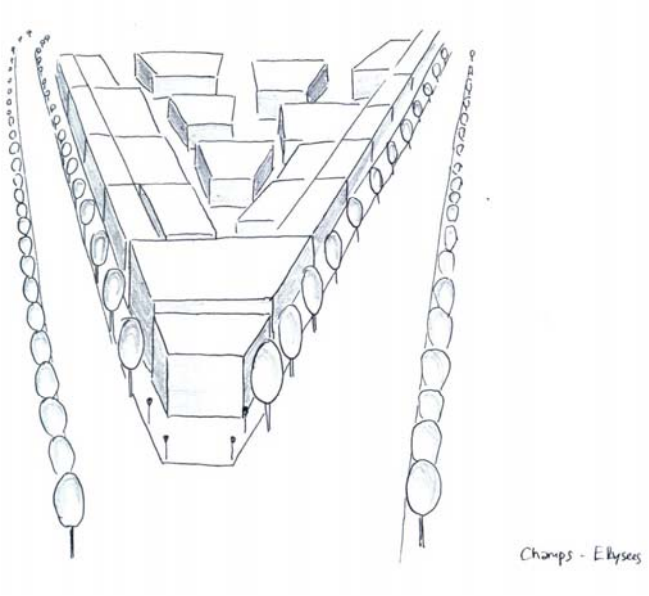
Picture 5. Curved streets.

Formality

Streets can be characterised as either formal or informal. Formal spaces typically have a strong sense of enclosure; orderly floorscape and arrangement of street furniture; surrounding buildings that enhance the formality; and often a symmetrical layout (picture 6). Informal spaces typically have a more relaxed character, a wide variety of surrounding architecture, and an asymmetric layout. Neither is necessarily more appropriate that the other (Carmona, Heath, Oc 2003).



The procession street in Ancient Egypt



Classicism- Champs-Elysees

Picture 6. Examples of a formal street.

Table 3. Street formality through history

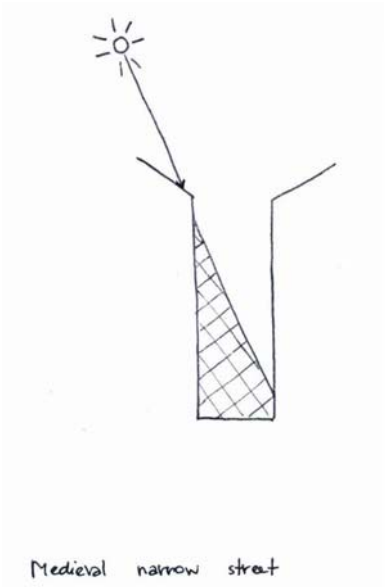
Sumerian times	Differentiated, living and market streets informal, procession streets formal
Indus valley	Differentiated, living and market streets informal, procession streets formal
Ancient Egypt	Formal, symmerty, repetition
Antique world	Formal, colonnades
Middle Ages	Informal, asymmetric, wide variety of bulidings
Renaissance	Formal, repetition of forms, straight building silhouettes, symmetry
Baroque	Formal, repetitions, straight building lines
Classicism	Formal, straight lines, long facades, aristocratic

Visual dynamism

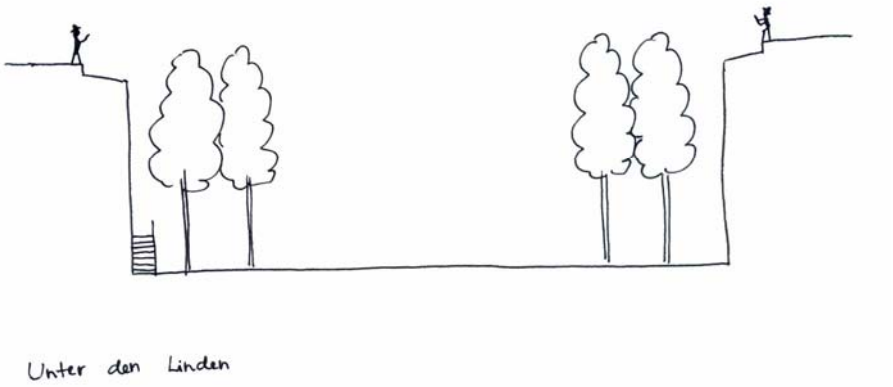
Great streets require physical characteristics that help the eyes do what they must do- move. Generally, it is many different surfaces over which light constantly moves that keeps the eyes engaged: separate buildings, many separate windows or doors, or surface changes. Visual complexity is what is required, but it must not be so complex as to become chaotic or disorienting. Good streets offer warmth or sunlight when it is cool and shade and coolness when it is hot (picture 7). People understand and respond to comfort. Trees help to define a street and provide shade (picture 8). The constant movement of their branches and leaves, and the ever-changing light that plays on, thorough, and around them is also important. The trees bring shady relief on hot sunny days, making the street a delightful place to be, and they provide some protection from rain, as do the shop awnings. Another good element is water. It moves, reflects the surrounding, moistures the air and creates a great microclimate (picture 9). What of streets as night? They may almost cease to exist, like the Grand Canal, or they may exist only at night, because of the light and what it does to the eyes (Jacobs 1995). The best streets have about them a quality of transparency at their edges, where the public realm of the street and the less public, often private realm of property and buildings meet. Usually it is windows and doors that give transparency (Jacobs 1995).

Table 4. Visual dynamism of the street through history

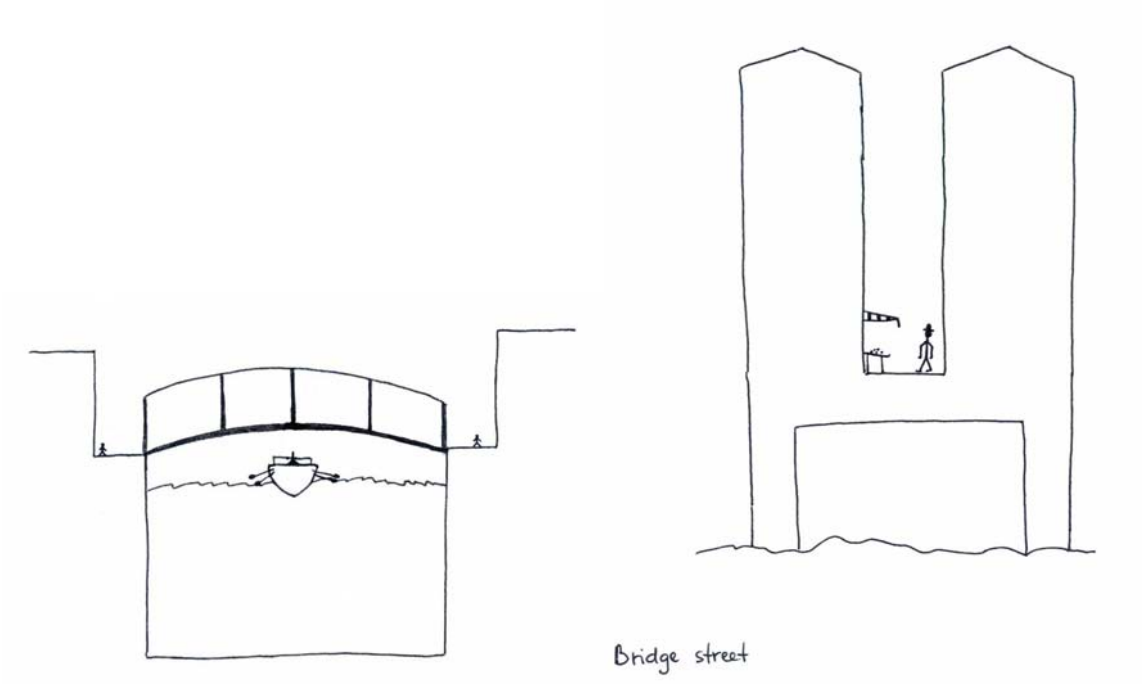
Sumerian times	Quite monotonous, some differences in light and shadow, some small shop windows
Indus valley	Unpaved, no holes in the first floor, balconies, attics, lians
Ancient Egypt	Monotonous, transparent
Antique world	Paved, raised pedestrian stripes, colonnades, triumphal arches, fountains, oli lamps
Middle Ages	Light-shadow variations, balconies, houses often colourful, multiplex facades, laterns, decorations (wind arrows, wall anchors)
Renaissance	Facinating, plastic, dynamics of light and shadow, many colours and contours, transparency (covered sidestreets, windows)
Baroque	Quite monotonous, specific demands on the houses from the central power
Classicism	Covered pedestrian streets, repetition, trees



Picture 7. Medieval street doen´t offer enought sunlight



Picture 8. Trees on a street



Waterway Bridge street

Picture 9. Water near the street creates a good microclimate

Maintenance

Ask a pedestrian what physical, buildable characteristics are most important to achieving a great street and the answers are likely to include words like “cleanliness” “smooth” and “no potholes.” Care of trees, buildings, and all the parts that make up a street is essential. People would rather not shop in poorly maintained stores if they can help it. Individually, (shopkeepers) shine the windows of their own stores. It makes a difference, not unrelated to eye-engaging light and reflection. Physical maintenance is as important as any of the other requirements for great streets (Jacobs 1995).

Table 5. Street maintenance through history

Sumerian times	Primitive sewage under the plots, garbage on the streets
Indus valley	Brick drains, ceramic tubes, sewage system
Ancient Egypt	Clean, representative
Antique world	Rarely cleaned
Middle Ages	Leaky and clogged drainage, waste water into the rivers, epidemics
Renaissance	Dogs, cats and pigs were used to keep the streets clean, despite taht the streets were still dirty
Baroque	Maintained
Classicism	Maintained

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