

Everyday human experience of space in the Chinese city

Enclosure – with the wall as its most prominent architectural element – represented for centuries a key human experience of space in Chinese cities, but is today regarded as a relic from the past. Yet enclosing walls provide a structure for one's position in space, time and society and a tangible spatial reference for everyday life. Walls were therefore crucial elements in the development of cities. This worked on every scale, from country and city, to house and bedroom. The Wall, my masters' graduation project, presents a contemporary interpretation of this in an urban-architectural design, for the city of Chengdu in Western China.

Jasper Nijveldt

Radical transformation

Since China formally adopted market-oriented economic policies in 1978, levels of urbanization and GDP increased enormously. The Chinese city has become hyper-adaptable to the demanding market forces, resulting in a permanent state of change. The city works as a pragmatic flywheel for improving living standards. Some authors acknowledge that due to radical transformation a modern hybrid society is rising, enabling mobility and individual freedom of choice, and resulting in the idea that identities and places are more loosely related.¹

However, a number of other authors argue that radical urbanization and transformation has not only changed the environment, but also the relationship and interactions of people within it. In the new Chinese city, finely meshed networks of courtyards, pocket parks and pedestrian-friendly streets are rapidly being replaced by a modern urban landscape with distinct travel ways, loosely defined open spaces, free-standing towers and privatized compounds. The focus tends to be on the spectacle, the object, and abstract bird's-eye designs, than on space itself or the daily human experience from eye-level. Miao, among others, argues that this radical and tactless reconstruction leads to a decline in the quality and use of ordinary public places, and, on a subconscious level, to a feeling that cities are becoming 'placeless'.²

Perception of space

The question arises of how to design meaningful places in the radically transforming Chinese urban society? One of the clues in answering this question is that the way people use and value places is highly influenced by their perception of space. It becomes significant to have a broader view on the environment and the human body. Therefore it is crucial to understand the Chinese perception of (public) space, in order to know how to structure it in cities. This is almost the exact opposite in Western cities. It is even more significant, since Chinese people, more than Westerners, tend to see the world in a more perceptual and intuitive way (Xiaodong and Kang Shua, 2007).

China progressively developed its perception of space for centuries by a process of accumulated evolution rather than outright revolution. Before the recent modernization, Chinese cities were conceived as a whole, and were usually based on a plan that was consistently applied to the existing topography. It was a collective work of art. A few principles were systematically applied following ancient precedents (see the perceptual city-forming principles listed below). These shaped the perception of space for centuries, but are coming under increasing influence from Western urban and architectural models.

Alternative urban-architectural design in Chengdu

What if we revive these principles as a basis for city form? In this project the city of Chengdu is used as a case study. This city is at the very heart of China's dramatic transformation. It is also a city under pressure from the enormous number of new migrants from rural areas. Like many Chinese cities, recent growth has been explosive, and a lot of valuable arable land has been lost. If the population growth of the city continues in the same space-consuming manner as during the last decade, it will need to double its size in the next twenty years, resulting in urban sprawl, traffic congestion and a further increase in air pollution. Chengdu will become more congested and will decrease in liveability and efficiency. The current urban model is no longer sustainable. The city has reached a crossroads.

Enclosing the city

By 'enclosing' the city via a 300-kilometre-long by 1-kilometre-wide urban zone at the current city border, the city will cater to a greater population without compromising the quality of life. This 'Wall' guides the city towards compact sustainable growth, giving at the same time a sense of 'place' to the millions of new migrants. By connecting the existing metro system with The Wall, public transit will be expanded, thus decreasing the dependency on cars. The Wall also encourages densification along important axes in the city. On each location The Wall takes on the specifics of the local soil, micro-climate, vegetation, and existing land-use patterns and interprets the perceptual principles mentioned earlier.

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New paddy-township

A new township is being designed as part of The Wall and will house 60,000 inhabitants. The landscape on this particular site is terraced to accommodate agricultural lots that produce rice, wheat, vegetables, tea, medicinal herbs, tobacco, silk, beef, and pork. The valley, the hills with bamboo thickets on them, and the ponds that store water, will be incorporated if possible. The existing roads will be upgraded to become primary roads for the township. New secondary lanes are added in an east-west direction, bringing hierarchy to the network. These lanes follow the edges of the terraced rice paddies. These lanes, open to the south, will take full advantage of the (scarce) sunshine in winter and of the prevailing winds in summer. Small public spaces are organized in a linear manner along the lanes. What results is a hierarchical system leading from the public to the very private. The hierarchy is emphasized by varying the width of the lanes.

This framework defines zones for building. Within these zones, walls are gradually erected on plot lines, to further enclose urban spaces. In this way building lots are created for a variety of dwelling typologies. Certain plots are reserved for semi-public spaces and for access. Walls on these plots will be perforated to allow penetration into the block. Entrances of the individual units are from these communal spaces. The subtle distribution of local materials, plants, and streaming water contributes to the quality and sensorial experience of the urban spaces. The township is canopied under trees rising out of small open areas.

The township is formed by the existing characteristics of the location, and holds an interpretation of fundamental perceptual principles of Chinese culture. It offers a series of enclosed worlds with humanly scaled courtyards, gardens, and small open areas. The township looks rather chaotic from a bird's-eye perspective, but at eye-level shows a movement through a clearly understandable series of enclosed worlds. Space is experienced via a crossing of various enclosures and different spatial sequences; from the very public all the way to the private bedroom. Space is presented little by little. The next space is always unpredictable, which creates a sense of mystery and a human experience of space.

Perceptual city-forming principles

Based on Chinese literature, five crucial city forming principles are formulated: Linearity, Hierarchy, Unity, Human Scale and Enclosure.³ In China's old cities, space is organized in a linear and hierarchical manner with small and scattered nodes along the street, while in the West (mainly Europe) big central static nodes play an important role (fig. 1) in a non-orthogonal lay-out (fig. 2). Chinese buildings are also oriented inwards, with more focus being placed on family ties and kinship, instead of being transparent and individualistically oriented towards the street (fig. 3). Open space and nature is broken into smaller pieces and distributed evenly through-out a human-scaled and horizontal city, while Western culture groups open space into bigger pieces, distributing it via important nodes in a vertical-oriented city (fig. 4). Finally, the enclosing of spaces touches the essence of the Chinese perception of space. Space is fundamentally perceived as a series of enclosed worlds, and the smaller units repeat the forms of the larger one, on a reduced scale (fig. 5).



Fig. 1: Linearity.

Left: Chinese linear public space.
Right: Western central square.
(after Miao 1990)

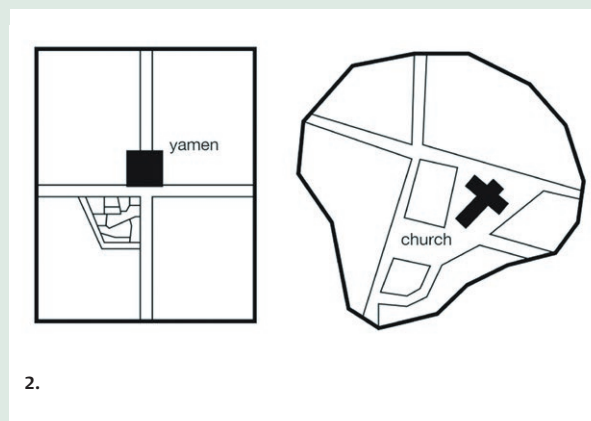


Fig. 2: Hierarchy.

Left: Chinese hierarchical organization.
Right: Western non-orthogonal urban tissue.
(after Miao 1990)

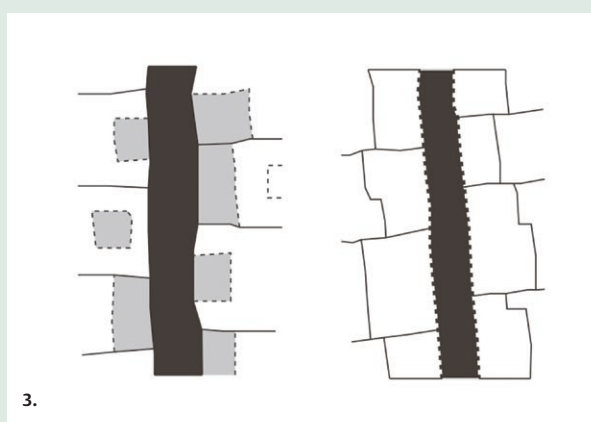


Fig. 3: Unity.

Left: Walls defined the street in China.
Right: Open façade to the street in the West.
(after Miao 1990)

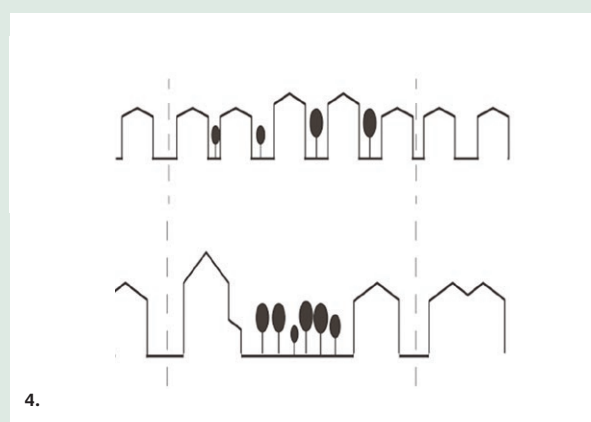
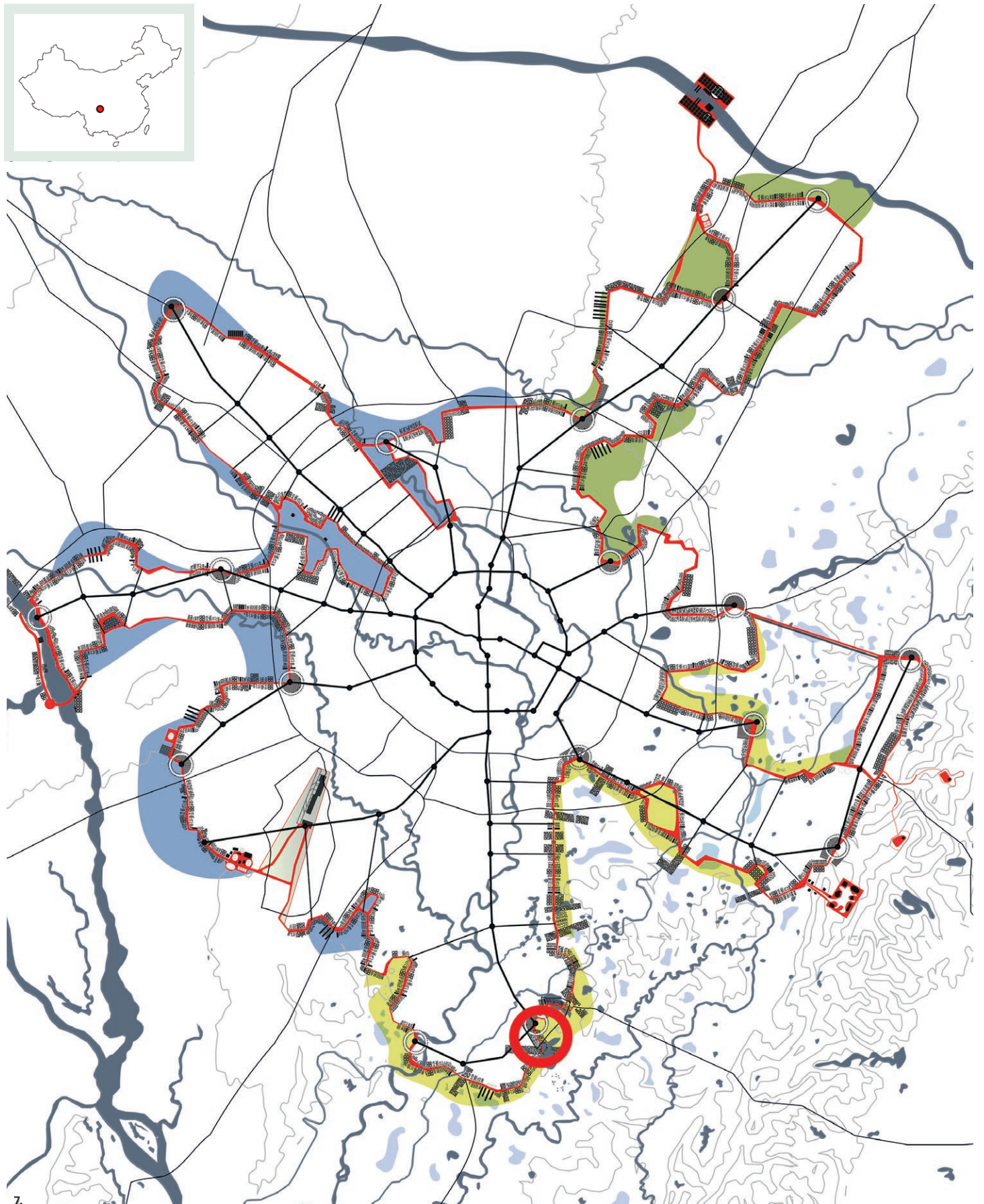


Fig. 4: Human scale.

Top: Evenly distributed, small-scale open spaces in China.
Bottom: Large open space in centre of block in West.
(after Miao 1990)



Everyday human experience

Is falling back on historical city-forming principles a useful step in the rapid modernization of urban China? In China the re-creation of traditional districts is becoming widespread, but mostly with local identity becoming an ornament displayed to attract tourists rather than to shelter communities. Space is seen as an autonomous phenomenon that does no more than form a static 'image' that looks historical. This often leads to closed, sometimes authoritarian, and brittle places. This project did not consider the historical image as being useful, but rather the older *perceptual principles*. As a Western designer it is almost impossible to fully understand the evolution of Chinese cities and to fix its value for today's rapidly changing society, but somehow current urbanization tends to neglect these principles. Public space is not organized in a linear way, and tends to neglect existing topography with a view to designing large over-dimensioned spaces. The relation towards the street is also often problematic. The buildings themselves are more and more conceived of as individual objects, instead of being part of an urban context. By once again incorporating these principles into city-making, this project attempts to contribute to the meaningful everyday human experiences of space in Chinese cities.

Jasper Nijveldt studied Architecture at TU Delft, graduating cum laude as an urban designer. Last year he won the second prize in the Vertical Cities Asia competition (mailto:jaspurnijveldt.com; www.jaspurnijveldt.com).

Notes

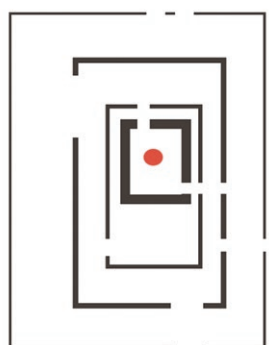
- 1 Faure, G.O. 2008. 'Chinese society and its new emerging culture', *Journal of Contemporary China*, 17, 469-491; Lin, G.C.S. 2007. 'Chinese urbanism in question: state, society, and the reproduction of urban spaces', *Urban Geography*, 28, 7-29.
- 2 Miao, P. 2011. 'Brave New City: Three Problems in Chinese Urban Public Space since the 1980s', *Journal of Urban Design*, 16, 179-207.
- 3 Miao, P. 1990. 'Seven Characteristics of Traditional Urban Form in Southeast China', *Traditional Dwellings and Settlements Review*, 1.2.; Xiaodong, L. & Kang Shua, Y. 2007. *Chinese Conception of Space*, Singapore: China Architecture & Building Press.



Fig. 5: Enclosure.

Series of enclosed worlds.

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Fig. 6: The design is based on existing landscape and use patterns of agricultural lots at the location. Walls are erected on plot lines to create building lots allowing for a variety of dwelling typologies.

Fig. 7: 300-kilometre-long by 1-kilometre-wide urban 'Wall' located at the current city border. The Wall 'encloses' the space of the city. Chengdu is able to double in population without consuming valuable land. One part of the Wall is worked out further into a new paddy-township.

Fig. 8: The creating and ordering of 'empty volumes' leads to a human experience of space.