

New Design Models for the Public Space of Chinese Cities

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UNIQUE CHARACTERISTICS OF CHINESE CITIES

Being one of the most populous areas in the world, China and other East Asia countries have higher population densities in their major cities than most Western counterparts. About 400 to 1,000 people live in each hectare of residential area in Asia cities, in contrast to 30 to 40 in most US cities.¹ East Asian cities also have much larger total populations. The region contains seven of the 15 largest cities in the world, and claims the highest percentage (16.6%) of urban population residing in cities of 10 million or more inhabitants (the world average is 8.0%).²

Chinese cities have inherited physical forms very different from those in the West. Except the portions planned by Western colonialists, these cities tend to be uniformly crowded, lacking the kind of large, concentrated civic open spaces we call squares and parks. Public activities take place mostly in commercial streets.³ For example, Shanghai has average 1.0 square meters of public green space for each resident, while Paris and London provide 8.4 and 17.6 square meters respectively.⁴ Compared with the zoned Western cities, Chinese cities are also known for their mixture of different functions.

Chinese cities are further characterized by their residents' heavy use of the inner-city public areas, especially during the evening. Window-shopping, park-going, and other recreational uses of urban spaces are among the most favorable leisure activities in China. Indeed, in 1997 70% of Shanghai residents chose to spend their May Day (a national holiday) window-shopping. From the evening of April 30 to May 4, more than one million people daily walked through Huaihai Avenue, a major shopping street.⁵ The pattern may have economic reasons such as the cramped residential space.⁶ But it also reflects the Asian cultural preference for strolling in crowds.⁷

Finally, many Chinese cities in the past two decades have experienced a level of industrialization which in developed countries took a century to complete. Such an instant economic growth only exposes the lag in cultural and political development, as evidenced by the societies' overemphasis on material wealth, the pro-business government policies, and the public's lack of concern over the environment and historic preservation. Any urban strategy for Chinese cities should include response to these factors as a part of the proposal.

PROBLEMS OF THE EXISTING URBAN FORM

The escalating urbanization of the recent decades has exposed several problems for the public spaces of Chinese cities. The most visible one is the need for more public space. The sidewalks in Shanghai or Hong Kong are so overcrowded that they become mere circulation channels where people literally push each other to keep moving. While "self-congestion" attracts people to a public place, as

argued by William Whyte, one should not jump to a conclusion that the more congested a place is, the better. Whyte himself pointed out that a sidewalk filled with pedestrians could be just a boring transportation corridor.⁸ What get lost in such jams are the other important roles of a public space, such as a place for people to take a rest or to meet others.⁹ These days in the chic Shanghai shopping streets, one can often observe people sitting along the curbs or atop fire hydrants!

However, merely expanding the width of a sidewalk and placing benches along the curb side have not solved the problem, as people do not feel easy when sitting in traffic flow. Therefore the problem here has to do with both inadequate square-footage of public space and the inherent weakness of the linear form which is hardly suitable for "a psychological parking place," a function Paul Zucker identified with a nodal space such as a square or park.¹⁰

The economic boom in China demands ever more offices, retails and services. Limited by the linear organization patterns, commercial uses sprawl haphazardly along the major streets. Once-separated shopping areas begin to merge into continuous commercial corridors in an over-extended megacity. One of such corridors in Shanghai, the East and West Nanjing Lu, extends as long as 5,000 meters. The endless street space and their commercial signs, without the punctuation of nodal spaces, create visual boredom in pedestrians after a prolonged walk.

The visual problem reduces the legibility of the environment for these lengthy corridors leave few significant spatial variations in people's memories as landmarks. Visitors to Shanghai and Tokyo, for example, tend to get disoriented in the street webs extending from one sub-center to another. Beyond the practical problem of way-finding, a uniform urban spatial system also takes away the opportunity to create unique public spaces as symbolic identities for the communities.

At the micro-level, high-density urban life challenges architects and governments to protect adjacent parties' privacy and to provide durable public facilities. Due to the traditional mixed land use and the Chinese laxity in enforcing regulations, the current permeation of commercial use subjects residences in core areas to the noises, visual intrusions, and other disturbances from street vendors. In addition, the tight home space in Chinese cities push residents to utilize public or semi-public areas in many ways, such as peddling wares and bicycle/moped-parking on the sidewalk, cooking in alleys, or storing personal belongings in condominium corridors, intensifying the existing traffic congestion and accelerating the deterioration of public facilities.

DEFICIENCIES IN CURRENT DESIGN APPROACHES

To respond to the rapid urban renewal processes, Chinese urban designers have come up with several strategies in creating new urban

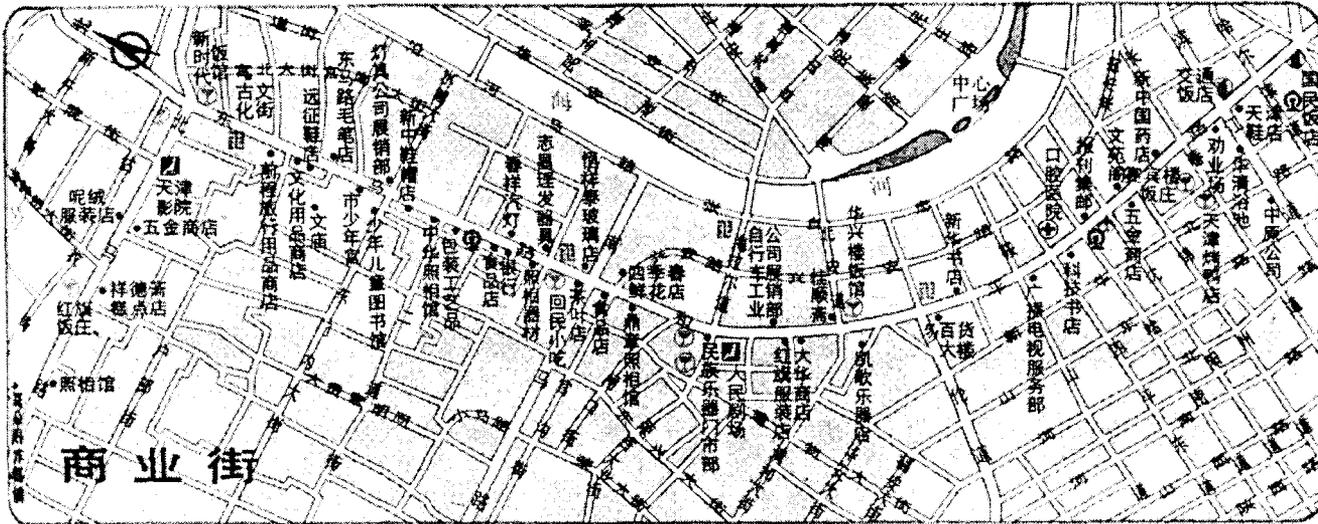


Fig. 1. Lack of nodal spaces in downtown Tianjing.

spaces. The most widely adopted approaches all draw on Western concepts such as axial boulevards and expansive plazas. Schemes based on these models (e.g., the center of Pudong New District, Shanghai, 1990s) did create a fresh sensation and more breathing spaces in newly developed areas. However, they are inappropriate for existing cities due to their failure to address the high population density, in particular the tight supply of land and the society's demand of maximum economic gain. Consequently the existing cities, where most of the urban population resides, have not received much relief from the urban redevelopment started two decades ago. In fact, conditions in certain cities have worsened with the chaotic construction of high-rises which often fully occupy the ground areas of previous mid-rise buildings.

Therefore it is urgent to stop the *laissez-faire* state by providing designers and administrators alternative models which should be both doable in terms of the particular economic and cultural contexts and effective in rescuing the public space system. Created from observation of existing examples, my own practice, and theoretical research, each of the following six proposals will address one particular aspect of urban public space system. They are intended for existing Chinese cities, but may also have implications for new towns and other East Asian cities because of the similar urban conditions.

NODAL SPACE: NUMEROUS SMALL COURTYARDS VERSUS ONE LARGE SQUARE

During the 1950s Chinese government created a few Western-styled squares in selected major cities, such as the Tienanmen Square in Beijing and the People's Square in Shanghai. Evidence has shown that these squares are under-used even though located near busy streets. Their intended purpose for state parades and governments' tight control over their use may render them less friendly, but the real inhibiting factors may lie in their enormous sizes and Chinese people's traditional disinterest in large open areas.¹¹ Today the high population density simply precludes the possibility of more such squares being built in inner cities.

Since the 1980s interior and podium-top "squares" also have been created in some luxury commercial buildings. Like their U.S. precedents (which in some cities are even connected to one another by underground or overhead passes), these areas haven't worked too well as public spaces because they are isolated from the people on sidewalks, not to mention that in a developing country they are very expensive to build and operate, and often exclude the general public.

Instead of a few large squares, numerous small courtyards within

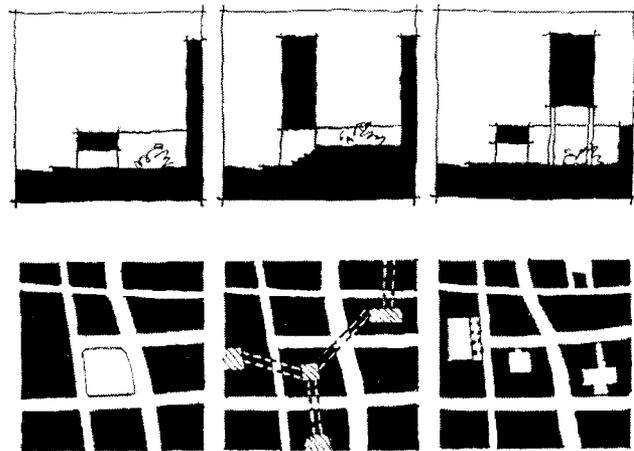


Fig. 2. Prototypes of the courtyard and comparison of courtyard, atrium, and square as nodal spaces.

urban blocks may provide a more practical and culturally sensitive answer to the need for nodal public spaces. The courtyard is a mainly paved outdoor area, surrounded by commercial or public buildings but still enjoys some sunlight and breeze. It is protected from sidewalk traffic by a wall or a public-accessible building (such as a store). At the same time the courtyard should be visible to the pedestrians on the street through large gates, storefronts, or open structures like a cloister. The courtyard should be much smaller than a traditional European square. New York's Paley Park of 13 by 30 meters serves as a good guide, but the area could be as small as the 4-by-5-meter "sitting-out area" in downtown Hong Kong. Each urban center should have a string of courtyards, separated by walkable distances and located at strategic places as perceived from the streets.

Unlike the square, the urban courtyard will appeal to Chinese people with its familiar scale and atmosphere as those of the courtyard in a traditional Chinese house. Aesthetically the openings of the courtyards into the street create layered space and transparency which break the monotony of the solid street facades. These openings also act as urban landmarks, helping visitors acquire memorable gestalts of a city. Most importantly, the small sizes and inner-block locations make courtyards more feasible to be realized. With easy public access from the sidewalk, a courtyard can even be placed on a podium or under elevated buildings to maximize land use.

The courtyard concept is not new in Chinese history. In traditional Chinese towns, the courtyards of temples and native-place associations often functioned as public open spaces, accommodating town meetings, festival performances, and civil society gatherings.¹² The traditional stores facing a street also had courtyards behind the stores, used for small public gatherings. The concept has already attracted modern architects' attention in East Asian countries. Fumiko Maki experimented with a similar idea in his Hillside Terrace in Tokyo as early as 1962. On a larger scale the Urban Council of Hong Kong has converted numerous condemned building sites and once wasted nooks into small public spaces. And the commercial courtyards in Singapore's public housing estates show more signs of life than the nearby air-conditioned malls or oversized parks.

GREEN SPACE: PAVED GARDEN VERSUS ENGLISH LANDSCAPE PARK

The high-density environment also challenges our understanding of what an urban park should be. Since pre-industrial Chinese cities did not have the tradition of building public parks, most existing parks were constructed by Western colonists in the 1920s or 30s, and many adopted the English landscape style exemplified by the Central Park in New York: Large expanses of lawns dominate the park, which are separated by curvilinear paths, meandering lakes, rolling hills and groves. The essence of an urban park was to imitate the natural landscape—to bring the countryside into the city. Such a philosophy still directs today's park design.

But increasing evidence shows that this model is incompatible with today's intense use of urban parks. Apart from the streets, parks in many Chinese cities are the only public spaces (either outdoor or indoor) open to various uses for an affordable fee. A 1982 survey found that each hectare of land in an inner city park of Shanghai received as many as 8,210 visitors on an average day.¹³ With such a concentrated use, lawns are soon worn out exposing the dusty soil, and trees and bushes are often damaged by being used as playground or exercise equipment. These signs indicate that, in a high-density environment, the park functions chiefly as "a public room with plants" rather than "a piece of nature" transplanted into the man-made city.

This new perspective calls for a different set of design strategies. First, most ground area of a park could be paved, with many tree pits and planters though, so that more people can use the park as a space rather than untouchable scenery. Second, greenery should be planted mainly on overhead and vertical planes. Third, planted areas and water surfaces should be completely rimmed by protective boundaries which might also be used as sitting furniture. Finally, association with nature might be created using geometric forms, man-made structures and artificial materials to symbolize, rather than reproduce, our experiences in forests and mountains. Compared to the dead-end approach of imitation, symbolization creates a stronger effect within a smaller area. The gardens of traditional Chinese houses contain examples of these principles. Many modern urban parks in Hong Kong, from the large Hong Kong Park to the miniature Caine Lane Park in Sheung Wan, provide modern examples of the park as "a public room with plants."

BUILDING AND OPEN SPACE: OVERLAPPING VERSUS SINGLE USE

Today most urban planners in China still do "horizontal" planning only. Each square meter of land is marked on a map either as public roads and parks, or as building sites. Such a two-dimensional model may work in a land-abundant, over-extended urban area like Moscow, but in a jammed Chinese inner city it simply adds difficulty to any attempt to develop new public open spaces.

To use valuable land more efficiently, a "vertical" model has been used in building use zoning by cities like New York. Following the same principle, buildings should be allowed to overlap public

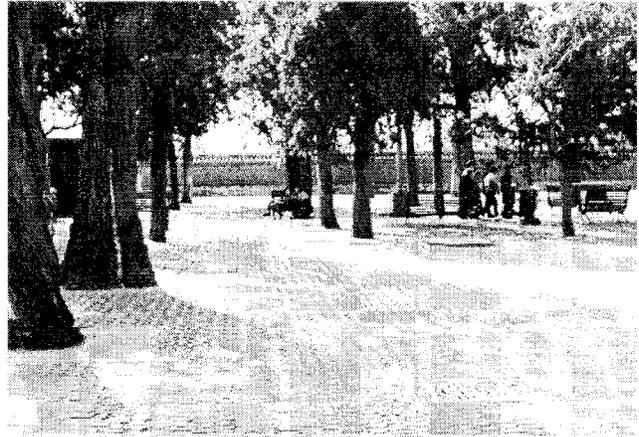


Fig. 3. Paved garden: Tiantan Park, Beijing.

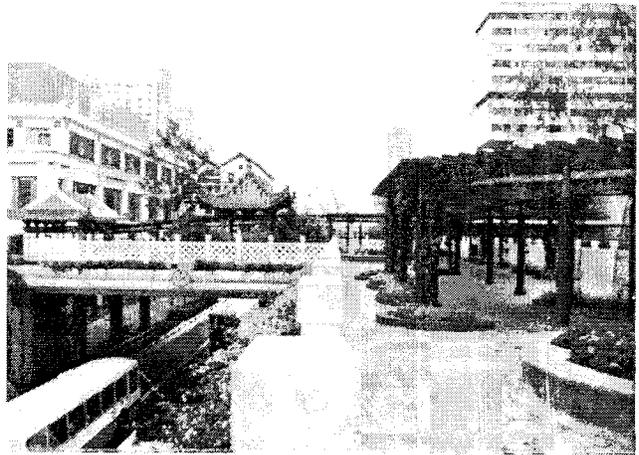


Fig. 4. Elevated mini-park above Eu Tong Sen Street, Singapore City.

open space. One particular technique makes use of the fact that, when a sheltered space is open at its sides and is tall enough in relation to its horizontal dimensions, sun light, rain and breezes can then enter the space diagonally from the sides to create an environment similar to an open space. Thus, one can have a garden or plaza even under a building! This idea has appeared in Le Corbusier's 1920s proposal of Freehold Masonettes, Hugh Stubbins' Citicorp Center in New York City (1971), and Kisho Kurokawa's Fukuoka Bank Head Offices. These schemes are made possible by the cities providing developers with incentive development bonuses.

A more conventional design technique of overlapping makes use of the spaces under elevated roads or other public open areas. By converting these no-man's-lands into commercial interiors which can generate higher rents, a crowded city will gain more maneuvering room to add new public open spaces at other locations. Under the eastern edge of Kowloon Park, Hong Kong, for example, a row of boutique shops have been inserted in the 340-meter-long retaining wall facing the busy Nathan Road located at a level lower than the Park. Conversely, one may also build plazas or gardens over on-grade roads.

SPACE CONTROL: TIGHTLY REGULATED VERSUS LOOSELY REGULATED

In a low-density Western city, public, semi-public, and private territories are usually defined by both "hardware" (railings and walls) and "software" (customs and protocol). To maintain an openness and fluidity in urban scape, as favored by European

cultures since the Baroque period, the “hardware” often appears subdued, such as a low hedge or simply an open area. A typical community park in an American city often consists of a lawn with no walls or even hedges sheltering its users from the surrounding streets. Park users simply keep away from the peripheries. In a standard American single-family home, privacy of the living room is protected by the front lawn. Many U.S. communities even have by-laws prohibiting any solid fence taller than 6 feet. They don’t need this level of separation because there is plenty of open space available between different territories.

This is not so in the high-density cities of China. Space has become such a high-valued commodity today that encroachment of public areas and invasion of privacy have begun to interfere with normal life, as have been discussed earlier. While to some Western urban theorists this ambiguity has an “organic” appeal, it inflicts pains every day on local residents.¹⁴

The problem calls for a new design strategy for space control. In this model, areas intended for different uses should be always clearly differentiated, preferably by effective, physical measures such as railings. When such divisions are not feasible, the designer should create each space just large enough for the intended purpose (for example, avoid ubiquitous nooks and niches in the public corridor of an apartment building). Instead of space-wasting lawns, architects should be allowed to use walls to achieve mutual privacy between neighboring spaces. Walls should be above eye-level, solid or translucent, and made of bricks, plants and other varied constructions. More than one Western critic has found a mysterious semblance of a “miniature city” in the walled commercial buildings of Japanese architects like Tadao Ando. The experience may simply come from the need to establish a territory in the visual chaos of a Japanese city. Rather than the sweeping vistas of a Western city, this model promotes a new urban image more appropriate to the Asian context, characterized by small but neatly defined spaces, layered urban views, and occasional hints of hidden spaces through apertures in the walls.

The proposed model does not completely reject “soft” space controls. As long as they are effective either by enforceable regulations or by self-discipline, methods such as time-sharing of different uses (in Hong Kong and Tokyo street markets) may make more efficient use of urban space.

EDGES OF COMMERCIAL STREETS: MULTIPLE LAYERS VERSUS SINGLE LAYER

Since streets dominate the public spaces of Chinese cities, it is important to avoid the placelessness associated with the perpetual commercial sprawl along these corridors. As Kevin Lynch pointed out, “the lack of intensive centers is a handicap for the linear city. Some uses flourish in extreme propinquity, and centers are psychologically important.”¹⁵ A survey of Shanghai’s shop owners shows that a commercial street longer than 600 meters creates physical fatigue and attracts fewer customers.¹⁶ Over-extensions happen because of the conventional wisdom which favors the space bordering a sidewalk. Two concepts are proposed below to reinterpret this pattern so that any given segment of a street can contain more sidewalk-facing spaces to avoid overflow out of the segment.

The first proposal calls for the opening of more sidewalks on the second or basement level of buildings facing a street. City planners may require owners of individual buildings within a selected area to continue the new sidewalks from one structure to another. The proposed sidewalks, either in open-air or enclosed, should be frequently accessible from the ground through public stairs. People on the ground level should be able to see storefronts along these new sidewalks, or at least see their signs.

In addition to increasing the amount of sidewalk-facing commercial space, the level changes add welcome territory-defining edges along one side of the sidewalks, inviting people there to watch other people or to have private conversations. Whyte points out that

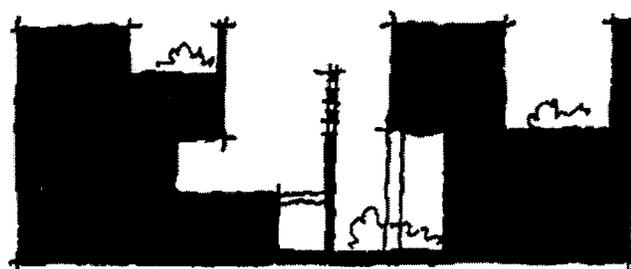
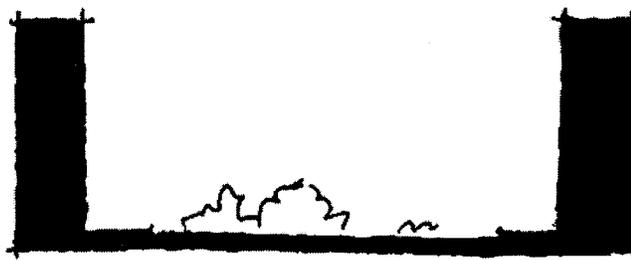


Fig. 5. Comparison between wall and distance as boundary.



Fig. 6. Prototypes of the multi-leveled sidewalk.

adjacency to the street is “far and away the critical design factor” to the success of a public space.¹⁷ Just like at a conventional sidewalk, people at this multi-leveled sidewalk can see other people on the ground or even call a taxi. In reality, the concept has been already used in individual buildings. In Singapore City for example, both along the trendy Orchard Road or in the shopping areas of public housing estates, one can observe stores on split levels or on second floors which overlook the street below.

The second concept, the back-alley network, explores new possibilities in the plan. Walking in the downtown areas of Tokyo or Hong Kong, one is fascinated by the back alleys behind the grand facades of the boulevards. The back alleys are much shorter and narrower, many are one-way, small loops, *cul-de-sacs*, or even pedestrian-only corridors. Their width, paving, and street planting are distinctively more intimate than those of the main street. The buildings along the alleys are either old mid-rise structures or the rear parts of the high-rises facing the main street.

Even though back alleys usually do not form continuing streets, collectively they constitute a layer of secondary “vessels” adjacent to the main artery, absorbing additional amount of people and activity. These networks also create places with a different rhythm and rent. For example, one can even find convenience stores for local residents in the back alleys of the Ginza district, Tokyo, a place renowned for its skyrocketing land prices and posh department stores. Visually, the alleys show a glimpse of mysterious vistas from time to time to pedestrians in the main street, breaking up the solid “walls” of the street boundaries. Using the main street as a spine, people tend to venture into the alleys and then return to the thoroughfare from time to time. Since the back alley networks already exist along the major commercial streets of many major Chinese cities, the issue for a city planner here often is how to preserve the existing patterns in urban renewal projects.

CITY BOUNDARY: LANDMARK VERSUS BELT

If over-extended commercial streets create monotonous experiences and confuse people’s perception of where the city center is, similar problems happen at the intercity level when the built-up area extends endlessly throughout the megalopolis. Such expansions may be justifiable economically, but in terms of visual quality they are definitely an ill: Tourists and local residents alike are bored to death by continuously traveling through similar urban scenes. Lost too is a clear mental image of a city’s scope and location, as well as one’s sense of belonging to a community.

Such problems in environmental identity become especially acute in Chinese mega-cities due to their enormous and expanding sizes. One unique characteristic of Asian urbanization further aggravates the problem. As identified by McGee and Ginsburg, Asian mega-cities do not display a clear bipolarity between urban and rural areas. Instead, densely populated “semi-urban” areas develop along major transportation routes between the cities, “characterized by an intense mixture of land use.” Together with the cities, these areas form an “extended metropolitan region.”¹⁸ One can observe this phenomenon between Shanghai and its satellite cities or between Hong Kong and Guangzhou. It does not take a planner to realize that these interstitial areas can easily become urban sprawl. How such developments can be evaluated social-economically is beyond the scope of this paper, but in terms of creating a structured environmental image, the formation of a built-up continuum from one city to another must be considered undesirable.

Establishing green belts around cities, such as the ones in the London and Moscow plans, is the only method known to Chinese urban planners for curtailing built-up areas. It is hard to apply the method to East Asian cities due to the high population density and intensive economic use of land in the areas surrounding the cities. Besides, the goal is to create an identifiable visual structure, not redirect urban development (a questionable goal for planners). These thoughts lead to the conclusion that since people form cognitive maps of a region mainly through traveling within it, “green landmarks” can be established at strategic locations along major traffic routes to help identify the boundaries of cities. The landmarks could be regional parks or recreational farms, and to be effective they must present a substantial length of natural landscape along roads. Compared to the green belt model, green landmarks consume much less land and relocation costs, and are easier in the long run to guard politically against encroachment. With the current rate of urban

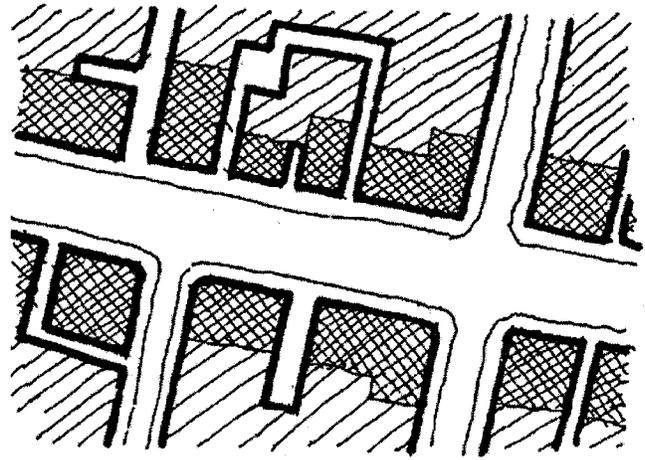


Fig. 7. Diagram of the back-alley system.

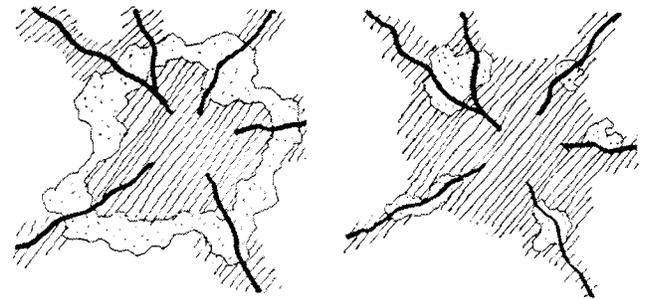


Fig. 8. Green belt and green landmarks as the visual identities of city boundaries.

growth, Chinese municipalities must act fast to pass legislation and expropriate land in the interstitial zones before concrete jungles fill in these still relatively open areas.

Cities can benefit most from the six concepts proposed above by incorporating them into other more conventional ideas according to the different conditions of individual communities. Whether or not these concepts can actually work will be answered by their application in real projects. However, it is hoped that this research will contribute to a design/planning approach which, neither clinging to tradition nor blindly chasing novelty, seeks solutions which are most appropriate to the unique problems of fast-changing Chinese cities.

NOTES

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- ² United Nations, *World Urbanization Prospects: The 1994 Revision* (New York: United Nations, 1995), Table 1 and A.17.
- ³ Kisho Kurokawa, *Rediscovering Japanese Space* (Tokyo: John Weatherhill, 1988), p. 19; Pu Miao, “Seven Characteristics of Traditional Urban Form in Southeast China,” *Traditional Dwellings and Settlements Review*, Vol. 1, No. 2 (Spring 1990), pp. 39-40.
- ⁴ Binyi Liu, “Planning of Ecological Green System in Pudong,” *Cheng Shi Gui Hua Hui Kan* (Urban Planning Forum), Vol. 76 (November 1991), p. 53.
- ⁵ *Shijie Ribao* (World Journal), May 7, 1997, Hawaii edition, p. 11.
- ⁶ Deborah Pellow, “No Place to Live, No Place to Love: Coping in Shanghai,” in Greg Guldin and Aidan Southall, eds., *Urban Anthropology in China* (Leiden, The Netherlands: E.J. Brill, 1993), p. 419. The author reported an average living space per

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- ⁷ Frank Leeming, *Street Studies in Hong Kong, Localities in a Chinese City* (Hong Kong: Oxford University Press, 1977), p. 38.
- ⁸ William Whyte, "New York and Tokyo: A Study in Crowding," in Hidetoshi Kato, ed., *A Comparative Study of Street Life* (Tokyo: Research Institute for Oriental Cultures, Gakushuin University, 1978), p. 16.
- ⁹ Allen Jacobs, *Great Streets* (Cambridge, MA: MIT Press, 1993), pp. 272, 312.
- ¹⁰ Paul Zucker, *Town and Square* (Cambridge, MA: MIT Press, 1959), p. 2.
- ¹¹ For this inherited psychological or cultural pattern see my articles cited in note 3.
- ¹² Dehua Wang, "The Effect of Religion on Ancient Urban Planning in China," *Cheng Shi Gui Hua Hui Kan* (Urban Planning Forum), Vol. 74 (November 1991), p. 8.
- ¹³ Xudong Huang, "An Investigation on the Users of Public Parks," *Cheng Shi Gui Hua Hui Kan* (Urban Planning Forum), Vol. 19 (April 1982), p. 32.
- ¹⁴ Marsden, p. 16.
- ¹⁵ Kevin Lynch, *Good City Form* (Cambridge, MA: MIT Press, 1985), p. 377.
- ¹⁶ Xiumin Hou, et al., "The Change of the Urban Function and the Optimization of the Spatial Structure in Shanghai," *Cheng Shi Gui Hua* (City Planning Review), No. 4 (July 1997), p. 52.
- ¹⁷ William Whyte, *The Social Life of Small Urban Spaces* (Washington, D.C.: Conservation Foundation, 1980), p. 54.
- ¹⁸ Norton Ginsburg, et al. eds., *The Extended Metropolis: Settlement Transition in Asia* (Honolulu: University of Hawaii Press, 1991.), pp. 3-46.