

Chinese City Design:

Searching History in Order to Find a Balanced and Sustainable Future



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The Problems of the Contemporary Chinese City

The Chinese city faces a crisis. As development on a scale unprecedented in human history consumes this country, little care is being taken to ensure the survival of age-old traditions and the concrete principles that accompany those traditions. Western ideas seep into the country, and this produces an effect of imbalance [see Figure A]. This imbalance is not only cultural but is accompanied with all of the derivatives pertaining thereto: physical disharmony, economic imbalance, environmental unsustainability. Considering this, what needs to change within the contemporary Chinese city? To this question one must answer that the fundamental bases which underlie the myriad forms of development need to change.



Figure A.
Modern China provides little balance between traditional and contemporary developments, and natural surroundings.

Following the American Dream

A chief culprit in this unbalanced and, even, careless development is the Western ideal of capitalist consumption. As China becomes wealthier, and thus her people are afforded more and more economic opportunities, they look to the West (or, better, the West looks to them) in order to satiate the myriad needs of the modern consumer. This takes shape in many forms: new automobiles, larger homes with more green space, clothes, jewelry, etc [see Figure B].



Figure B.
China following American consumptive habits is unsustainable. Sprawling developments such as this are not culturally sensitive nor are they sustainable.

The problem, however, is the fact that China is not America. In the United States a population of roughly 285 million persons live within a geographic area roughly the same as China [see Figure C]. In China, 1.3 billion persons occupy that area. If China consumed on the per capita level of America, the world's natural resource base would collapse. For example, if the Chinese used as much

energy per capita as Americans, a natural resource base the size of three planet Earths would be required in order to sustain it. If the Chinese used as many automobiles as Americans, there would be roughly 850 million autos in the country— over three times the size of the entire American population. Mass consumption and material capitalism simply cannot exist in China according to sheer fact.

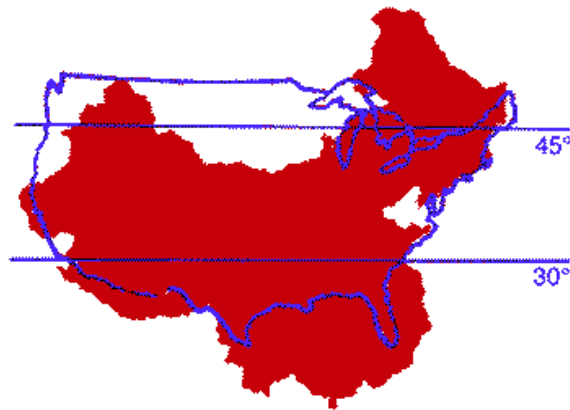


Figure C.
The spatial area of China is roughly equivalent to that of the continental United States.

The Past is Being Ignored

One of the most fundamental problems that exists in the development of the modern Chinese landscape is the fact that traditionally cohesive principles— principles that have survived in a largely homogeneous state for thousands of years— are now being ignored and instead culturally indifferent philosophies are being embedded into the physical structure of China [see Figure D]. One of the primary concerns of this is the fact that Chinese culture is built and maintained on these ancient principles. What

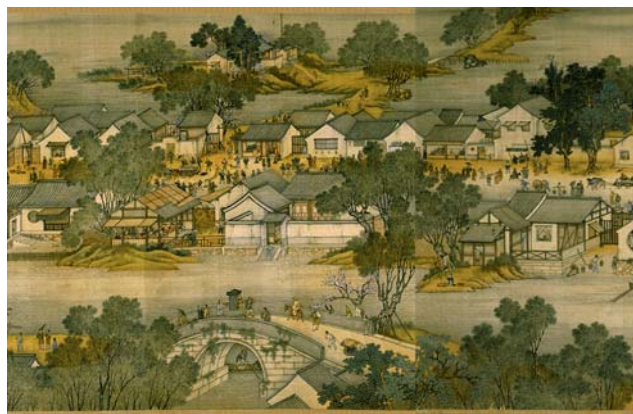
happens when they are ignored and another culture's ideals are imposed on the physical fabric of cities? Confusion, and a crisis of identity that threatens much more than the physical landscape.



Figure D.
Massive international developments such as this are disharmonious to the Chinese landscape.

"The Past is Prologue"

In order to solve this problem China needs to look to the past. In doing so they can discover what methods have sustained their physical and cultural structure. They can then apply these methods to the contemporary Chinese city, and, in so doing, build a future that is at once culturally sensitive and physically and economically sustainable.



Components of Chinese City Design

Fengshui

There is an ancient saying in China: “*Let the wind and water direct me to heaven*”. One of the most fundamental aspects of Chinese thought was (and to a great extent *is*) based upon the idea that man must build in harmony with the natural universe; that there are energies all-pervading, invisible to the biological eye but at the same time omnipresent and highly significant. These energies coexist with nature and with all forms of life. If the works of man interrupt these energies, the natural harmony of the universe will be locally interrupted and great misfortune will ensue. Thus there developed highly intricate methods of not only searching out and mapping these energies but also formulating ways to build the artificial landscape to harmonize with them [see [Figure E](#)].

If successful the result would be an environment that man shares with nature and the universe, which does not misuse nature, and can even greatly benefit those who interact within its dimensions.



Figure E.
Expert Fengshui geomancers study the landscape for signs of Qi and other natural forces.

The traditional term for this ancient concept is *KanYu*, or '*the way of heaven and the way of earth*'. This term is not used colloquially in modern times, and is better known by its vernacular derivative, *Fengshui*. *Fengshui* is sufficiently complex to accommodate several volumes of literature, and only a cursory introduction can be given in the bounds of this paper.

Embedded Beliefs

It may be slightly difficult for other cultures (especially Western cultures) to understand the rationality behind some of the ancient Chinese beliefs and practices—*Fengshui*, for example. However it may be important to rationalize some of these practices by observing their empirical effects on the physical and economic space in which they are involved, and the people through which they are involved. We may in fact hold the following as an axiom: incorporating embedded beliefs and traditions into an urban space, whatever their basis in rational, temporal, logical reality, will enhance the subsequent interaction with and appreciation of that space.

For a Western example of this axiom, let us look to the Christian church and the effects it has on those who believe in this form of symbolic practice [see [Figure F](#)]. The church, in its physical form as well as in its cultural

form, might seem slightly bizarre to a typical Chinese. What function does this building have? How does this serve to enhance the space around it? To Christians these questions are superfluous and indubitable.



Figure F.
The church enhances the quality of the space around it for believers of the Christian religion.

The Christian church— for Christians— serves as a cultural symbol of how human beings should act and think. It is viewed as a medium of interface between the physical world and the world of meta-reality. Now, whatever basis this has in truth is a superfluous question and ultimately irrelevant. Those who condone its presence are affected by it in that way, and thus it serves as a medium for that culture. To the Chinese, it might be an interesting form of architecture worthy of some aesthetic note (or perhaps not), but nothing more.

When a landscape is designed around the principles of Fengshui, and those who believe in this concept know this,

the effects of the landscape become manifest. Good fortune is touted to be the progeniture of the proper alignment of Qi (in this sense, positive lines of energy which also depict beneficial areas to build structures), etc. At the same time, Fengshui does hold value in a very rational way that effects those in its vicinity, whether they happen to believe in the principle or not. Fengshui is a form of geomancy which involves the proper placement of buildings and towns according to the location of surrounding natural features and the directions of the poles. If care is not taken to ensure this placement, calamitous effects such as earthquakes, floods and famine might result. The placement in such a case is based upon time-proven principles which determine whether a particular space may or may not be prone to such disasters [see

[Figure G](#)].

Fengshui is also beneficial in terms of designing structures not only to be sustainable into the future but also to balance their construction with the surrounding natural environment [see [Figure H](#)].

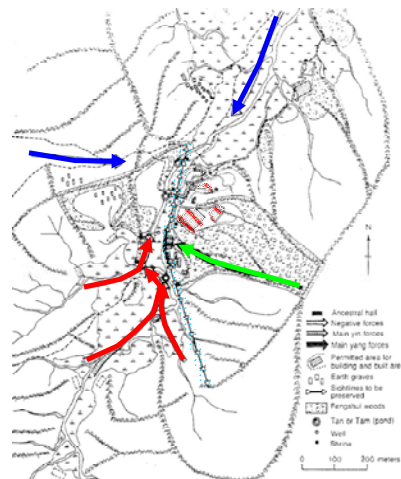


Figure G. Beneficial locations were carefully mapped out.

Fengshui practitioners believe that to build a structure is to want it to 'fit' with its surrounding natural features in order that it may survive the ages and also remind human beings that they are to live in mutual respect of nature, rather than in dominance over it.

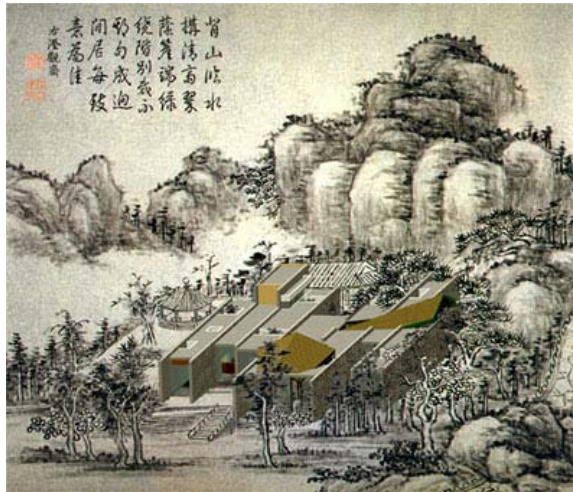


Figure H.
This anachronistic site plan incorporates Fengshui principles in order to 'fit' the artificial building with its surrounding natural environment. Such practices were followed in ancient times.

For these reasons Fengshui serves as a realistic set of principles for the Chinese people to follow in order not only that they can live on the most beneficial lands and come to respect nature, but also that they can (seemingly) benefit from the positive energies derived from its alignment with the cosmic forces of *Qi*.

The Chinese City as a Scroll

One is able to effectively think of the Chinese city in its traditional form as possessing many of the qualities inherent to a Chinese scroll painting. Chinese scrolls are designed so that in order for one to see the entire composition, one must proceed through a sequence of visual

events. Bounded by the physical qualities inherent to an unfolding scroll, one is never allowed to “know all at once”. A procession must be made across the physical space of the scroll, unfolding visual events as the scroll itself unfolds [see Figure I].



Figure I. *An ancient Chinese scroll painting. One must progressively unfold the scroll, effectively discovering the space throughout the journey.*

When the unfolding of the scroll is completed, one finally observes a global form that arises from the myriad local forms. This astounding interplay between local and the global perspectives is a hallmark of both Chinese art and traditional Chinese urban space, and offers a completely novel (to the Western eye) approach to planning an urban space. One can say that the *Ming* and *Qing* dynasty’s Forbidden City in Beijing is the ultimate exemplification of these design concepts in concrete form.

Just as one progresses step-by-step through a Chinese scroll, so does one progress through the complex layers of Beijing. One must progress through a series of spaces,

each one visually and contextually separated from the next [see Figure J]. This dispersion of space allows one to immerse themselves into each space, made more complex and intricate because of its very dispersal. After the progression is made, one observes a global outline, a composite whole, made up of the various sequences of visual and temporal space.

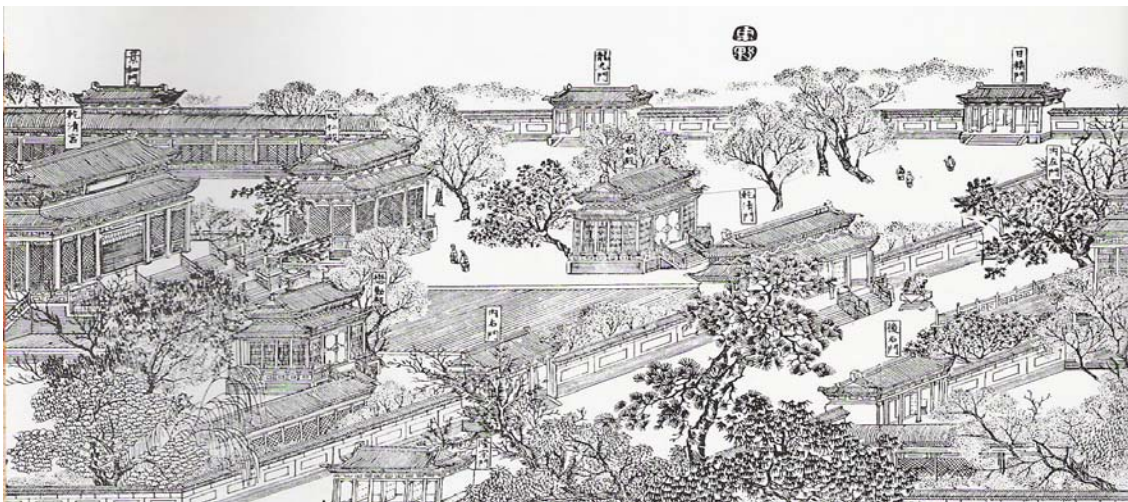


Figure J. As one progresses through the 'scroll' of Beijing's Forbidden City, one unfolds the mystery of the organizationally separated space.

Xing and Shi

These concepts are fundamental to the design of ancient Chinese spaces. The fact that they have been to a large extent ignored in modern development is a fact that has significant implications and its use should be reexamined.

Xing and *Shi* refer to local and global compositions, respectively. Chinese space was composed in a way that allowed one to progress through a highly complex local environment whose progression was shrouded and separated by distinct and visually separated events. However, these events were also components of a much larger, more cohesive global form. The forms, when combined, allowed for an overall propensity to exist [see Figure K].

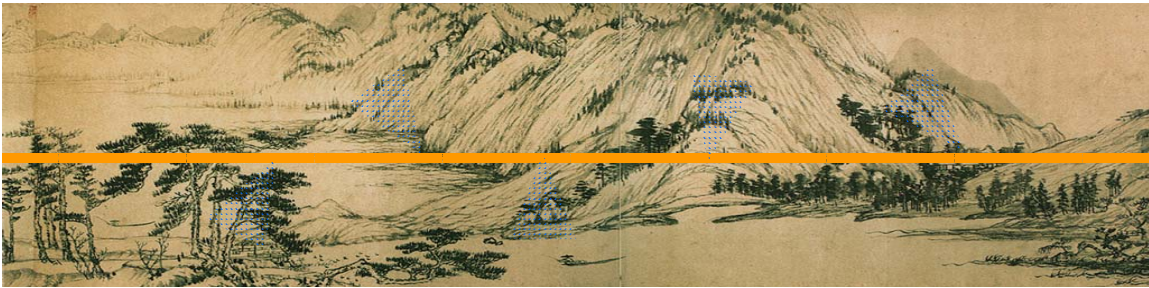


Figure K. Note how the local forms (signified by the blue triangles) of the environment gradually merge into a global outline (signified by the axial line).

Cartesian Perspectivalism

In order to properly understand the principles which underlie Chinese space— so different as they are from Western conception— we may search for a proper contrast in the Western world. We find this contrast, in almost absolute terms, in the derivatives of the philosophies of René Descartes and the dualistic, rational thought that is intercalated within it.

Cartesian dualism dictates that the mind and the body are separate entities, working together as two distinct machines. The external world of things is also separate from the mind/body, and from the various components within it. This idea has shaped Renaissance European space and indeed the majority of Western philosophical bases for the past several hundred years.

Renaissance space is exemplified in the grand, linear axes which lead to central physical points which serve as 'ends of the road'. These axes are visually powerful and can be aesthetically pleasing. They are very defined and culminate in such monumental splendor that one feels astounded at the work of man [see Figure L]. This is the epitome of dualistic thought. One is confronted with a 'final truth', an ultimate reality which is the object at the culmination of the axis. This object is absolutely separate from anything around it, and certainly from its observer. It is at the same time a reflective image of the Self, of man's defeat of the natural and mysterious world. No mystery remains; we have solved it by way of overpowering it. Chinese space is completely different.



Figure L.
The linear axis of Renaissance space culminates in a final, monumental object, or 'truth'.

The Chinese Axis

The Chinese axis does not present a powerful vista from which one can 'see all'. On the other hand, the Chinese axis is separated into visual and temporal segments. One must proceed, segment by segment, through the space as if on a quest of discovery, as if there is an infinite mystery unfolding around them. There is no culmination of a central object; indeed, the very idea of centrality holds no significance in the Chinese axis. Imagine a central object that is dispersed into smaller, sequential fragments of space (one is not to think of the term 'fragment' in a pejorative manner; this is simply the term which describes the physical effect of the dispersed space). The effect of this is that never does one confront a central object, and thus never does one confront a final and ultimate truth revealed in the composition of the space. Indeed, in

Beijing's Forbidden City, the most important building along the central axis appears physically to be no more than just another event, no larger (in fact, a degree smaller) than the other objects which visually and physically separate the axis.

This arrangement of space is also indicative of the cultural philosophies of its creators, and serves to enhance and augment these philosophies, just as does Renaissance European space. The Chinese axis by separating the primary axis into smaller spaces and decentralizing central objects reflects the Taoist ideals of unitivism, or the idea of humanity being linked to the cosmos, nature and each other. One is able to become immersed in the temporal and visual sequencing of the axis, and interact with the mystery of what will come with each passing moment. As one becomes more immersed in the space, and as one continues along this quest, a sense of lack of separation from the external world may become apparent. With no final and central truth, no monument to man's 'progress' in the material world, there is no impetus for separation.

A present approach for the future: Ningbo

In this search for a cultural identity while maintaining a sustainable urban environment we come to the city of Ningbo. Ningbo has adopted a development plan for

a new city center. This design incorporates ancient but time-proven principles of development into a contemporary and very much Chinese context. The result is a sound model for the future development of Chinese cities across the country [see Figure M].



Figure M.
A depiction of the new city of Ningbo, by the Australian firm Hassell.

Among the various ancient principles that Ningbo incorporates into its design scheme is the idea of organizational axes. Instead of modern boulevards opening up to vast vistas, Ningbo's main axis is actually marked by a linear waterway which bisects the city. This waterway serves to separate the districts along its axis into distinct areas. This is then supported by numerous secondary axes which organize and separate space with boulevards ending in urban parks or pedestrian plazas [see Appendix A].

While Ningbo's layout is based on a grid pattern in order to augment density and provide ease of circulation, it is also permeated with sinuous waterways and pedestrian/bike paths that serve almost to remind the

inhabitants of the city of their natural origins. These waterways and paths follow a most contra-linear path throughout the city [again, see Appendix A]. One is never far from nature.

While noting these principles which were once the basis of ancient Chinese city development, Ningbo also incorporates state-of-the-art technology in order to ensure its status as a world-class city, as well as a sustainable urban form. For example, innovative methods incorporating methane reprocessing makes it possible for the city to produce about half of the power that it consumes. This is unheard of in most cities around the world, but it is entirely necessary for China if it is to ensure there is sufficient energy for the future.

The city also boasts a highly complex mass transportation system and an overall transit network that decreases the efficiency of private automobile usage in comparison with the use of mass transportation. These characteristics produce in the end a city which is uniquely Chinese, economically and physically sustainable, and sensitive to Chinese culture.

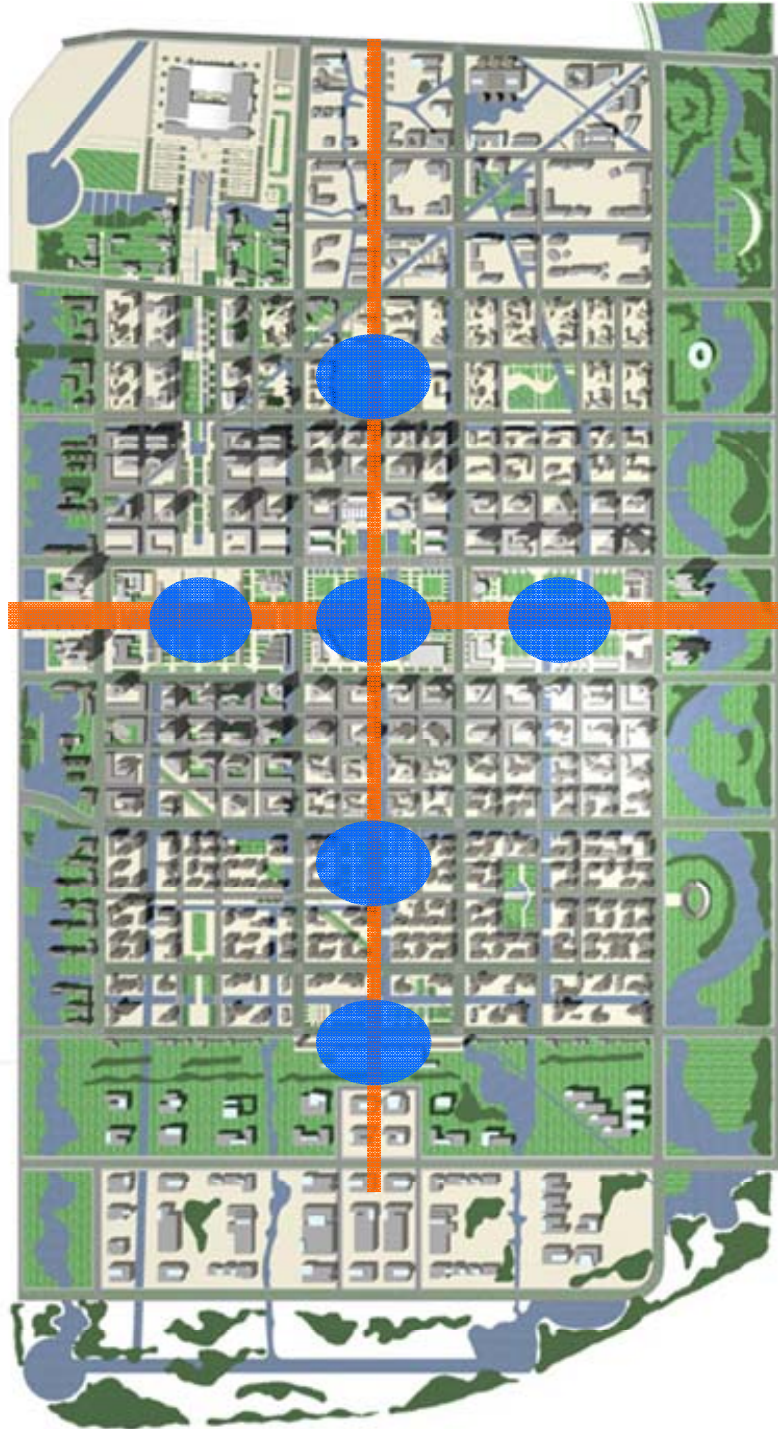
In Conclusion

If the Chinese city is to survive into the future it must respect the ancient principles from which it was

constructed in the past. These principles emphasized harmony with nature, a balance between consumption and available resources, and unity with the universe through the understanding of natural phenomena and the design of various urban spaces.

As has been shown, if China embraces the West with all of its culturally insensitive (and sometimes destructive) habits, the country cannot survive. However, just as importantly, by embracing Western ideals China is losing part of its identity, and part of what gives its urban spaces the qualities requisite to remind human beings of their natural and universal habitats. Indeed, in the case of China, *Praeteritus Prologus* ("the past is prologue").

Appendix A



Note the meandering waterways and greenways which permeate the city.

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