A STRATEGY OF MEMORY:
SUZhou, CHINA

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Submitted to the Department of Architecture on May 12, 1995
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Abstract

The thesis is trying to establish a strategy of memory for the urban preservation of old
cities, like Suzhou, within the context of the rapid growing economy in Southern China.

The general attitude towards the problem starts from a critical viewpoint which acquires a
sharp, yet fair, evaluation of the existing preservation policy of Suzhou with respect to
time, place and architecture. Encountered is the problem of modernity within the old fabric
of the water city that confuses the traditional values simply by erasing the memorable urban
artifacts. The criticism arrives at a new ideology of restoring the memory with the emphasis
on the triple supports of a clear vision of modernity, an organic matrix of growth and an
elevated spirit of humanity.

By a diachronic typological understanding of the old city from relative scales of territory,
city, ensemble, and house, a ground of reference is laid for the intervention strategy in the
future. Under the hypothetical model of historical contextualism, the phenomenon of
canals is analyzed in the aspects of environmental characteristics and human activities.
After absorbing the essence of the analysis, the base of preservation strategy is concretized
through the re-interpretation of the local tradition under the genius loci of Suzhou. Three
principles of Change, Permanence, and Reference so formulated knit with the TIME--
PLACE--PEOPLE hypothetical matrix to generate a framework of guidelines under which
the method of interpretative intervention acquires its ability to tackle the urban preservation
problem of the ancient Chinese cities like Suzhou.

Finally, a strategy proposal suggests a framework of memory for the rehabilitation of the
old city of Suzhou through a reinforcement of human activities and an initiation of self-
regeneration program in the implementation of redevelopment and upgrading under a
comprehensive financing mechanism. In short, this experimental approach stresses on:
• the continuity of the reknitted fragments of memorable urban artifacts;
• the coherent existence of the historic fabrics within the whole Suzhou; and
• the mutual adaptability between the improvement of the old city and the economic
development;
to reveal the future urban scene of ancient Chinese cities as an adaptive integrity.

Thesis Supervisor: Attilio Petruccioli
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Having the chance to realize my dream to further study in America, I would treat it as a privilege of mine, so the last two years were the time that I was overjoyed. Although it was not a relaxing study at all, during which, for moments, I even felt lonely and frustrated. After all, it was so tough, yet enjoyable, that I could hardly forget. Being exposed to a big community of complexity and multiplicity, I experienced something of difference that not only enlightened my mind, but widened my vision. In the thesis report, the strategy presents the memory and transformation of Suzhou to the readers, but, to myself, it evokes my memories of America and, at the same time, gratitude to those who helped in the preparation of the thesis: to Attilio Petruccioli for his patient supervision, to Julian Beinart and Gary Hack for their advice, to Tunney Lee and Tom Campanella who gave me encouragement and support, to Yu Shengfang, Ruan Yisna, Jin Oubo and Luo Xiaowei for their consultation, to Stephen Cheng and Brian So for their assistance, to Maria Puaschunder and my family who lent me the time and love, something I can never repay fully. Finally, praises should be given to the Almighty for His guidance and forgiveness, without that, the thesis report would not be possible.
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INTRODUCTION

At the one end of the ancient Silk Road, Suzhou was once much admired by Marco Polo for its prosperity and its amazing urban form; the intermingled canals and streets were so familiar to him... Gradually, the faded memories of his hometown were recalled into his mind, the noisy marketplace at Rialto, the bustling Grand Canal, the grandiose San Marco's Basilica, the breeze from the Lagoon; as if he was back to the origin of his journey, Venice.

Today, we can easily see Marco Polo's mental picture as Venice has basically been frozen for several centuries, but for its oriental counterpart, Suzhou, we have to reconstruct the memory from the urban fragments. As we investigate the phenomenon, a series of questions are aroused. Why is there such a different manifestation in their urban expressions? What are the concepts to build, to preserve and to destroy in the cultural context? How should we interpret tradition in urban culture? Why is it important to retain the memory in the city? Is it possible to rebuild a lost memory via architectural and urban interventions?

Hypothesis

"A city without history is like a man without memory." We forget, but will remember if our memories are being recalled. Sometimes, we need artifacts to refresh the memory, but for most of the time, we depend on a mental construct or a system to remember. In the urban context, we call it a strategy of memory, with which the traditional urban values can be restored. It is believe that the continuity of these urban values is essential for the future development of a historical town. In this notion, the candidate would pose the hypothesis that the memory about a city would only be restored and continued through a critical historical interpretation of the contemporary context.
Objective

The thesis is trying to establish a strategy of memory for the urban preservation of old cities, like Suzhou, within the context of the rapid growing economy in Southern China. To achieve this goal, we need to understand the city and resolve the complexity at present and in history.

The Present Challenge

After the ‘open door’ and reform policies, the economic development and its result of rapid urbanization in China are unprecedented. Historically speaking, the present development is different from both the Western Industrial Revolution and general urbanization trends in the Third World today. China has already stepped onwards ‘the road of no return’\(^1\) along which the urbanization process is irreversible and constantly consuming the existing old urban tissues. As such, the quality of Suzhou’s built environment is deteriorating under a pressing crisis in the process of modernization. The city walls were torn down; the canals were filled up; unsympathetic buildings were constructed within the traditional town center. The historic urban fabrics are being ‘systematically destroyed’ and thus, the memories of this old city are not naturally fading out, but being erased by artificial negligence.

At this critical time, it is imperative that immediate action be taken before the city loses the very assets of urban culture which make it unique. The retention and improvement of the old town of Suzhou would provide the city with historical links that are essential for every city of character and identity. By establishing the preservation principles, it is possible to explore ways to reknit memorable urban fragments of old cities into a continuity of time and place.

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\(^1\) Cheung, S., *The Prospect of China*, p.3
The Historical Enigma

Overburdened by the long history of civilization, the cultural vitality of China has submerged into a latent layer covered by rigid sets of common rules. These unchallengeable rules are often misunderstood as 'traditions' that has been constantly irritating the urban values since the turn of this century. As reactions that misinterpreted the urban design traditions, urban surgery have untied the interrelationships between people, place, and architecture, in a way destroying the overall coherence of the historical cities into unidentifiable pieces.

In the case of Suzhou, when the time in urban history is perceived as disjointed from the past, the urban evolution has fallen into a fallacy of contextual irrelevance. The thick overlays of architectural and urban precedents would thus be treated as blankets of nostalgia that lead to a confusion of urban values. The absolute rejection of any nostalgic attachment in the execution of the urban redevelopment has created a paradox that dying is to tolerate and living is to destroy.

To rectify this current development practice in Suzhou, an understanding of the urban forms of Suzhou in conjunction with a comparative study of the other canal city, like Venice, in the perception of space and attitude towards time would be essential. Through this understanding regarding the urban history, morphological expression and social structures, it is aimed at developing a theory on urban preservation suitable to save the vanishing historical cities of Southern China. As such, it is more an urgent cultural call than a poetic act that a strategy of memory could be formulated to revitalize the old town of Suzhou as a coherence existence within the whole city.
The Road to Modernization

"Modernization as an historical process and live-in reality, is what is happening in those countries and regions attempting and aspiring to be modern in their cultural idioms."²

John Nash

Development in China is directed towards modernization, and architecture and urbanism are no exceptions. In an age when lifestyles, thoughts and ideas are being constantly renewed, when traditional and foreign cultures are merging, the project, thus aims architecturally to explore the possibility of inheriting the essence of the tradition and transforming it into new urban forms.

An attempt to express the 'cultural idioms' of modern China through this interpretation in the context of both new and old Suzhou would manifest itself as a milestone in the long march of China's road to modernization.

The step-by-step approach is adopted on the compromise between two contradictory elements of fundamental reform and the establishment of a new direction. This approach ensures that the changes would be 'readable' as a statement in the history, yet subordinate in the urban context. In short, new arrangements coexist with the old fabrics. This coexistence would enhance the mutual adaptability of the old city with the economic growth. The success of this experimental approach would probably reveal the future urban scene of historical towns in modern China as an adaptive integrity.

² Wong, K., *The Modernization in China*, p.25
Suzhou is one of the great canal cities of the world with unique urban landscapes. Its long urban history, extensive canals, classical gardens, tree-lined streets and numerous cultural heritage make Suzhou a jewel among Chinese cities. Being one of the earliest municipal cities in Southern China, Suzhou was first established as the capital of Wu, the country ruling that region in the 6th century BC. Built a thousand years before Venice, the city blossomed into a cultural center upon completion of the Grand Canal\(^1\) around 600 AD, that brought along numerous trades and commerce to its door. Its prosperity awed Marco Polo in the 13th century as described in his travelogue, *Travels*,

> "They posses silk in great quantities, from which they make gold brocade and other stuffs, and they live by their manufactures and trade. The city is passing great, and has a circuit of some 60 miles; it hath merchants of great wealth and an incalculable number of people. Indeed, if the men of this city and of the rest of Manzi\(^2\) had but the spirit of soldiers, they would conquer the world; but they are no soldiers at all, only accomplished traders and most skillful craftsmen. There are also in this city many philosophers and leeches [doctors]."\(^3\)

In time, Suzhou became a destination for aristocrats, painters and poets, many of whom constructed villas and gardens in the city. It gradually gained prominence in the West as

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\(^1\) The canal connecting cities from Beijing to Hangzhou, dug with an intention for the royal tours of the emperors in Sui Dynasty.

\(^2\) A derogatory term used by the Mongols for the southern Chinese subjects of the Sung Dynasty.

\(^3\) Polo, M., *Travels*, p.130
termed by a member of Lord Macartney’s in the 17th century as the “legislator of Chinese taste, fashion, and language.”

The Problem of Modernity
Despite its rich and varied history of 2,500 years, the city is facing an urban crisis of vanishing old fabrics in the current drive for modernization of China. After the tyrannical period of Chairman Mao, China started to shift her subjects’ attention from politics to economics, thus introducing the ‘Four Modernizations’ and the ‘open-door policy’. The advent of a socialist market economy in China has placed new strains on the built environments of the past. To catch up the relative backwardness of its economy, the import of modern technology and management techniques is considered to be a feasible and desirable move. Recent developments of Wuxian new town to the south and Singapore-Suzhou township, an industrial park, to the east, have induced tremendous pressure of urban renewal.

In giving up the local tradition in exchange of a twisted perception of modernity, the old city is being shaped towards a rootless existence of pseudo-modern urbanity. Witnessing the sharp changes in Suzhou, sadly, much of the old town has already been sacrificed.

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4 Wang, C., *Transformation and Continuity of the Traditional Dwelling in Suzhou, China*, p.23


6 A three-phase development of coverage of 694 hectares for population of 62,000 first implemented in 1990

7 A ‘squeaky-clean miniature Singapore’ designed by the Singapore Urban Development Authority for 600,000 local and foreign residents to emulate Singapore’s social order—crime-free streets and a population that respects authority, *South China Morning Post*, Aug 13, 1994.
The Crisis of Erasing Memory

Our experience of physical environments depends upon changing perceptions of patterns generated by solid and void, light and shade--patterns which reveal forms in space as we move among them and change our position in relation to them. It is this direct existential experience, combined with the imagery we perceive in our surroundings, that offers the basic material of environmental memory.\(^8\)

This essential environmental memory of Suzhou is vanishing with the forgotten urban tradition in the process of importing urban models totally alien to the local context. In fact, it is being driven to a fixed moment in time, a sort of eternal present that has no meaningful reference to history or precedent and in which there are few poetic images or none. In spite of recent height limitations and preservation guidelines, much of Suzhou's historic character has vanished in the face of modernization.

When two maps, one of ancient Suzhou in Sung Dynasty of the 13th century and one of the modern city, are overlaid, it becomes painfully evident that the canals have diminished to only a fraction of their former extent.\(^9\) A casual tour of Suzhou reveals a city which has been partially defaced: canals have been filled and paved over; the human scale of the old fabrics has been distorted by high-rise apartment blocks; and the vital, bristling building edges along the canals have been made inaccessible and antiseptic. The leisure communal life of the original neighborhood is now being diluted, or even eaten up, by the insensitive mechanism of redevelopment. Confronted by the urge of urbanization, the old town and its inhabitants inclusive, at this time of change, is being thrown into a dilemma, either

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\(^8\) Quantrill, M., *The Environmental Memory*, p.xiv

\(^9\) See *Evolution of the Town* of this thesis, p.63-64
isolating itself as a lonely ‘island’ or a museum piece among the roars for urban reforms, or, even worse, being colonized by the monotonous glaze-wrapped commercial boxes.

In this crisis, the historical environment of Suzhou would be destroyed leaving the city without memory as in a state that Frances Yates warns us,

"If a building has an immaterial existence in the mind of the architect before it is built, it has also many immaterial existences in the memories of those who have seen it.....Probably architectural memory, which depends upon detail, will die out as buildings and cities grow more uniform, and air travel blurs the distinction between places."10

Cut off from the past experience captured in the walls, canals, streets and lanes of the traditional settlement of Suzhou, we find it more and more difficult to relate to buildings and also to the spaces within and between them. In effect, we have laid aside the tools of civilization and entered a traveling theater of technical props. While the preserved individual buildings are meant to retain the remnants of the broken past, the memories attached to the overall setting of the urban quarters would be lost when the inherent ambiance is eroded by constructions without contextual relevance. In consequence we no longer give a true value in building the city that should ultimately relate to a meaningful presence of the inhabitants and visitors alike.

10 Yates, F., Architecture and the Art of Memory.
The Value of Tradition

"The word 'tradition' is handled around again for the superficial purpose of enabling this or that piece of 'mood architecture' and to conserve facile 'links with the past' for the half educated. The word 'tradition' comes from the Latin: tradere, i.e. transmit, carry on."

Walter Gropius

When we consider the motive of restoring the memory of Suzhou, we have to understand the value of tradition in the perspective of history. As the word 'tradition' means to 'carry on', it exists in a dynamic and ever evolving process that takes place through criticism which destroys, changes, and alters earlier myths, and then rebuilds beliefs towards certain directions in time.

As Karl Popper explains that the emergence of traditions in society has a role similar to scientific theories, they bring order and rational predictability into the social world we live in. They give us clear idea of what to expect and how to proceed. The origin and propagation of traditions therefore lies in our need to introduce structure and regularity into our natural and social environment.\(^\text{11}\)

In this sense, urban traditions not only help in creating social structures but are also subject to criticism and change. The continuance of traditions in a society renders them above criticism. Their survival is closely related to the deep-rooted values in the related matrix of time-place-people, whereby those have pertinence with this matrix continue, while others are deleted or modified. Thus the issue involved seems more an acceptance of their validity and identification of their presence through critical analysis.

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\(^{11}\) Popper, K., *Towards a Rational Theory of Tradition: conjectures and refutations*, p.129-132
A society, like that of Suzhou, is always in an ongoing process of evolution and transformation. When confronted by forces of change through time, it may accept and accommodate those it considers suitable and reject those irrelevant to its norms and values. The survival of urban traditions would prove their vitality and prevalent strength amidst responsive adjustments. At times their persistence may manifest itself and consolidate into visible forms. Built environments and urban fabrics are the resultant forms of these adjustments with recurrent behavior patterns along traits of urban traditions. This consolidation of types *a priori* in turn stabilizes behavior in concordance with the physical forms that distillate past actions, events and feelings. Their span and content are affected not only by external factors such as the stability and success of the past experiences, the symbolic security of the perceived environment, the pressures of the present on future expectations, but also by internal habits of mind, by symbolic abilities, by the sense of self and by the strength of motivation.  

An attempt to understand the role of urban traditions in relation to the physical environment in the society of Suzhou is a complex task but a prerequisite in acquiring the direction to ‘carry on’, i.e. to bridge the continuity in a critical manner.

12 A term used by Muratori to describe the ‘unself-conscious’ molding process of types.

13 Lynch, K., *What Time is This Place?*; p.219
The Recall of Memory

If all evidence of our traditions were to be systematically destroyed tomorrow, any scholars, scientists, historians, and poets who survived such a disaster would surely attempt to reconstruct our present scope of written knowledge and culture from memory. The art of architecture and city making, just as much as the theorem, is an essential part of man’s collective memory and therefore of his identity with place and time.

At the time when the built environment of Suzhou is expanding, its historical fabrics are 'systemically destroyed' at the same speed. The essential urban values attaching to the memorable urban quarters are disintegrated amidst the buzzes of bulldozers and bricks of the fallen walls. Besides the age value of these old urban tissues, there are cultural and pragmatic values laid within the old town:

- politicians and historians view the town as evidence of the historical evolution showing the civilization and culture, the creative powers and traditions of a community, a nation, and their institutions as well;
- for researchers and artists, there is a treasury of documentation and a source of inspiration for discovery and creation;
- for architects, they constitute a problem to be solved, a challenge to organize the urban space;
- for the population in general, the old quarters provide affordable accommodations, and the old streets and canals exert a constant economic attraction and supply rich experience of life.

At this critical moment between being a place and a noplace, the old city of Suzhou is still dotted with some historical
urban artifacts of *housing and monuments*. Surviving as isolated items in the overall deteriorating field of historical area, the catalytic function of these primary elements in stimulating the coherent growth of the city is suppressed. These ‘urban fragments’ originally constituted a recognizable urban model are disconnected into unrelated pieces when the skeleton of the city was demounted, e.g. the filling of the canals and the destruction of the walls.

Having the significance in giving a sense of place, these urban fragments still present eroded and blurry pieces of the memorable picture of the old town. As broken from the initial ties in place, the urban fragments should be reknitted into a correlated whole via a system of internal topography underlaid by a narrative matrix. Though partially irrecoverable, the lost memory is possible to be comprehended through a careful overlay of the fading images. Partially new and partially old, the constructed memory is meant to bring back the interrelationship of the past and the future of Suzhou. "Understood in this sense, memory becomes the guiding thread of the entire complex urban structure.”

This idea of reconstituting time into a meaningful whole would acquire an artificial construct of commemoration system.

In establishing this system, the historical overlays are peeled off, interpretated and re-applied to the context. The interpretative interventions of urban preservation in the overall evolution of the city would discourage both nostalgia and cultural transplantation, but encourage a progressive growth of that with historical reference.

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14 Two main primary elements in the city of Rossi’s concept of permanence
15 Rossi, A.; *The Architecture of the City*; p.130
METHODOLOGY

-- defining

To seek for a coherent growth with appropriate historical reference, the thesis begins with an identification of the problems of modernization in the urban preservation of the old city of Suzhou from a criticism of the existing preservation policies in the three levels of planning, urban design and architecture, then with the support of on site observations and interviews with local authorities, planners, architects, and residents, a general understanding of the issue is formed. The discussion would be further developed by a general review of the Chinese and typological thinking on preservation so as to formulate the attitude towards a contextual preservation of the historical water city.

Following this general attitude, the preservation principles would be established with the assistance of typological studies of the local urban and architectural language. The framework formed by these preservation principles with the contextual matrix at the four scales of territory, city, ensemble and house would derive preservation guidelines in navigating through the narrative system of memory.

As such, through the method of interpretative intervention of the urban environment demonstrated at three parts of the historical town of Suzhou, Hillside River, west city wall from Panmen Gate to Changmen Gate, and Pingjiang neighborhood, it is hoped that a strategy of memory would be applied in reviving the original flavor and recalling the memory of the water city.
CRITICISM

"In this race against time,.....I would applause for the opening policy; whenever it goes off the track, I would stand up and shout!"

Steven Cheung

Would the urban form of the old town of Suzhou in the future exist as it was, it is or it will be? If change, along which direction should it go? If not, how should it be kept? After the opening policy, the recent economic boom in the Yangtze River Delta has accelerated the urbanization process of the region. As Shanghai, 92 km away eastwards, moves to the forefront of Chinese commercial cities, Suzhou could become its "cultural satellite." Tying to the whole region, the cultural aspect of the old city should not be treated as a passive showpiece but rather be actively involved in this process of transformation. In addition, as a UNESCO World Heritage Site, Suzhou has been ordained by the international community as a cultural resource of global significance. Under these favorable conditions, unless it is intentional to give up the urban traditions as in the destruction in the early communist period when Suzhou was classified as a ‘consuming’ city under the biased ideological idiom of revolutionary reforms, the city should be preserved in the most faithful way to its own heritage that can vividly reflect the urban tradition in the shifted social conditions at present. In realizing this important, yet complex, task, the existing preservation policies, and current preservation concept in Suzhou should be challenged and renewed accordingly.

1 Cheung, S., The Prospect of China, p.3
2 This relationship may be observed between Tokyo and Kyoto, New York and Boston, Rome and Florence, and Beijing and Xi’an.
3 Others include Boston, Kyoto, Xi’an, and Florence.
4 Most of the city walls were torn down and more than 30 km long canals were filled up.
The Planning in Transition

After the destructive period of the Cultural Revolution from mid-60s to mid-70s, the recent works of preserving the heritage in Suzhou have involved site surveys, restorations of old buildings, zoning in the master plans under the historic preservation policy which is intended:

- to preserve the long cultural heritage;
- to manifest the glory of revolutionary tradition;
- to promote the education of patriotism;
- to build the socialist spiritual civilization; and
- to extend the international influence.5

With these objectives, the official planning bureau has made urban studies and ‘total controls’ on the population, industrial construction, traffic flow, land use, pollution and density to protect the old town under a socialist ideology.

The Rigid Master Plan

With this idea of total control, the preservation planning practice is still dictated by the zoning concept; urban policies are often made without a careful understanding of the existing fabrics, not to mention the historical overlays of the context, so what resulted are imported models of preservation zoning6 controlled by the dated master plans. For example, to control building height in the old city, the policy was made that,

"...in order to preserve the traditional atmosphere in the old city, new buildings should not exceed seven-stories in height."7

This sketchy control has no fine-grained effect on the urban texture which in reality is being eroded by some urban redevelopments misinterpreting the original intentions of the guidelines.

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5 Municipal Government of Suzhou City, Preservation Plan of the Historical Cultural Town, Master Plan of Suzhou, 1988, p.123
6 Detail explanation in The Concept in Transition of this thesis, p.28
7 Suzhou Urban and Rural Construction Development, The Development Guideline of Suzhou, 1985
The Deficiency of Policy

Superseding the central planning policies made in the 50s, the recent Planning Goals and Objectives and Priority Investment Strategy\(^8\) make good senses in response to China’s current and future needs on national level, intended to overcome the past mistakes in:

- lack of integration with economic and social planning;
- over-concentrations of industry in huge industrial zone in the master plans;
- exclusive reliance on public sector investment in the funding of development.

However, working with the rigid master plan, the growth of the city and the historic preservation policy are still perceived as two detached issues. Still planned in the socialist mind set, the cultural heritage is considered without the economic mechanism, making the preservation an enormous economic burden on the overall development of the city. As a result, for the sake of economic expediency, the cultural and historical aspirations in preservation is overshadowed. In addition, lacking in visual policies and three dimensional development guidelines, the preservation planning remains as abstract rules for general appreciation of the public and provides loopholes for inconsiderate developers.

The Vision

“We are planning to set up several Hong Kong type areas on the mainland.”\(^9\)

Deng Xiaoping

The direct-transfer vision of economic model has already changed the social structure of the Chinese cities that, in turn, would gradually be manifested in physical forms. Under the shadow of ‘paternal leadership’, this misinterpreted understanding of modernity in planning

\(^8\) An internal planning document for Suzhou completed in 1988

Suzhou would confuse its original identity in search for a balanced urban form. In fact,

"a miniature Singapore is taking shape in the rice paddy fields of Suzhou, part of Deng Xiaoping's vision of high-speed growth free from drugs, prostitution and Western-style democracy.....Chinese leaders hope to copy Singapore's winning formula of managing a booming economy through a tight-knit partnership between the public and private sectors.....It is planned as a miniature city complete with factories, high-rise office blocks, residential buildings, hospitals, schools and a golf course. Singapore planners are hoping that a successful Singapore-style city in China will become a model for others around China."\(^{10}\)

This transplantation of urban model, being undigested, in effect, would be more harmful than beneficial to the city, especially to the historical fabrics in the long run. Immediate damages have already been witnessed. In the construction of a W-E thoroughfare, Ganjiang Road, connecting this 'miniature Singapore' to the other new areas, the old town was bisected into two halves, the original canal together with its adjoining urban housing was replaced by a straightened 'ditch' sandwiched between two double-line roads.

Without a clear understanding of its own identity, the city would never resolve the problem of modernity that, in fact, acquires a common vision shared by the inhabitants of Suzhou. According to the way urban traditions were originated, the correct directions in urbanization including historic preservation can be traced only if a clear vision of modernity is formulated upon the necessary sensitivity to the historical aspirations and local characteristics. In this way, historic preservation should be perceived as a forward-looking process going hand-in-hand with the growth of the city.

\(^{10}\) South China Morning Post, Aug 13, 1994
The Urban Design in Transition

The great urban tradition and the fine heritage of landscaping in Suzhou are too precious to be discarded lightly for standard socialist urban design model that has deprived much of the local flavor from most of the Chinese cities since the 50s. Beginning to rectify the past mistakes, the awareness of preservation is taking shape in passive protection control and rehabilitation proposals at a speed much slower than the invasion of urban redevelopment and the devastation of old neighborhoods.

The Standard Urban Design Model

Under the First Five Year Plan, the Chinese communist adopted the Soviet concept of industrial centralization with the chief goal of urban policy in transforming Suzhou from a ‘consuming’ city into a ‘producing’ one. This ideological shift from an ‘imperial urban construction’ to a ‘socialist urban construction’ was intended to eradicate the ‘bourgeois poison’. As a result, almost all the city walls were demolished and half of the canals were filled to give vehicular access to the industrial precincts in the old town, the mix-use character of the previous commercial urbanity along the canals was erased, and each of the remaining institutional buildings was recharged with a single given function. The social bonds of the urban neighborhoods were disintegrated by the commune system. In addition, the coherence of the neighborhoods was diluted by injecting several nuclear families into one single family dwelling unit.

This unquestionable acceptance of standard urban design model has brought about irrecoverable symptoms. The most obvious are the monotonous setting of N-S axis ‘Socialist Street’, Renmin Road, lined with government buildings and terminated by municipal public square in front of the railway station, and the oddly scattered prototype of flatted workers'
housing. Divorced from the symbiotic relationship between the social system and the urban structure, physical structures are lacking individual attentions and commercial neighborhoods are segregated. As such, the built field\textsuperscript{11} was dissuaded from natural growth, resulting in a decaying memory and an alienation of urban expressions.

In rectifying these urban design problems, the solution should develop a rehabilitation strategy in conserving the local character from further vanishing and stimulating the coherent growth of the neighborhoods as well.

\textbf{The Implementation Problem}

China has a strong central government who decree national historic preservation policies. Under these circumstances there are relatively few difficulties in laying down the appropriate preservation strategies, “but major problems are encountered at the local implementation level”\textsuperscript{12} mainly due to:

- inefficient bureaucratic procedures in translating the original intentions of the strategies;
- rigid urban planning ideology neglecting urban design as a dynamic process to integrate local development with historic preservation;
- urban solution dominated by tourism consideration, sacrificing the sensitive local neighborhood;
- the ‘top-down’ one-way hierarchy of influence: \textit{national policy} $\rightarrow$ \textit{district strategy} $\rightarrow$ \textit{local solution} not responsive to the local spirit and immediate need of the people.

\textsuperscript{11} A term used by Habraken in describing the continuous wholeness of urban fabrics cultivated over years

\textsuperscript{12} Bor, W., \textit{Chinese Urban Planning Practice in Transition: A Consultant's View}; p.20
The Matrix

The reconstitution of neighborhoods, at the beginning of the communist period, had unfastened the kinship ties in the social structure, but after thirty years of settlement, the residents have resumed a sense of belonging to the place and begun to cultivate the built field in a complex manner of functional encroachment without ownership. On this basis, the ‘push factor’ for the improvement of the old town of Suzhou is the external pressure of the ‘top-down’ influence. The ‘pull factor’ is the internal calling of the people for a better living. In this way, only the ‘bottom-up’ hierarchy of growth: living condition --> economic viability --> policy modification, can truly reflect the ‘will of the place’, and bring along a coherent transformation of the urban form.

A flexible matrix on which the neighborhood, as more sensitive to the place, organizes among themselves to exert their collective effort on restoring a lively environmental memory, is more effective, yet manageable, than the uncompromising top-down urban preservation strategies. Upon this matrix, a practical framework with desirable direction for further development and innovation can be established throughout the entire city. The ubiquitous slogan, “serve the people,” from an ideology, then, can be translated into an action “the people serve.” Thus, to solve both the problem of continuing the urban tradition and its implementation, the ‘matrix growth’ initiated among the residents should go in parallel with some considerate urban design guidelines.
The Architecture in Transition

The symbolic presence of pagodas and temples in the old town that was once intended to give a visual and psychological anchorage to the city dwellers were depreciated in the Cultural Revolution as 'residues of feudalistic nostalgia'. In Suzhou, they were either extensively destroyed or encroached by unmatched industrial functions in the past thirty years. The old canal houses in the residential settlements originally owned by extended families were either randomly subdivided or pull down to spare rooms for unrelated nuclear families. Detached from the initial mode of existence, these buildings were mostly adapted without proper respect to their original intention. Most of these surviving structures have remained intact for some forty years, but in a state without proper maintenance. In the context of a rapid economic growth, their right of survival is again being challenged by the emergence of pseudo-tech commercial ‘palaces’ and flatted housing.

The Modernization Complex

The spirit of ‘Modern China’ may lie much in its attribute of self-renewal and self-reliance through controlled intake of what is considered to be Occidental--capitalism, technology and management. When confronted by the starring physical need, it would constitute what we refer as ‘Modernization Complex’--the tension between the illusion of far reaching advancement and the reality of discontented basic provision. Expressed in the architecture, this complex brings about a negative design attitude which stresses on financial expediency instead of social benefit, on technological expression instead of cultural reference, and on functional efficiency instead of spatial quality. What follows is the emergence of a range of odd-looking buildings: miniatures of Eiffel Tower and Pei’s Bank of China; seven-story commercial boxes wrapped with reflective curtain walling.
and punctuated with neon lights and electronic mega-TV screens; and duplicates of cross-plan Hongkong-style high-rise flatted housing. Scattered inside and around the old town, these new concrete mammoths, wrongly perceived as symbols of modern advancement, have passively distorted the original scale of the town, polluting the visual quality along the canals and destroying the interrelationship between the urban artifacts.

**The Burden of ‘Tradition’**

As that of a historical town, the architecture of Suzhou is often being misinterpreted as old-fashioned or obsolete. In fact, besides those buildings being restored as national monuments, most of the surviving traditional houses are at the fringe of being demolished. The majority of the inhabitants in them are not in a position either because of ownership problem or economic situation to pay for proper upkeep and maintenance. On their minds, staying in these old houses is to tolerate the bad sanitary condition, frequent leakage and endless repairs.

For the new buildings, some of them are intended to express the Chinese characteristic in architecture, e.g. the railway station, a raw concrete box with roofs covered with greenish glazed tiles—the borrowed image of a stereotyped Chinese expression from Beijing. The ‘big-roof symptom’ of ‘Chinese style’ has prevailed over the country now as its concrete frame counterpart of ‘international style’ in the world for the last few decades. The problem, however, still lingers around the interpretation of ‘Chinese style’ in which nostalgia plays the major role.

The ‘tradition’, then, becomes a burden instead of an enhancement. The mistakes are on the misinterpretation of tradition, the confusion of memory, and the negligence of local conditions.
The Spirit

"Architecture is a language different from other forms of communication and I would like to see the Chinese speak their own language."13

I.M. Pei

In solving the immediate need of the residents in the historic quarters, a historic preservation strategy with clear guidance and aspiring incentives is most desirable. Under the true spirit of 'Modern China', the idea of self renewal and self-reliance when applied in the preservation should take a form of neither enforced conformity nor subsidized renovation. It should follow the will of the people that calls for that of the interpretation of a balance between history and finance. In seeking a realistic future life, an old place or building cannot become economically invalid. The urban artifacts should resume their functions as genuine places, neither historic nor modern but simply the continuation of special nodes as commercial or scenic significance in the old town, while the traditional houses, in the new social structure, should evolved in an organic way under self-managing mechanism. In this way, the physical form of the old town would continue to grow tastefully out of urban commerce and leased ownership that is answering honest human needs.

Considering the height of the traditional houses of no more than two stories and their delicate scale with the canals, the spirit of Suzhou is requesting a sensitive touch of architectural intervention that is neither nostalgic nor fantastic. Avoiding the conscious expressions of 'Modern Chinese' style, the solution acquires an abstraction of the spirit from the physical forms, that relies on the unified diversity of expressions, the layering of spaces, the vitality of activities, and the elevated humanity of the people in the local community. The memory, to survive, must go on living.

13 Chang, C.K. & Blaser, W., Tao of Chinese Architecture, p. 132
The Concept in Transition

In 1982, Suzhou was listed by the state council of China as one of the 24 culturally significant towns in the whole country. The idea behind this goes beyond the concept of placing cultural relics such as old buildings and monuments under state protection for restoration and preservation. This applies mainly to the historical temples, pagodas, formerly private gardens and villas of the merchants. Classifying these national monuments and buildings of public interest, the classical approach of preservation only covers architectural specimens as isolated, non-integrated inert entities, mere showpieces for display in glass cases with no urban dialogue. The recent approach of preserving the townscape around these monuments by extending the coverage of preservation zoning control is a forwarding step in the long march of restoring the memory of Suzhou.14

The Static Preservation Classification

In the current preservation concept in China, the cultural and architectural heritage is treated as 'protected endangered species' surviving as museum showpieces to 'manifest the glory of revolutionary tradition'. They are classified into grades of national, municipal, city, and provincial importance and protected by three categories of control zones according to the historical, scientific and art values:

- Class I--absolute protection zone, i.e. the preserved historical relics, old buildings and gardens that are kept in their original conditions and should any alteration and repair happen, expert consultation is legally required;
- Class II--important protection zone, i.e. zoning control within prescribed boundaries around the preserved objects to ensure them from any physical damages,

14 The zones covering a total area of 7 sqkm include those around Tiger Hill, Beisi Pagoda, Xuanmiao Temple, Pingjiang District and Panmen Gate, Municipal Government of Suzhou City, Preservation Plan of the Historical Cultural Town, Master Plan of Suzhou, 1988, p.127
traditional areas of secondary significance to the Class I heritage;

- Class III--general protection zone, i.e. passive control within the third prescribed boundary around the protected objects to ensure compatibility of new development or historical objects and areas of tertiary significance.\(^5\)

**The Protection Dogma**

The static approach of preservation classification according to the administrative hierarchy has confined the cultural and architectural heritage into a biased preference of historic significance, without a comprehensive evaluation of adaptive uses, environmental values and social changes. Under the top-down political influence, the preserved memory becomes recomposed stories retold by historians with political intentions. It does not truly reflect the history and the local traditions of Suzhou.

In addition, under the dogmatic preservation zoning control, the attentive preservation focus is concentric, rarely considering the visual and vectorial correlation with other preserved objects, not to mention those with the general urban area. Confined by the rigid controls without proper guidance, the protected zones would fall into a fallacy of becoming 'theme parks' in which original residents become actors for the visitors' audience. Detached from the real urban life, the protected zones would deteriorate into dying urban fabrics in which the memory would be trapped within a dedicated period of the past.

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\(^5\) Dong, J. & Ruan, Y., *Cultural Appreciation and Preservation in Historical Town*, p.44.
**The Memory**

"Memory....is the consciousness of the city; it is a rational operation whose development demonstrates with maximum clarity, economy, and harmony."\(^{16}\)

Aldo Rossi

Recognizing the city as a dynamic process of a general order consistent with the people's individual particular environment, the attitude of historic preservation in Suzhou should then enhance the evolution of this order. Instead of a passive means of protecting individual sites of heritage, the preservation should take a dynamic approach to structure the city along both axis of time and place. Thus, it is essential in classifying and valuing both isolated buildings and also urban ensembles and itineraries in an integrated way. Partaking in the urban dynamics of Suzhou, the concept of protection and control should be replaced by adaptation and growth. "Break the OLD, then establish the NEW"\(^{17}\) should be rephrased as "establish the NEW, then break the OLD."

That to recall the memory is to awaken the consciousness of the city, in the case of Suzhou, is its ‘clarity’ of the urban structure—a criss-cross canal-street network, its ‘economy’ of the vibrant commercial urbanity along the canals, and its ‘harmony’ of the neighborhood with the canal-born houses. In maintaining this consciousness in a progressssive manner, the ‘rational operation’ within the urban structure should rely on a clear vision of modernity, an organic matrix of growth and an elevated spirit of humanity. It is only through this integration of the vision, the matrix and the spirit should the old town of Suzhou survive as a living memory for both the local inhabitants and the visitors alike.

\(^{16}\) Rossi, A., *The Architecture of the City*, p.131

\(^{17}\) A common slogan in the Chinese Communist propaganda.
OBSERVATION

Suzhou is situated in the Yangtze River Delta located between Nanjing and Shanghai, in Jiangsu province, China. To the west of Suzhou is Taihu Lake and to the south is Hangzhou. Today the municipality of Suzhou, under the provincial government, contains a population of over 569,000 persons on its 29.33 sqkm built area, of which the old town takes a share of only 14.18 sqkm with about 350,000 people. The total built-up area covers just twice as much as the old walled area with an overall urban density of 20,220 pers/sqkm and a rural density of 1,176 pers/sqkm.\(^1\)

The city is divided into three urban and one suburban districts, and the old city is divided into 54 blocks with 92 key historical sites.

The Rationale for the Choice
From the macro scale, to choose Suzhou is because of:
- its long history of over 2,500 years,
- its complementation with Shanghai as a historical cultural counterpart,
- its uniqueness of being an extensive canal city in China and even among the world,
- its urgent need to restore its memorable urban environment.

From the micro scale, to choose the three spines along Hillside Canal, the Moat and Pingjiang neighborhood in Old Suzhou is because of:
- their strategic locations to link the nearby historical artifacts in giving a comprehensive memory,
- their being memorable places that require environmental improvement,
- their own historical interest and high commercial and tourist values that call for upgrading,

their strong neighborhoods upon which the experiment of 'matrix growth' can be anchored.

The Uniqueness
Old Suzhou is a historic place of characters, whose uniqueness lays in its long history, well-preserved layout, and its abundance of cultural heritage.

The Long History
- In 514 BC, the Wu King ordered Wu Zhixu to build the capital of Wu, "Gului City", by "reading the territories of earth and water." The city was finally located on a terrain with Yangtze River to its north and Taihu Lake to its south and relatively higher than the surrounding Taihu plain.
- In 589 AD, the city was first named Suzhou and had already been developed into a prosperous commercial water town.
- In the Five Dynasties (906-960 AD), due to the current Buddhist influence, many of the surviving pagodas and temples, including Twin Pagoda Temple, Kaiyuan Temple, and Beisi Pagoda were built.
- In 1113 AD, the city was renamed Pingjiang when the city had grown further.
- In 1129 AD, the invasion of Jin army had destroyed most of the city.
- In 1229 AD, the Pingjiang Map was engraved showing the complete urban model of a canal city.
- In 1275 AD, other invasion by Mongolian army had demolished the whole city, but afterwards, the city soon recovered and developed further to a state as Marco Polo described as "a very large and noble city.....and most likely there are six thousand stone bridges in that city, under which a galley or two could easily pass." ²

² Polo, M., Travels, p.130
- In late Ming Dynasty, the 17th century, the Western concept of capitalism was first introduced in the city that grew further into the most prosperous commercial city till late Qing Dynasty. Numerous private gardens were built.
- During the mid-Qing Dynasty, the emperors Kangsi and Qianlong visited the city several times and their itineraries were recorded in some scrolls of which *Prosperous Suzhou*, drawn in 1759, depicts the urban scenes most vividly.
- At the turn of the century, the commercial importance of Suzhou was replaced by Shanghai. The city started to decline and vehicular roads were laid.
- In 1949, Communist took over the city, and after that further roads were constructed and more canals were filled.

**The Well-preserved Layout**

The area of the old town is 14.18 sqkm that the width W-E measures 3.5 km and the length N-S measures 5.1 km. When compared to the old maps, the city is situated on the same site with almost the same layout which is very uncommon in Chinese cities. The city was planned according to the classical principles and modified by the waterways instead of a result of an organic growth.

Consistent with the Pingjiang Map in 1229 AD, the plan of the old city still maintains a modified rectangle surrounded by two moats, one inside and the other outside the city walls. The layout is asymmetrical but systematically overlaid by a traffic network both on land and in the water, complementing each other. This network divides the city quite evenly into rectangular city blocks sandwiched by W-E running streets approximately 100-150m apart, thus offering the houses good orientation and peaceful environment. The blocks containing the government institutes, temples,
gardens, and workshops are usually bigger while the residential blocks are smaller. The major canals of 3 latitudes and 4 longitudes are still maintained up to the moment.

In the 13th century map, small canals were crossed by over 300 stone bridges and the neighborhood entrances were defined by 65 memorial archways, some of them are still surviving. There was an inner city built in the center of the city; and the commercial buildings were clustered around Le Bridge. In the city, there were 13 pagodas and over 50 temples, the bigger of which, like Beisi Pagoda, and Xuanmiao Temple that are still surviving, were surrounded by canals and approached by axial streets.

Even the city was once demolished in 1275 AD by a warfare, the city was recovered soon afterwards on the original urban foundations. Although the numbers of pagodas, temples and bridges have diminished, the locations of city walls, canals and urban skeleton are remained unchanged till today.

**The Abundance of Cultural Heritage**

Suzhou being a historical cultural city, possesses a large amount of historical relics: a total of 71 historical sites, 6 of which are classified as national grade, 26 as municipal grade, 39 as city grade. Besides the richness of cultural values, the abundance of the architectural heritage, the numerous old pagodas, temple buildings, gardens, city walls, bridges and ruins have tremendous artistic values and urban values in composing a memorable townscape of Suzhou.
The Townscape

"The environmental images.....is the product both of immediate sensation and of the memory of past experience, and it is used to interpret information and to guide action."³

Kevin Lynch

By site observation, to understand the meaning of the environment of old town Suzhou, it is structured and identified in three levels:

- the path: the picturesque water lanes of the town,
- the district: the tight neighborhoods of the town,
- the landmark: the distinct built forms in the town.

The Path--the picturesque water lanes

Suzhou is famous as a canal city with the waterways and streets arranging in a chess board pattern. However, the city has a very picturesque townscape--canals and houses were constructed with proper proportions and scales, willows were cultivated along the banks, that composed a poetic picture of 'small bridges, flowing brooks and dwelling houses'. These environmental images captured in the poetry can still be found when we walk along some paths in the town where the traditional relationships of the canals and the dwellings are still maintained. These include the water lanes of different scales and characters, e.g.:

- Yejia Street, the lush canal of a bigger scale of 10m width;
- Hillside Canal, varies in width but is about 5-7m wide at where dwelling houses are lined at both sides; and
- Scholar's Street, a local neighborhood water lane in the west side of the city, measures about 3-5m in width and is packed with dwelling houses.

³ Lynch, K., *The Image of the City*, p.4
The District--the tight neighborhoods

The town of Old Suzhou still maintains some areas which remain distinctively recognizable as the old local neighborhoods. The northern part of the town is basically residential; at the north-eastern side, Pingjiang District is a historical protected neighborhood where the urban layout is kept intact since the 13th century; at the north-western side, Changmen District is a historical community of a mix of commercial and residential character where more shophouses are maintained. The hierarchy of space in these districts from public, semi-private, to private holds a coherent atmosphere within the local community. Their neighborhoods reveal the humanistic and lively sense that is generally lacking in other urban settlements.

Connecting to the other districts through canals, these commercial and residential areas are arranged in a clear serial order. The N-S running canals, usually lined by shophouses, are providing main access to these neighborhoods through the W-E running streets and canals. Arranged serially along the water lanes, most of the houses are orientating south to the street and extending longitudinally to the canal at the back. With this clear order, the neighborhoods grew on this urban skeleton and modified the space into a livable place with juxtapositions and sensitive adjustments:

- main streets, public access, including Pingjiang Road, Mid-Zhangjia Street, with average width of 4-6m;
- water lanes, semi-public access, subdividing neighborhood group, with average width of 2.5-4m;
- 'long', semi-private access to residence, either covered or open, with average width of 1.5-2.5m.

Within these neighborhoods, common problems including water pollution, lack of sanitary provisions, infrastructure and refuse collection, are urgent issues to be improved.
The Landmark—the distinct built forms

Within the area of Old Suzhou, a mixture of old and new constructions is witnessed. While much is lacking in individual quality of the new buildings, the vanishing coherence is still maintained by the old built forms. The old buildings of pagodas, city walls, temples, bridges and even houses are urban artifacts of immense visual and historic interest. Some of them can be dated back to Sung Dynasty, 600 years ago, but most of them were built or rebuilt in the last 150-200 years. The remaining gates of Panmen, Changmen and the outstanding pagodas of Beisi, Tiger Hill function as landmarks in the old town. Many houses are built in a traditional way of ‘white-wash walls and black-tiled roofs’. Others have been modified and are now built of reinforced concrete blocks. Most of them are between 1 to 3 stories with high density packing side by side. There is a mix of uses with workshops, commercial and residential units being profusely intermingled.

Until recently, much of the redevelopment of the old town has been on a scale alien to the context. The forms of hi-tech and so-called ‘Chinese style’ buildings are polluting the historical built environment. Along Renmin Road and Guanqing Street which have the highest concentration of population and commercial development in Suzhou at present, there are more than 30 new commercial complexes built or under design. The new landmarks of Suzhou are the curtain wall commercial buildings at the junction of these two streets while most of the point block apartments were built to the south of the old town. The on-going trend of development and the uncompromising architectural expression seem to attack the urban form harmfully. If a harmonious balance between the old and new is desired, considerate developments responsive to both the urban environment and the individual design should be encouraged.
Historic preservation, taking the urban dynamics into consideration, would generate a new perspective in the history and physical environment of historical cities. In addition to the historical significance of restoring monuments, or the social value of preserving collective memories, the continuous use of old buildings, functioning with either their original programs or injected with new meanings, has played a vital role in the revitalization of old cities. When economic considerations are put into the whole picture, this pragmatic attitude towards historical conservation has proven to be successful in cities nowadays. The act of historic preservation, however, is a highly cultural dependent activity. Extra complexities and controversies will be expected in cities where unique local culture exists. In the cultural setting of Suzhou, China, this dynamic approach should respect its own will of being a lively water town in the context of the water-born Wu culture.

A Comparative Study of the Preservation Attitudes

As the Chinese civilization has a long history and traditional China has been a self-sustained nation with a close system of internal orders that governed the growth and functions of its cities not until recently when the Western thinking shifted the traditional urban concept about a century ago. So, in employing the preservation concept that was generated from the studies of European towns into the historic preservation of their Chinese counterpart of Suzhou, we should have a comparative understanding of the two cultures on their preservation attitudes.

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1 The name of the country ruling that region at the 6th century, BC.
The Setting for Monumentality

In the stream of European urban tradition, the city is envisaged as an organized sequence of urban settings in which monuments play an essential role in their collective nature and character as elements for preserving myth and transmissions of ideas. In Moshe Safdie’s term,

"Monumentality in its elemental sense is the articulation of a network of spaces and particular buildings that give the city legibility."²

The architectural and urban heritage, in that sense, is a coherent part of the culture, having a visual and physical expression which articulates, symbolizes and materializes the remaining values of the past. Buildings are conceived as areas for social and cultural activities, and the city as the stage and the scenery—-a living and active memorial. Preservation of the heritage and environmental values, thus, represents the historical and cultural dimensions of the 'locus' without excluding creativity and innovation in the contemporary times.

Because history, in Rossi’s term, is limited by continuity of function; a building has ‘historical being’ with a continuous use for the original purpose while the adaptive use is to transform this historical nature into 'memory'. The individual architectural piece can contain a multiplicity of functions over time entirely independent of the form whose significance depends on its full participation in the structure of the city, i.e. the ‘individuality of the urban artifact’ will be absorbed into the collective locus only when it becomes part of a more complex, historic richness of place.

As a result, the facades of the buildings contributing to the urban 'strategy of memory' are preserved according to their

² Safdie, M., Collective Significance, p.87
original flavor, while the interiors could be reconstructed for modern use with a sense of élan and contemporary freedom. Depending much on the disposition of facades that provide a backdrop setting for the urban episodes, the urban space is given a consistent expression by the public faces of the building envelopes while their private faces are possibly deviate from the external alignments. The internal functions beyond this layer of building envelopes can be changed without affecting the preserved urban setting for monumentality. In this sense, form does not necessarily follow function, but the emphasis is on the collective images composed by built forms in an urban context.

The Layering of Practicality

On the contrary, the Chinese attitude towards historical preservation is more pragmatic as well as metaphysical. Instead of emphasizing the monumentality through the preserved urban setting, preservation in the traditional attitude is not a self-conscious act, but rather an extension of the personal passion for antiquities with a slight overlay of nostalgia. Practical functions, whether original or adaptive, of individual buildings are stressed more than the physical appearance of the urban images, and monuments play a less important role as permanent elements in preserving myths. With a different interpretation of eternity in the Chinese context, the permanent values embedded in the urban artifacts are relative. Detached from the presence of physical structure, the value anchored in the monuments in the European sense as landmarks in the passage of time is dissolved by literature and legends transcended from the previous generations. In this way, the memory that ties stronger to the names and mental association of the place than the surviving structure, is constantly refreshed and subject to alterations.
In addition, urban life is interpreted as a process of changes that is always perceived by urban aristocrats as 'floating'.\(^3\) As they believe that the physical artifacts are transitional when compared to the eternity of nature and humanity, renovation, alteration, or even reconstruction of buildings are easily accepted as long as the spatial ambiance and the geomantic orientation\(^4\) of the original buildings or landscape are maintained. Thus, the ‘historical being’ relies less on the preserved built forms or details, but on the continuous use of the place with memorable environment shaped by the preserved logistics of scales, orientation, and spatial layering.

Without an obvious idea of facade, the buildings give collectively a neutral backdrop to the urban setting as blank walls with minimal openings in most of the buildings or total exposure after demounting frontage panels in shophouses. Not providing intentionally a fenestrated facade with a given theme or perspective view around urban spaces, like the piazzas in Italian towns, the local expressions of white-washed walls in Suzhou, functioning as inward-looking envelopes, act as blank papers for the contrast of the varied compositions of objects and shadows in front. As direct enclosures of the internal functions, the preserved urban envelopes reflect honestly the interior volumes within individual buildings. Thus form follows function and the preservation emphasis is not expressed in a preserved physical existence, but in the captured subjective experiences and the collective memories of the place. Therefore, between destruction and conservation, a distinctive judgment is on the degree that the structure could enhance the practical urban values in relation to the social and geomantic orders of the place.

\(^3\) As interpreted by many scholars from Suzhou, for example, Shen Fu in his autobiography, *Chapters from a Floating Life*.

\(^4\) *Feng Shui*, a pseudo-scientific practice in China in relating the cosmological orders to the physical world.
Confluence of the Two Attitudes

From generation to generation, the *age value*, in Riegal's sense, is accumulated via artifacts descended from ancestors, whether these being pieces of jade or city walls. The traditional concept of relating ourselves to our ancestors through these artifacts as a linear continuation of a common order, the will of the city, has bridged the two preservation attitudes on a common ground.

Parallel to the Confucianist way of perceiving the universe from an expanding hierarchy of self--home--nation--world, the urban environment in China is always a magnified manifesto of the micro-order that, to a large extent, is consistent with the scaling of typological thinking in house--ensemble--city--territory.

In understanding the ‘idea of type’, typology, Rossi’s celebrated transformation of old building into a manifestation--the compound of object and memory, with the object embodying both an idea of itself and a memory of a former self, is intended to abstract the historical being of the transformed object into a self-regulating logic that can continue the historic process. To this end, the traditional Chinese perception of historic continuity in the mode between ‘spirit-like’ and ‘form-like’ shares the idea of abstraction in the typological concept. In addition, both attitudes emphasize a coherent evolutionary change in a diachronic perspective. For the growth along the city’s consciousness, the urban structure reveals the typological genesis while the Chinese urban context depends more on its harmony with the natural system. In Suzhou, these two keys of urban structure and natural system for a coherent growth intersect at the continuous use and further development of the canals.

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5 An important commemorative value in Alois Riegal’s preservation system
The Tool of Typological Analysis

From the arguments above that lead to an urban preservation attitude of continuous use and stimulated ‘matrix growth’, it is essential to understand the city as an organic evolution along the path of its own consciousness. With an evaluation of history, coherence of design within the context of the city can be established through a typological analysis of the urban fabric; in the case of Suzhou, that is its waterways, their significance in the territory, their role in the evolution of the city, and their relationship with urban and architectural expressions.

In Muratori’s term, the progress of the civilization ties the human being continuously closer to its environment. The logistic of the cumulative orders over time is crystallized in the ‘type’. By analyzing the ‘type’, it is possible to give a physical manifestation to the forgotten ‘code’ of design that can enhance the evolution of the city. In this de-codification and re-codification process, the memory, i.e. the consciousness of the city, can be recalled and helps to restructure the fragments into an overall urban coherence.

Historical Contextualism

Developed along the typological thinking, the analysis when applied to formulate the principles for a strategy of memory is useful to construct a hypothetical framework of historical contextualism, i.e. the memory about a city would only be restored and continued through a critical historical interpretation of the contemporary context.

The theory is based on the triple relationship among time-place-people in which the balanced architecture or urban form is arrived at the intersection of the three axes:
• along the time axis, the urban artifacts are built, preserved or destroyed according to the commemorative value;
• along the place-axis, the urban artifacts are located, correlated or hidden under the determination of strategic value; and
• along the people-axis, the urban artifacts are accommodated, adapted, or abandoned according to the use value.

Different contexts and cultures have their own balanced expression along these axes, but they may have different emphasis along one or two particular axes. So when we consider the situation of a particular context, e.g. Suzhou, the city acquires a stronger commemorative value to the historical sites, less practical nature, and a stronger relation to the waterways, the strategy of memory is thus designed accordingly to fix in different degrees of the criteria. The idea is through an investigation of the architecture in its historical context, thus setting up a method to apprehend its meaning by abstracting the essence from the past, then after re-interpretation to apply under the present genius loci, at last, to meet the local people's needs. From the general idea, 'type', to the specific intervention, 'strategy', from the time to a TIME, from the place to a PLACE, from the people to a PEOPLE, a unique solution is made that would go back into the matrix to influence the further evolution of the historic process.

**Interpretative Intervention**

What would be the ideal urban scene of a historical town, like Suzhou, in Modern China? Upon the theory, after the opening policy, China has broken the self-closing balance and set on an irreversible process of evolution through this mutation. The answer is beyond the scope of confrontation between socialism and capitalism, but emerges between the
integration of OLD and NEW, cultural continuance and modern requirement. The mode of integration is not simply the coming together of two entities but a close-knitted relationship of function and context, old and new.

The way begins from a careful abstraction of essence from the elimination of formal envelope, i.e. the spatial order of the water town; then a re-interpretation of the historical meaning in contemporary mentality; i.e. the meaning of the canals to the modern living, commercial values, tourism and environmental values. After this distillation process, what remains is reconstructed into an integral whole, a synthesis of the broken memory, i.e. the adaptation of water-born buildings and revitalization of the canals. By composing the synthesized memory, i.e. the restructuring and rehabilitation of the memorable water environments, amidst the urban setting with the art of memory⁶ to meet the genuine vitality of the people, an appropriate intervention strategy is arrived.

So in preserving Old Suzhou, the solution would not be in the passive protection or control measures of historical sites and monuments, but on the existence of a dynamic balance between the ever-proceeding adaptation of OLD to NEW. Assisted by a proper strategy of memory, the comprehension of this balance by both local people and visitors would be enhanced that, in turn, would further improve the city both commercially and economically towards its original will of being a water-born cultural town. The acquisition of a historical link would then indicate the future direction on this evolution of no return.

⁶ A rhetorical technique of loci and imagines, i.e. places and images, invented by Simonides of Ceos in Greece in the 4th century BC in identifying for relatives among the mutilated corpses of the guests after the collapse of a banqueting hall roof, involves the creation of a mental schema corresponding to a real or imagined topography.
The Integrity of Memory

With this idea of interpretative intervention, the preservation of the historical town of Suzhou requires the attention not just to individual artifacts, but most important to the overall coherence of the artifacts in the place. By using the art of memory, the images and the places are recollected by an order with a narrative matrix of time. This order is made by a consideration of individual preserved objects, their collective images, and subjective experiences.

Memory by Objects

The individual preserved objects are the basic components contributing to the coherent whole through the techniques of 'harmony' and 'contrast'. The former is constituting a coherence by a harmonious order of the common character of the objects while the latter is to create an order by contrasting objects of different natures against a common background.

Technique of Harmony--Harmony is the most basic and simplest principle in attaining the coherence, that can be divided into diachronic harmony and synchronic harmony. Synchronic harmony means, at the same time, a coherence is attained in giving the objects some common characters through certain interventions that are categorized as 'harmony in content' and 'harmony in form'. Diachronic harmony means, at different times, a coherence is gained in the natural evolution process. In the evolution, objects of different periods and styles have constantly being assimilated and eroded as well. Through assimilation and erosion, the physical appearance of the objects are adjusted into harmony. Because of the age marks in the historical town, even new objects are added in the same old way, there would still be a difference between the new and the old; or if the old objects are renovated into a new look, the age value
and the coherence of the historical environment would be destroyed. For example, if all the historical buildings in Suzhou are renovated in this way, Suzhou would no longer be a historical town.

Technique of Contrast—Contrast can also constitute to a coherent whole through ‘contrast in form’ and ‘contrast in content’. ‘Contrast in form’ is a method to generate a coherence through contrasting the difference in form of the objects against a backdrop, e.g. Panmen three scenes (the gate, the pagoda, the bridge) in Suzhou is a coherent whole not just because of the visual correlation, but also because of the formal contrast with the surrounding residences. There are many other methods such as order in chaos, high density among low density and fine grain among coarse grain. ‘Contrast in content’ is to highlight the particular contents of the objects and through this distinction to give a coherence among the objects from the overall context.

Memory by Images

Without the mnemonic device to recollect the urban fragments, there is still no integrity of memory. At this point, it is important to consider the concept of syntax. Syntax posits a structural relationship between the idea of the place and the image that together make a meaningful whole. This structure of relationship can be physical or metaphysical, and can be understood in four different dimensions of ‘point’, ‘line’, ‘surface’, and ‘volume’.

Structural Point—As urban environment is physically static, the image of the historical city can only be comprehended by people’s movement in it as Kevin Lynch explains,
"Nothing is experienced by itself, but always in relation to its surroundings, the sequences of events leading up to it, the memory of past experiences."\textsuperscript{7}

Thus, to connect two important points far apart, it is necessary to locate a sequence of related marks or hints between them, and the variation of their intensity would then create a sense of direction or discovery. In the process of way-finding, the strategic link is the environmental images, the generalized mental picture of the exterior physical world.\textsuperscript{8} The distance between each two points is determined by psychological and behavioral patterns of the people in movement. In leisure walking or traveling on boat, the comfortable distance is 200m to 300m, that would suggest a general modulation of locating these marks.

\textit{Structural Lines}--The linear structures are the most basic forms in correlating the artifacts, that can be divided into two types, ‘solid line’ and ‘dotted line’. ‘Solid line’ is constituted by physical links and paths, such as streets, canals and walls while ‘dotted line’ is composed by metaphysical links, such as visual lines, axial lines and geomantic forces. The most common organizing structure are the paths, in Lynch’s term,

\begin{quote}
\textit{“the network of habitual or potential lines in movement through the urban complex are the most potent means by which the whole can be ordered.”}\textsuperscript{9}
\end{quote}

In the preservation of Old Suzhou, it is proposed to identify several historical trails, one along Hillside River, one along the west city wall from Panmen Gate to Changmen Gate, and the other along the canals in Pingjiang neighborhood. Along these paths, the historical artifacts of gates, bridges, tombs and pagodas would be strategically connected by the

\begin{itemize}
  \item \textsuperscript{7} Lynch, K., \textit{The Image of the City}, p.1
  \item \textsuperscript{8} Ibid., p.4
  \item \textsuperscript{9} Ibid., p.96
\end{itemize}
traveling itineraries and the visual corridors are reinforced by the edges of houses and plants as well.

*Structural Surface*--It is normal for people to associate artifacts of similar characters or those included within a common boundary, or edge as a coherent 'surface'. Similarity and inclusion, thus, are the basic means to create a structural surface of coherence that, again, can be divided into 'solid surface' and 'void surface'.

Inclusion is essential to give a solid surface; in Suzhou, the outer moat and the city walls have included the old city into a easily comprehensible whole, and Guanqing Street at the center of the old city agglomerates all trades around Xuanmiao Temple is also perceived as a structural surface.

*Structural Volume*--When considering the overall environment, the coherence of the historical town is maintained in its location and bulk envelope relative to the surrounding landscape, the territory. The mountains, the rivers and the lakes forming a three-dimensional structural coherence to define the volume and the position of the town.

In Suzhou, Taihu Lake and the other waterbodies through the waterways that penetrate into the city, have created a structural coherence to the historical town. At a smaller scale inside the city, the building bulks surrounding the artifacts are articulated into a structural coherence by the disposition of different proportions of vertical and horizontal scales.

*Memory by Experiences*
Subjective experiences are essential to recall the objective environmental memory. The memory of human being has an ability to reconstruct the meaning through conceptual narratives. So by giving the hints through naming of the place and abstract images, a comprehensive mental picture
can be composed; e.g. ‘Panmen three scenes’, the name, would arouse an association with a coherent picture of the gate, the pagoda and the bridge. This mental association is effective to imply a bigger picture in the imaginative matrix of the historical water town. But the comprehension ability of human being is limited by the ‘realm of senses’ that, by statistics, can handle about 7 images at one time. So the narrative matrix should not be composed by groups of more than 7 objects, otherwise most of the people would be confused about the overall images.

Also the subjective memory has an ability to recover the broken narratives in the mental construct that a continuity or coherence of forms can be suggested from ruins, or symbolic fragments. In this sense, the broken old city walls of Suzhou would become recognizable as an inclusive edge by reinforcing the images at some strategic points around the original gates, thus enhancing the coherence of the old town.

As the environmental memory is perceived by the people through two experiences of ‘seeing’ and ‘walking’. ‘Walking’ is the main movement behavior of the people in Suzhou, and ‘staying’ is consolidated into contact points. By enforcing the images of these contact points, the character of the historic city would be more outstanding. As there are different traveling paths for the visitors and local inhabitants, the contact points are also different; for the visitors, they are the city gates, scenic points, shopping centers, terminals, and hotels that should present a strong flavor of tradition and local character to them; for the local inhabitants, these points include workshops, markets, temples, canal steps and other neighborhood open spaces of daily living, the design of which requires a closer integration with the deeper social structure of the local living patterns.
‘Seeing’ is the main subjective experience to perceive the city, that basically requires the perceived objects to be ‘visible’. As Suzhou is famous for being a water city, the canals, water-born architecture, and water-born culture should be incorporated into some ‘walking’ itineraries to make those artifacts being seen, ‘visible’. For example, along the main road, Renmin Road, most of the well-preserved Suzhou traditional houses are hidden behind the envelop of new buildings so even these objects exist in the city, it is not subjectively memorable in the urban experience. Therefore, to recall the memory effectively, the contact matrix should merge with the narrative matrix of the urban artifacts.

‘Point of vision’ is another important tool to experience the coherence of the objects. By changing the distance between the observer and a cluster of objects, the difference in the cone of vision determines whether they are coherent or not. For example, when we climb up the stairways of the highest monuments of Suzhou, Beisi Temple, to an elevated level, we can visually experience the old city that can hardly be comprehended by traveling on the street level.
ANALYSIS
--reading

In the notion of historical contextualism, we need to understand the present city in history. In this section, a western approach of typology is used to read an eastern city of Suzhou in a diachronic perspective. With reference to the visual literature of historical maps and paintings, it is intended to analyze the present urban forms across layers of historical overlays. In reading this layers at different levels of territory--city--ensemble--house, it is possible to trace out the factors that influence the evolution of urban form of Suzhou. Particular attention is paid to its relationship with water that shaped the city unique in the urban history. By synthesizing these readings in a systematic way upon the principles of permanence, change, and reference, it is hoped that a strategy can be formulated particularly suitable to restore the memory of Suzhou.
EVOLUTION

Suzhou is a unique Chinese city not just because of its consistent urban overlays on the same location over a long time, but also because of its integration with the waterbodies. From the investigation of the historic overlays, we can trace how the places were changed, while the analysis of its correlation with the waterbodies would tell us how the places were formed.

Before the homogeneous urban setting was invaded by the modern construction, Suzhou city had embedded an enigmatic quality between nostalgia and pragmatics. History was never remote from its inhabitants as they practiced traditions through their daily life. People remembered because they were part of the continuous history which was descended and passed on through subjective involvement and experience. In this city, the presence of 'primary elements' in Aldo Rossi's term is not intended to impart the message of monumentality, but provide places to create or refresh collective environmental memory. These places at where urban life performed are defined and evolved along the intrinsic values of its early urban fabrics, whereby the forms of urban artifacts can be transformed radically at dramatic moments in history. In this sense, the city being perceived as an integral summation of urban artifacts is created, and transformed upon this framework of urban values. 'Structural permanency' of urban forms as the principle of constant in the western world is less emphasized than in their Chinese counterparts. In Suzhou, the permanence is embarked on the network of waterways. The city is sited, planned, built and modulated according to the courses of water. Its canal networks provide reference for 'capillary changes' that enable the city to evolve towards a balanced form.
**Territory of Watercourses**

The setting of Suzhou is unique as it is located on the delta of Yangtze River, at the confluence of three rivers (Luo River, East River and Wuzhong River). The stream flow and water level are regulated by lakes around it (Taihu Lake, Stone Lake, Yangcheng Lake). The city was carefully sited on a piece of flat land relatively higher than the surrounding watercourses around Taihu Lake so as to command the territory and avoid flooding.

The topography and the immediate river patterns have given the city a strategic position to command the waterways and allow fresh water to flow into the city. As *Encyclopedia on Waterworks around Wu* outlines a clear account of how Suzhou relates to the territory,

"Suzhou is at the downstream of Taihu Lake, directly located at the outlets, Sikou and Jinyukou. The NE flowing water from Taihu Lake then passes through Suzhou, reaching Luo River in the east then to Luojia River, reaching Yangcheng Lake in the NE then to Chipo River, reaching Wu River in the south then to Jiashing."

There was no major roads leading to the city not until recently at the turn of this century, as described by the British after looking at the air photo of the territory,

"Wheeled transportation is not used in South Kiangsu, and the roads and bridges are quite unfitted for it."

In this case, paths in the territory are equivalent to canals and watercourses. It is believed that initially there were two major paths running from West to East: Luo River connecting Suzhou directly to Taihu Lake and Yangtze River, Wuchun River connecting to the coast through Shanghai. However, after 621AD, the Grand Canal running from North to South connecting Beijing and Hangzhou

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1 Kung, T.W. & Yip, K.K., *Water City*, p.16-17
2 Another translation of Jiangsu, the province where Suzhou is situated
3 British Naval Staff Intelligence Division. *A Handbook of China Proper* (1917)(Skinner, 1977)
which became the main artery of trade and commerce between Suzhou and these two capitals, had brought about prosperity to Suzhou and the surrounding territory. In the past, navigation was the most convenient mode of transportation and especially in Southern China the water network played a vital role in transportation. In this sense, besides its strategic location, the city was extended further to the territory by digging canals of Sui Channel and Ying Channel; and in the following dynasties, the priority given to the waterway issue had made the city even more prosperous. As in the vicinity of Suzhou the waterbodies of Taihu Lake, the Grand Canal, Yangtze River and South China Sea are well connected to cities inland and overseas alike, this well-established water network has brought about immense commercial and cultural development as in the saying that goes,

"Wu is a water city interconnected by waterways that can drain the fields and provide access to vessels from everywhere; it is the resources to the wealth."

When we investigate the territory of Suzhou, it can be read as a web of lakes and canals that supplies water for irrigation and provides intramural access for trade and communication. The territory including the towns and villages around the city via the canals forms a hierarchy of agricultural and fishery production networks through which the produces are collected from the villages to the towns and from the town the manufactured products are traded in the city. Suzhou being the central city is surrounded by smaller towns of sizes ranging from 3x5 li⁴ (population: 5,000-10,000) to 6x10 li (population: 10,000-20,000); the span between these towns is around 10km. While the distribution of villages and small towns is rather random, however, in the past, to administer the territory effectively, the prefectural towns were located with a regular span of around 50km apart.

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⁴ A Chinese linear measurement, 1 li is about 0.5km
The efficiency of this hierarchy of distribution network had much enhanced the commercial activities. As a result, the towns and villages of the territory around Suzhou had grown rapidly since the 13th century of Sung Dynasty and flourished even further in Ming and Qing Dynasties due to the emergence of free trading and capitalism. The following table summarizes the growth of towns surrounding three major cities on the Yangtze Delta in different periods:

<table>
<thead>
<tr>
<th></th>
<th>Sung Dynasty</th>
<th>Ming Dynasty</th>
<th>Qing Dynasty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suzhou</td>
<td>11</td>
<td>64</td>
<td>101</td>
</tr>
<tr>
<td>Chunjiang</td>
<td>10</td>
<td>62</td>
<td>116</td>
</tr>
<tr>
<td>Chengzhou</td>
<td>13</td>
<td>57</td>
<td>67</td>
</tr>
</tbody>
</table>

Suzhou and the surrounding towns, Jiangsu Province
Evolution of the Territory

The territory can be read as an overlay of three layers:

- the natural system of ponds and watercourses,
- the navigation system of canals,
- the artificial administrative of control.

The first layer provides a geometry for the agricultural settlements which evolved into the second phase when trading towns emerged at the confluence of canals. Those outgrown trading towns that had a command of waterways were reinforced as prefectural towns by an administrative overlay to control the local economics.

• 1600 AD

Prefectural towns—centers of administrative units in which the dike administrator system started to operate; the towns were distributed quite evenly around Suzhou.

• 1900 AD

Former prefectural towns became cities with the supporting towns around, forming a network of administration and commercial distribution.
Designing the Water Town

The city plan is a hybrid of two major orders—a modified square ideal city plan prescribed in the *Rituals of Zhou (Zhouli)*, with an integration of defensive controls and waterways within the surrounding territories.

In 514 BC, Wu Zixu who was then the prime minister of Wu was commissioned to build the city according to the geomantic orders. According to *Yue Jue Book,* the inner city walls measured about 8 li and that of the outer city walls about 47 li in perimeter with 8 gateways of both water-side and land-side accesses to symbolize the eight diagrams and the eight directions of the winds. Inside the walls, the basic framework of canals was then laid down with a regular grid of 200-400m along N-S and 100-150m along W-E, upon which the other urban fabrics and structures grew gradually.

After the wars in 1129 AD, due to the expanding commercial activities, the city recovered rapidly upon the original foundations, and was restored to an urban form as seen on the *Pingjiang Map* of 1229 AD. From the map, we can understand the organization of the city and how it was designed with the waterways as explained in the following:

The rectangular city wall was surrounded by the moat; and two waterways connecting to Tiger Hill and Hanshan Temple and the city was divided evenly by three N-S running and four W-E running main waterways which acted as a main frame to the city skeleton.

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5 A reference of classical rituals defining the principles from wedding ceremony to city planning. Regarding the layout of a city, it describes as follows: "The planner designs the city with a square of 9 li with 3 gateways along each edge. Inside the city, there are 9 roads running along N-S, and W-E respectively, each with a width of 9 carriages [each carriage equals to 8 feet]. The inner city is right at the center. To the left[east] is the ancestral hall and to the right[west] is the granary temple. In the front is the administrative compound and at the back is the marketplace, each measured 0.1 li square. Within the inner city, there are 9 inner chambers for the living of the royal family and 9 outer chambers for the administration of the ministers."

6 The name of the country ruling that region at 6th century, BC.

7 A geographical account of the counties on the Yangtze Delta

8 See Appendix II
Now, the general skeleton of the waterway system is well known to the local inhabitants as:

- one ring (the moat),
- two extensions (Hillside Canal, Maple Bridge Canal),
- three longitudes and
- four latitudes.

While the moat and the extensions were for defense and communication purposes within the territory, the longitudinal and lateral main canals were acting as the arteries for water traffic within the city. Growing from this skeleton were the intertwining grids of streets and canals, of which the waterways were the matrix, with streets running parallel and adjacent to them, forming an integral "double checkerboard" pattern in which the streets and canals complemented each other.

As the general trends of flows were from west to east and from south to north, it becomes understandable that the resultant city form was shaped by the water flows and the immediate water environs:

- The elongated northern end of Suzhou helped to include the water flows from the Grand Canal into the city;
- The truncation at the NE and NW corners was intended to smoothen and direct the water flows towards the downstream;
- Protrusion at SW corner was to redirect the overflows from Taihu Lake and the hilly terrain at the SW side of the city from flowing into the city through Panmen;
- Right-angled turn at the SE side of the city was possible as there was a small bay, Red Door Bay, which could modulate the water flow towards the north.

In Encyclopedia on Waterworks around Wu Region, there is a summary on the canals of Suzhou, "On top of the 3 longitudinal and 4 lateral main canals, in the city there are over a hundred smaller canals running perpendicular to each other; all are running either from west to east or from south to north, ever since Tang, Sung and Yuan Dynasties."
Concerning the immediate surroundings, the polar effects of the Grand Canal, Tiger Hill, and the surrounding lakes and towns had induced paths of matrix in the form of canals extending from the city proper through gateways at the four sides as shown in the following map.

The map of Suzhou City and its immediate surroundings
Regarding the organization of the city, it followed the classical planning principles of Zhouli with an adjustment in the relative locations. As the most prominent inner city was offset towards SE to address the water flow through Jiangmen Gate, the important civil buildings of ancestral hall, granary temple, administrative compound and marketplaces were arranged around it accordingly. In the outer layer beyond this core there were courtyard compounds for educational (Confucius Temple and Examination Hall) and hostel (Foreigners' Hostel) purposes. By the western side of the city wall sat a group of buildings as ‘Gong Yuan’ where the imperial examinations took place. In the south was the highest institution of education in the prefecture. Throughout the city, temples as the nuclei of activities and meeting places for inhabitants were scattered among the residential areas.

Apart from these institutional buildings, in Suzhou the markets played a catalytic role in stimulating the evolution of the urban environment. In the Annals of Wu Province, it describes that there were an East Market at the NE of Le Bridge, a West Market at the NW of Le Bridge, a Big Market at the SE part. On the Map of Pingjiang, however, the markets were not specifically located. It was probably due to the resolution of control over commercial system after the Tang Dynasty that the markets, though resided around the original location to the north of the inner city, were dissolved into street markets around Le Bridge and Leishi Bridge near Tianqing Temple (now known as Xuanmiao Temple). Around these two bridges, wine shops, restaurants and teahouses were dotted. The commercial character of this area still prevails up to the present moment. The evolution of this area will be discussed in the following pages. In addition, as a result of immense pedestrian and naval flows, the markets of both land-side and water-side accesses had
overgrown beyond the city walls around the western gates of Changmen and Xumen.

Besides its clear strategy in locating nodal urban elements in key points, the city was zoned that the northern end was basically for residential areas among which Pingjiang District still preserves the original layout. The map also gives exact locations of various handicraft workshops along different streets and lanes which included silk-weaving, carving, as well as jade, gold, silver and lacquer ware making. There were more than 100 kinds of handicraft trades and professions in the city. The quarters around the NE and SE corners were reserved for agricultural use to supply food in case of any battle.

The organization of Suzhou in the Map of Pingjiang, 1229 AD.

1. Palace of the General;
2. Prefecture of Pingjiang;
3. Subprefecture;
4. County Magistrate of Wu County;
5. County Magistrate of Changzhou County;
6. Tianqing Temple;
7. Confucius Temple;
8. Examination Hall;
9. Granary Temple;
10. Tiger Hill;
*Evolution of the Town*

Although there were modifications correlated to the waterways, the following classical principles in setting the Chinese town were still maintained: a. walled enclosure; b. axially; c. N-S orientation.; d. layers and hierarchy.

In tracing how the town evolved over time, we find that before 1950s the city walls were basically intact with a slight modification in the SW corner as a result of the restoration after another invasion by the Mongols in 1275A.D. However, due to the ever-growing population, the canals were vanishing gradually with a dramatic eradication when motor roads were first introduced in 1940s.

**514 BC**
- Wall: 19km (=37 li)
- Gateway: 8 land- & water-accesses
- Canal: unknown
- Bridge: unknown

**1229 AD**
- Wall: 16km (=32 li)
- Gateway: 5 land- & water-accesses
- Canal: 85km
- Bridge: 359

**1500 AD**
- Wall: 17km (=34 li)
- Gateway: 5 land- & water-accesses
- Canal: 90km
- Bridge: 359
• 1800 AD
Wall: 17km (=34 li)
Gateway: 6 land-, 5 water-accesses
Canal: 74km
Bridge: 310

• 1950 AD
Wall: 17km (=34 li)
Gateway: 10 land-, 5 water-accesses
Canal: 66km
Bridge: 280

• 1990 AD
Wall: 2km (=4 li)
Gateway: 3 land-, 1 water-accesses
Canal: 35km
Bridge: 168
Eradication of the Canal

Guanqian Street Area

To analyze the urban fabrics more intensively, an area with both commercial character and residential ambiance is chosen. In the case of Guanqian Street Area, we can trace out how the character of an urban ensemble evolved over different periods of time.

With the largest temple in Suzhou at the center, Xuanmiao Temple, the area is centrally located in the residential district to the north of the inner city as shown on the Map of Pingjiang. It was initially defined by a matrix of canals at the four sides penetrated by three W-E running canals each with a distance of 150m apart. As a common feature throughout the whole city, these canals as the primary accesses are aligned by streets. In between two canals from which measured 60m -90m, there are parallel lanes running as secondary accesses into the block. The houses are arranged serially as implants with an orientation to the south. Within each block, there are two to three tertiary connections at an interval of about 150m running perpendicular to the canals.

The 19 blocks of Guanqing Street Area

1. Yingou Lane
2. Renmin Road
3. Ganjiang Road
4. Lindun Road
5. Lindun Canal
6. Guanqian Street
7. Pishi Street
8. Guang Lane
This typical hierarchy of access system by canals, streets, and lanes running perpendicular to each other in defining the blocks is a basic urban framework of the whole town. Aggregation of the base type of housing, as a result, is strongly regulated by the logistics of this urban pattern. The special types, like Xuanmiao Temple, though deviate much from the base type in size and function, they somehow follow the overall pattern and submerge into the context.

The generic hierarchy of access systems of canals, streets and lanes.

The modified grid with the insertion of special types.
The mode of changes in this area also reflects the general principles of evolution in the town:

a. **Principle of Nodal Permanency**--Xuanmiao Temple as an urban node provides an anchorage of spatial reference to the neighborhood. Its importance is in its location and function as an enclosed urban void, whereby its structure was built and rebuilt several times throughout the history, the premium of the temple precinct is relatively permanent. In the case of the nearby plot, the open space at Beijiu, there was initially a small mount of undeveloped land. Its position as an anti-node started to change to one of nodal when it was first marked by a military building in the 18th century, BC.

b. **Principle of Access Mutation**--As the eradication of canals had dramatically altered the pattern of access within the blocks, the hierarchy of community was dissolved and reorganized. The original tartan-grid relationship between canals and lanes was substituted by loops of vehicular roads that confined pedestrian lanes within the blocks and at the same time isolated the remaining canal from reaching the inner urban fabrics.

c. **Principle of Shifting Character**--Guanqian Street was originally a pilgrim access with residential atmosphere while the market fair was located at the SW corner of the block around Le Bridge. As the canals were filled up for the fast-moving vehicular roads, this commercial character retreated into the then secondary access of Guanqian Street. Over time, the characters of a pilgrim access and a commercial street were combined within a precinct which evolved further into a unique place of animated ambiance. After the street was being pedestrianized in 1979 AD, it evolved further to become a place of dual characters, i.e. daytime shopping street and night fair operated by two separate groups of people.
Evolution of the Ensemble

**1229 AD**
- Major W-E canals and streets forming a hierarchy of access;
- Xuanmiao Temple being the center of the district.

**1900 AD**
- Secondary canals diminishing with the establishment of other special types around Beijiu;
- Guanqian Street becoming the only W-E secondary canal access within the area.

**1930 AD**
- 4 primary canals confining a 'larger block' with all secondary canals eradicated;
- Importance of Guanqian Street reinforced by the new developments around Pingan Lane and Beijiu.  

**1990 AD**
- Hierarchy of access changed into loops of vehicular roads leaving one remaining canal;
- Pedestrianized Guanqian Street enabling the possibility of leisure shopping and night fair.

10 See Appendix IV
Consolidation of the Shophouse

In the area of Guanqian Street, the shophouse was once a current type in the homogeneous context of the water town till recently. Though quite an extent of these houses were demolished, or likely to be demolished, among those remained it is still possible to recognize the organizing principles and retrace how the house type was consolidated. Different from the canal-street system in its relative constant nature, due to the flexible construction method and the concept of renewal, private individual houses in this context were easily altered, demolished and rebuilt over times. So it is difficult, if not impossible, to identify the periods of evolution process simply by examining the surviving structures without an assumption of the type a priori. Thus, the house constructed in the period of homogeneous urban values should be read as an accumulation of common norms with respect to physical setting, construction and internal organization. The analysis would then enable us to retrace the broken linkage in this continuity of values.

As mentioned earlier, Suzhou city is an integration of the classical principles of walled enclosure, axiality, N-S orientation, layers and hierarchy, adopted to the natural environs of watercourses. When applied at the micro scale of a house, these principles have molded the base type of jin, a south-facing house with an enclosed front court accessed in the middle. This base type then changed and evolved into house forms in a serial way of longitudinal extensions up to a maximum of 60m; further lateral aggregation occurred when the adjoining lots were combined. When the base type is examined in the context, it is interesting to find that three modes of mutations have evolved as a result of its correlation with the canals. These mutations exist not just within the city proper, but also in towns around Suzhou. This once again reinforces the notion that continuity of type exists in time and space of a traditional Chinese society.
Evolution of the House

• **Base Type House**
  A generic type of dwelling--basic module of 4m in width and 6m in length including a courtyard of 2m in depth.

• **L-plan House**
  In the situation along the lateral matrix of canals, due to the pragmatic reasons of site restriction and direct access to the canals, the house evolved into an L-plan house with an entrance at one side of the front court, yet facing south.

• **Canal-shophouse**
  A mutation along the narrow strip of land between a canal and a commercial street. In order to maximize frontage, the ground is dedicated to shopping and first floor to living. In this case the south facing principle is kept for the living quarters only.

• **Shophouse**
  A balance form of mutation in combining the shop in the front and keeping the residence behind the courtyard. Due to its adaptability and extendibility, the house becomes the current type in the urban area of Suzhou.
The Values
The study above is definitely far from comprehensive, but is intended to provide an initial step in understanding the city of Suzhou through a typological analysis. Within the limit of information available, the evolution of the city in the scales of territory, town, ensemble and house is retraced throughout periods of dramatic changes.

In tracing out these changes, it is noticed that there are some qualities both tangible and intangible lost and should be rediscovered so as to restore the collective memory of Suzhou. The most important of these are:

- the human scales of the construction,
- the correlation with the waterways,
- the scenic meaning of the urban setting, and
- the collective activities of the inhabitants.

If these urban values of the city should have been appreciated earlier, the heritage of Suzhou would prevail and survive as part of the daily life up to the present moment. So in understanding the typological process of Suzhou it is hoped to restore or even to restructure these values in a way of contextual preservation.

Besides the physical overlays of architecture and urban design, in Chinese cities the cultural overlay through the media of literature, painting, and traditional rituals has an immanent effect on molding and perceiving the city. Although this issue of cultural overlay is not addressed in this section, that would become the emphasis of the next phase of the study in which the result of the formal analysis would be integrated with the subjective perception of urbanity in formulating a strategy of memory for Suzhou.
Throughout the 2,500 years of history, Suzhou has organically been formed by a continuous process of managing, utilizing and planning the waterbodies. In this process, the water system has evolved to be an important issue of Suzhou culture and has composed a unique waterscape. The beauty of the town lays in shaping the nature with human efforts with that an intimacy and harmony are established in the relationship between water, the city and the people.

In many historical towns of China and of the other continents, there are histories and problems related to the water systems. Water systems, to a large extent, has influenced and determined the site selection, overall planning, functional allocation, traffic organization, street layout, urban architecture, infrastructure, landscape and urban environment; so to study the urban water system has a practical significance in the preservation and development of the waterborne towns in China, and in this way the heritage of urban water culture, water environment, water transport, waterscape, water town landscape can be kept and flourished as well in the long run of the modernization process.

In this section, it is going to investigate the urban and architectural vocabulary of a Chinese water town in a systematic way from the territory to the urban element and architectural expression; as most of them are still valid in meeting the social, cultural and environment needs of the contemporary living, so the result of this typological analysis would assist in bringing back the lost consciousness of this water town.
**Water and the Territory**

In history, the territory of Suzhou city was

"connecting by 3 rivers, 5 lakes and the sea, on which are villages, paths, and fertile plains; amidst the bays and ponds are the paddy fields, on which are water towns of agriculture and fishery."

The territory was a picture composed of the beauties of both rural and urban landscapes. The main component of the urban landscape was "water." Now, Suzhou city is still surrounded by lakes, penetrated by streams. In the territory of various waterbodies, being passed by the Grand Canal, its periphery encircled by the moats, packed with greenery, regulated by the grid of canal system, Suzhou has a complete waterway network. Axial reference of the natural order includes the embracement of Taihu Lake, the rectangular intersection of Luo River and Wuchun River; plus the artificial order of the Grand Canal passing the west side, Xu Canal connecting Taihu Lake and the city.

The territory is perfectly matching with the natural landscape that provides a backdrop for the ancient city and gives a strong character to the urban environment as well. As a famous Sung poet, Su Shunyum, once recited,

"the green willows and the white storks have their leisure; the waters nearby and the mountains afar have their feelings,"

the amazing character of the urban space within the waterscape is vividly outlined. "*The waters nearby*" is a general term of the lakes in the vicinity and the canal networks flowing in all directions in the old city. "The mountains afar" are the mountains to the west and southwest of the city (in Suzhou, there is an old saying of "from the west is the beauty of mountains."). The phrases have subtly concluded the subjective meanings embedded in the planning of the urban environment.
Fields and Waterbodies

1. Taihu Lake,
2. Grand Canal from Beijing,
3. Luo River to Yangtze River,
4. Wuchun River to Shanghai,
5. Grand Canal to Hangzhou,
6. Xu Canal

The shore of Taihu Lake
A village along Luo River
Water and the City

In Southern China, many cities and towns were shaped naturally by the waterbodies, except Suzhou where most of the waterways were artificially made and well planned with a high density and extensive coverage. The tartan grid of canals and streets had created a waterscape of much beauty and intimacy that was rarely found in the urban history of the world. These good urban qualities were mainly due to the urban design fully considering the properties of water in irrigation, navigation, and creating habitat. Built upon the natural waterways, the moats and canals formed had completed the navigation network in the vicinity, and the waterway system was perfected by the well-organized canal system within the city walls. In this way, the canals and waterways were interconnected with the old city as the nucleus of the overall network. The design thus followed the theory of waterworks mentioned in Guanzi that goes,

"The wise man builds the city upon a flat piece of fertile land surrounded by hills, accessed by rivers; whenever there are floods, water can be drained easily inside the city; ..... wherever above water level, make channels; wherever below water level, build dams."

The water network of the city was composed of artificial canals, grid pattern waterways, two moats sandwiching the city walls and 8 gateways of both water and land accesses. With a strong historical reference to the grid-iron plan in Western Zhou Dynasty, 11th century BC, this layout was a creative interpretation in planning a water city. The urban design was embarked on a web of waterways from where canals formed a skeleton aligned by parallel streets, i.e. "water and land adjoin; canals and streets parallel," and a tartan grid of water-land access became the urban framework.

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1 A classical book on the management of the country, written in the 4th century, BC.
Although the urban skeleton was built upon the canals, recent urban development has largely ignored this order and many of them were eradicated. The surviving 3 longitudinal and 3 latitudinal canals are under-utilized as the water transportation system and their tradition scales to the houses and streets were largely distorted:

**longitudinal canals**--
1. Scholar’s Canal, near the west city wall partly demolished,
2. Lindun Canal, the eastern edge widened for vehicular traffic,
3. Pingjiang Canal, well preserved;

**latitudinal canals**--
- a. Beisi Canal, well preserved,
- b. Ganjiang Canal, rebuilt, becoming a 'ditch' sandwiched by two highways,
- c. Daoqian Canal, the northern edge widened for vehicular traffic.
In Suzhou, the urban artifacts basically include pagodas, temples, gates, gardens and bridges. In the past, all of them were linked and closely related to the canals. In Sung Dynasty, Suzhou had 139 temples whose architectural layout and styles had deeply shaped the urban scene, in particular, their integration with water. From the Pingjiang Map, all temples were built along the canals and bounded by water, e.g. Baoyun Temple, Lunren Temple. The gates of Suzhou city were constructed corresponding to the flows of waterways and accessed through water-gates, e.g. Panmen Gate. The pagodas, usually located within the temples give visual reference and stand as landmarks in the city. These urban artifacts together with the gardens, over the years, are surviving as monuments that provide another dimension of time to Suzhou.
Urban artifacts that used to be accessed via the canals are mostly being isolated when the canals were filled or disconnected. Protected by the government as individual elements of particular historical or touristic interest in Suzhou, though located at some strategic locations, most of them are not actively involved into the daily patterns of the local people and their urban values are fading out:

1. **Tiger Hill**—a historical site over 2,000 years at the end of Hillside Canal outside the old city, its eroded leaning pagoda being the highest point in the vicinity presents an enigmatic presence of the aged glory;

2. **Xuanmiao Temple**—a Taoist temple dated back to 276 AD, demolished and rebuilt several times, still surviving as a living religious precinct amidst the commercial area of Guanqian Street;

3. **Panmen Gate**—a tourist attraction at the SW corner of the old city, the only surviving gate with both land- & water-accesses.
**Water and the Urban Fabrics**

The tartan grid layout has in general shaped the characters of the urban space in Suzhou. The web of longitudinal and latitudinal canals is integrated with residential neighborhoods, thus generating the basic urban space in the city—water lane. Water lanes are communal spaces of the residents, and function as the intimate living environment between people and the water system. People can conveniently use and touch water while the buildings can be built along the canals; the inhabitants can walk leisurely along the canals and the water lanes or overlook the lanes on the bridges. Water lanes can reflect the living patterns and vitality of the neighborhoods.

In Tang Dynasty, Suzhou city was subdivided into 60 residential neighborhoods (*fong*), and in Sung Dynasty, there were 65 *fongs*, mostly in the planning mode of ‘front-street-rear-canal.’ Each water lane in the ‘front-street-rear-canal’ neighborhood is composed of a portion of canal and a parallel lane, with the same length as that of the *fong*. Generally the length ranges from 200 to 400m, and along the lanes are residential houses, sometimes with shops, workshops or temples. Bridges are framing the water lanes at the two ends, or occasionally in the middle. When two accesses, either canals or streets, cross, a public social space is shaped.

In this sense, the major paths are the waterways through the water-gates, e.g. Hillside Canal via Changmen Gate, Xu Canal via Xumen Gate and the Grand Canal via Panmen Gate. Within the city proper, the urban fabrics are organized along the main 3 longitudinal and 3 latitudinal canals, the matrix, that lead to the implants, the water lanes, which, in turn, are enveloped by the urban settings of parallel streets, bridges, memorial gateways, water architecture, urban furniture, paving and trees.
"Small bridges, flowing brooks and dwelling houses"--the picturesque townscape of water town--is composed by the water lanes in harmony with the daily livelihood. The typical urban quarters in Suzhou are the rectangular residential blocks which are formed by two N-S running canals and two W-E running parallel water lanes.

△ Pingjiang District at the NE part of the old city is the most well preserved neighborhood which still maintains the original layout since Sung Dynasty, the 13th century, AD. The district grows upon an orderly structure of parallel canals that penetrate into the neighborhood as means of access and environmental modulators. The urban quarter is arranged serially by residential blocks measured 350m in width and 70m-110m in length.

Roofscape of urban quarters
A 'front-street-rear-canal' water lane
Having a typical arrangement of "front-street-rear-canal", these blocks are accessed by both streets and canals. The serial pattern in the layout of these blocks holds a consistent order as that of the city at large—the double checker grid of streets and canals. While the canals are the main routes to the neighborhood, the streets provide secondary access to groups of houses and tertiary lanes, 'long', some of which with covers, lead into the houses. The blocks being serially juxtaposed by long courtyard houses with minimal frontage from 4m to 6m and maximum depth up to 60m, are accented with communal spaces at the junctions of the canals and streets with imaginative setting between water and land. With the same division pattern, special buildings, like opera houses and gardens, exist as agglomerations of individual housing modules.
Urban Spines and Canals

The 3 longitudinal and 3 latitudinal canals are the major urban spines inside the old city and the 2 extension canals to Tiger Hill and Hanshan Temple are spines connecting a number of scenic spots in a more leisure setting. Along these spines, houses, temples, and other urban artifacts are orchestrated into a coherent urban logic with the water space. The intimate scales of the streets along these canals give the urban space of Suzhou a particular local flavor and their rhythmic variations imply the changes in use and direction:

a. width between two rows of overlooking 2-story houses is 5m;
b. close transitional space between walls is 2m wide;
c. communal space is 10m wide;
d. open transitional space to other streets is 8m wide.

A street between two rows of houses
A street corner to a lane
Enriched by the flowing water, the boats, the willows and the people's activities, these urban spines of canals reveal a spectrum of the water culture into readable sequences. At the junctions of the canals where people meet and communicate, the steps, bridges, pavilions become social places of the local residents. Boats embark along the steps, the elderly takes rest on the balustrades, neighborhood shops and workshops are clustered around the corners. Without any formal urban setting of facade and piazza, these nodal points where land and water meet, become a stage for the daily performance of the neighborhood. The polarity of these local nodes not just attracts activities, but also interlocks the canals and the surrounding streets into a multi-level communal space.

Junction of Pingjiang Canal and Wu Xiangshi Lane
Junction of Pingjiang Canal and Da Liuzhi Lane
Instead of large scale public square, there are small scale squares integrated with the canals. Functionally, they can be divided into two types: market squares, and entrance squares. In terms of layout, they have 5 basic variations:

1. **Internal square**—a market square with shophouses around it, e.g. the square in front of Xuanmiao Temple;

2. **Along-street square**—an entrance square defined by walls at four sides with entrance wall abutting the street, e.g. the entrance square of Zhuozheng Garden;

3. **Along-canal square**—a hybrid between market and entrance squares, visually including the enclosure beyond the canal, e.g. pier landings along Hillside Canal;

4. **Around-bridge square**—a market square formed by shophouses and dwellings around the bridges;

5. **Along-street-canal square**—an entrance square, it is formed by buildings around and a reflection wall, ‘zhaobi’, at relative locations, e.g. entrance to Tiger Hill.
When the two grids of canals and streets intermingle, there exists a variety of water lanes with interesting sections between land and water. Among these spaces, there are 3 basic relationships between canals, streets and houses:

1. **one-canal-one-street water lanes**—on one side of a canal is a street and on the other are houses. Across the section, there is a spatial hierarchy of low, medium and high spaces; with a multitude of variations on plans, elevations, sections, and roofscapes, plus the relative scales of canals, streets, houses, and bridges, all add together to compose a lively and decent spatial silhouette. As Suzhou has neighborhoods mostly of the type "front-street-rear-canal," this type of water lanes has the most morphological variations.

2. **one-canal-no-street water lanes**—in the middle is a canal with houses along the two sides. Within this spatial arrangement, due to the
houses enveloping both sides of the canals, the narrower space gives a sense of depth and serenity. The first impression in the water lanes is enclosed, and due to the variations in elevation treatments, balconies, building heights, steps, piers, balusters and plantings, the space is gradually animated and enlivened, as described by Xu Yaujing in Ming Dynasty, "ups and downs are pavilions and platforms within the misty lanes; backs and frogs are boats and rafts on the milky waters."

3. one-canal-two-street water lanes--a canal in the middle sandwiched by a pair of parallel streets with houses along the two sides. The scale is bigger in this type of water lanes. Due to the flows of water, and the distinction between the upper banks of a higher elevation with a wider street and lower banks, the overall width of the street and the canal still maintains a decent spatial intimacy among the low-rise houses on both sides.
Water and the Houses

Inside Suzhou city, the orderly yet artistically arranged buildings along the canals are not deliberately designed by artists and poets, but mainly dictated by the canal system and the living patterns. In the front-street-rear-canal arrangement of neighborhoods, every household in the dwelling houses can be accessed by either a canal or a street. In this organic integration of canals and houses, water is "supplied day and night," and at high tides, in all seasons the residents can buy fresh vegetables, fruits, fishes, rice and daily necessities simply by shopping through their windows from the vendors on boats. Moreover, the canals provide lots of life to the inhabitants; they can enjoy the "views over all windows," walk along the canals with leisure, relieve psychologically in the lively water environment.

Among the shophouses, teahouses and restaurants are the most common; the majority of them are built along the canals towards which are frontages punctuated with jetties and balconies, and their interiors decorated with calligraphy and paintings. In the past, the tea was cooked in the pleasant environment facing the canals. This picturesque waterscape had lured Bai Juyi even in his dreams when he was working in Yangzhou,

"In the hotel of Yangzhou I dreamed about Suzhou, dreaming about its delicate bridges and water terraces."

Gusu Hotel of Ming Dynasty, once a compound of restaurants adjoining the canals, was demolished, but on the stone pillars of its remaining pavilion there engraved a lyric,

"The guests come and cook tea that they have to host themselves for the moment; the lanterns are raised to wait for the moon and the post pavilion is reflected at a distance on Xu River."

It presents a coherent picture of the harmony between the teahouses and the canals.

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2 A prefectural governor of Suzhou in Tang Dynasty.
Formation of the House

1. A dwelling house is firstly built at the front part of the lot from the basic type of jin, a south-facing house with an enclosed front court.
2. When the house expands longitudinally towards the canal at the back, besides the formal entrance through the central axis, a long service lane at the side, 'long', provides informal and direct through access from the implant street in the front to the rear canal.
3. Further transverse expansion towards the adjoining lot starts from an additional single unit house connected to the old house via a covered lane, 'beilong'.
4. When the house is further developed, the pertinence at the back of the adjoining is absorbed into the house compound, sometimes left open as a private garden; thus a new type, merchant house, is formed.
5. A variation of this evolution is the transverse subdivision of ownership that develops into a type for working class.
Since Sung Dynasty, in the towns and cities of China, shophouse being a typical mode of urban dwelling combining both traditional commercial and residential activities under the same roof, addresses itself as an important house type in Suzhou.

A simple shophouse can physically be divided into basic components of: main house, subsidiary house, and courtyard. Functionally, the most primitive components include: parlor, passage, and lightwell.

The main house contains spatial elements of shop, parlor, room, arcade, and the subsidiary house includes kitchen, passage, laundry, while the courtyard comprises of garden, service parts. Corresponding to each of these elements is the spatial character of a particular social content, including commercial space, ceremonial space, living space and transition space. The meanings of these spaces are dedicated accordingly with their nature.
The Merchant House
In the houses of Suzhou, the courtyard is the basic spatial element for transitional purpose as well as a definition of social hierarchy. Interplayed with the pavilions, the courtyards give a sense of layering and a progression of privacy along the axis of the long merchant house. Defined by the brick walls at two sides, the timber-framed pavilions provide shelter for the daily activities in a sequence as follows:

- Water access via the canal,
- Land access via the street,
- Commercial activities at the entrance pavilion,
- Social activities at the guest pavilion,
- Family gathering at the main pavilion,
- House master living at the 2-story secondary pavilion,
- Family living at the 2-story tertiary pavilion,
- Servant living, laundry and kitchen at the back pavilion,
- Service access directly from the rear canal.

An entrance courtyard
**Water and the Urban Features**

In Suzhou, the interactions between the people and the canals are enhanced by a whole set of urban features. They provide different means for the people’s active involvement with water at a human scale. These features are not designed by urban designers or architects, but simply a crystallization of the behavioral patterns of the inhabitants over the years. The functional aspects of these elements are well incorporated into the aesthetic consideration; so the bridges providing access over the water lanes give depth to the linear space, the pier steps leading to the canals shape the water edges with a multitude of levels, the willows giving shades to the pedestrians soften the building edges, and the boats carrying goods and people enliven the neighborhoods with a dynamic quality, all add together to compose a poetic scene with practical rationales.

The most common artificial features of bridges, memorial gateways, pier steps and water wells, despite their functional and aesthetic values, are embodying a rich volume of historical references, and the combination of these features has created a unique set of imaginative urban syntax of the Chinese water town.

From an extensive scale of territorial waterbodies to an intimate scale of urban furniture, the consistency in the idea of attaining a harmony between the people and water has created a symbiotic relationship between the physical design of the urban features and the users. If these urban features were taken out of the context, the flavor of the water lanes would deteriorate into one of stale ditches. So in making a strategy of memory in Suzhou, particular attention should be paid to use these features in modulating the overall system into comprehensible ‘idioms’ of human scale.
Bridges with canals have presented the most typical picture of waterscape and the basic contents of the water culture in Suzhou. In the old city of Suzhou, there are numerous bridges. In Tang Dynasty, there were more than 300 bridges, 314 in Sung Dynasty, 340 in Ming Dynasty, 308 in late Qing Dynasty and 164 at present. The oldest surviving bridges were constructed in Sung Dynasty while most of the others in Ming and Qing Dynasties. The bridges are small, light, and elegant whereas some big bridges have deep arches with gentle curves. Besides the general form, there are pavilion-bridges, and gallery-bridges. "Bridges are seen from four directions with multiple dimensions."3 These bridges in different forms and scales have enriched the visual quality of the town and provided different points of vistas.

Tonggui Bridge and Puji Bridge

3 A poet by Bai Juyi of Tang Dynasty
The distribution and combination of bridges within the canal system are considered to be accents in the urban spaces. According to the traffic patterns, locations, elevations and aesthetics, the bridges are shaped with different heights and arranged in different combinations with the canals. From a single bridge spanning across the canal, to twin bridges, to 3-, 4-, and 5-bridge combinations, the integral arrangements have not only fulfilled the traffic requirement, but also generated a unique spatial quality in the townscape of Suzhou. Bridges are meeting points and foci of water and land traffics, and are activity centers of people as well, so piers, rear landings, teahouses and restaurants are always coexisting with some bridges to attract more customers in the lively settings.

Different combinations of bridges in the Pingjiang Map
Twin bridges-Wumen Bridge and Watergate Bridge
Because of the tartan urban grid, there are many bridges located near by the stone gateways, thus defining entrances to the fong—a neighborhood community. In Sung Dynasty, Suzhou city had about 65 memorial gateways, 57 of which were either guarding or adjoining the bridges; the integral spatial entity of bridges, gateways and canals has become a spatial character in the urban art of Suzhou. Also, these urban features of Suzhou have embedded the local history of the fong. Their forms, names, engravings and decorations have made them more than merely civil constructions, but a coherent heritage of sculptural and public art in Suzhou.

Definition of fongs by different locations of bridges in the Pingjiang Map
A gateway near Changmen Gate
A gateway leading to a fong along Yejia Canal
Between the streets and the canals, the lateral edges between the land and the water are defined by banks made of stone blocks. These granite blocks are of common size of 150 x 300 x 900 mm arranged in an interlocking manner. To maximize the usable space, these edges are mostly straight, and occasionally curve to allow the embarkment of the boats. Usually without balustrades, these edges are designed to allow direct visual contact with the water. Whenever necessary, pier steps are dotted along to allow direct access to the canals. To meet the functional requirements, these steps take a variation of forms: extrusion, recess, half-recess-half-extrusion, semi-circular, rectangular, single parallel, single perpendicular, double parallel, double perpendicular.

The multitude of these edge conditions have enriched the spatial variation of the canals and provided platforms for the people to perform their daily activities.
Private Edges of the Canals

In the ‘front-street-rear-canal’ residential neighborhoods, the service areas of the houses are adjoining the private edges of the canals. While the public edges of the canals provide indirect water access to the front entrance, the private edges are directly linked to the water and most of them are integrated with the house design. The pier steps become the end of the service lane, *beilong*, or part of the service areas where housewives clean the utensils, wash clothes and shop directly from the vendors on boats.

Smaller in scale, these private pier steps are either covered within the building envelops or cantilevered from the building edges. With an addition of simple sheds, some of them are modified now into open kitchens or laundry areas. Imaginative adaptation and encroachment of these building envelops have given the private edges a unique character inseparable between water and land.
In layouts other than ‘front-street-rear-canal’, houses whose front entrances are directly accessed from the canals, have edge treatments radically different from those accessed from the rear canals. In general, the axiality is still maintained with slight modifications to accommodate the pier steps and space to park the boats.

With a grander scale, usually located in the middle of the 3-bay houses, the pier steps are mostly integrated as part of the entrance porches. This type of private entrances is found in merchant houses, institutional buildings and restaurants where a distinctive image is essential. Sometimes, the landing platforms are emphasized as waiting areas by extending artistic balustrades along the water edges and recessing the entrance doors back into the buildings.

An asymmetrical entrance
Private Edges of the Streets

In order to maximize the usable spaces, the houses are designed to extend their coverage not only along the canals, but also along the street frontage. Particularly in the shophouses, to provide shelter and maximize covered usable space, the edges along the streets are subtly delineated with cantilevered jetties on the first floor:

1. Cantilever box—under the eaves, enclosed towards the street but open to the interiors (2,3),
2. Cantilever balcony—beyond the windows, a balustraded platform of width 500-600 mm, 1m above the floor (1,4,7,8),
3. Cantilever window—similar to the cantilever balcony, but with windows located along the outer edge (5,6),
4. Cantilever floor—usable floor extended over the ground floor alignment and supported by beams spanning across two gable walls (9).

For further extension, the floor is supported by colonnaded arcades.
Most of the houses facing the streets have front entrances composed of movable wooden panels between two brick gable walls or two white-washed walls in the case of a 3-bay house. The wooden panels of the front entrance are mostly movable and demountable to provide flexibility of different degrees of exposure and width of access. Designed in modules and perforated with articulated patterns, the panels provide a semi-transparent barrier between indoor and outdoor spaces. Together with the outlines of the gable walls and the stepping stones, variations of sections along the street edges are found.
In the neighborhood structure, where two streets intersect or at the junctions between streets and small lanes, the street corners are commonly punctuated with special urban features related to the daily life of the people, e.g. the water wells, refuse collection points, public toilets, and narrow steps between buildings leading to the canals. The varieties of these pocket spaces enrich the spatial quality of the streets and provide identity to the neighborhoods as well. In Suzhou, some of the surviving water wells can be dated back to Sung Dynasty, and, morphologically, these wells exist along the widened linear lanes, at L-junctions, T-junctions and cross-junctions. Besides their functions of supplying water and providing meeting places, they are essential in anchoring the fine-grain divisions of the streets and giving a reference of human scale.

Narrow steps leading to the canal
A water well along Scholar’s Street
In a water town, like Suzhou, the canals have generated a set of urban furniture, the designs of which are commonly making use of the level difference between the streets and the canals:

1. 'Beauty’s lean’ provides an in between space of water and land for resting.
2. Wastes collection funnel collects the wastes onto boats which, in turn, discharge the wastes onto fields as fertilizers.
4. Stone balustrades are found near piers, but for most edges, there is no balustrade.
In Suzhou the boats were the major traffic means in the past, and have potentials to resume their significance in the intra-city water traffic in the near future. Operated manually or partly by propellers, the boats can navigate through the canals as a means of traffic and mobile shops. Shaped by the functional requirements, most of them are covered with movable canvas shelters and flat platforms at both ends. Besides the wooden boats, since the 60s there have been light-weight concrete boats made in the traditional forms.

A concrete boat to carry wastes
A wooden boat with fixed chamber
ACTIVITY

With the belief that a city should speak of its time and culture, the studies of the act of living and the act of city making become inseparable. In view of achieving an adaptive and integral growth of an old community of Suzhou which has been released from its past constraints but is still attaching to its cultural root, an understanding of the cultural idioms, livelihood and habits of the people is essential in projecting a new set of paradigms. When we look at the traditional activities and festivals taking place around the year, it is noticed that these activities relating to the seasons and the spirit of traditions, rely much on the urban structure from landscapes, temples, streets, canals, to houses. Incorporating these activities into the strategy of memory are essential in continuing a coherent society with historical relevance.

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Place</th>
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<tbody>
<tr>
<td>Jan 1</td>
<td>family gathering</td>
<td>neighborhood, home</td>
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<tr>
<td>Jan 5</td>
<td>praising ‘wealth’ god</td>
<td>shop, home</td>
</tr>
<tr>
<td>Jan 15</td>
<td>Lantern Festival</td>
<td>street, market, home</td>
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<tr>
<td>Feb 12</td>
<td>Flower Festival</td>
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<td>Mar 3</td>
<td>Shangmian Festival</td>
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<td>early April</td>
<td>Qingming Festival, hiking</td>
<td>cemetery, outskirts</td>
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<tr>
<td>late April</td>
<td>ancestral worship</td>
<td>home</td>
</tr>
<tr>
<td>May 5</td>
<td>Dragon-boat Festival, crewing</td>
<td>home, river</td>
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<td>Jun 6</td>
<td>sun-drying</td>
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<td>July 7</td>
<td>Begging-skill Festival</td>
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<tr>
<td>Aug 15</td>
<td>Mid-autumn Festival</td>
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<tr>
<td>Sep 9</td>
<td>Zhongyang Festival, hiking</td>
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<tr>
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</tr>
<tr>
<td>late Dec</td>
<td>New Year preparation</td>
<td>shop, home</td>
</tr>
</tbody>
</table>

* The time is measured in Lunar Calendar
Besides the relationship between the activities and the places, that between the activities and the local people is critical in understanding how the places are being use and in which way they can be improved and modified to enhance certain mode of activities in formulating the strategy.

Commercial Activities--Focusing around the pedestrianized street of Guanqing Street, commercial activities of urban scale involve the trades of silk garments, clothing, and daily commodities. Along Scholar’s Street, there are chains of small antiques shops. Near Panmen, there are wholesale vegetable and food markets, while other retails and local markets are taking place along small streets and lanes where the shops are much embellished via direct display of the items.

Manufacturing Activities--Around Changmen and Jinmen Gates, retails shops selling arts and crafts items with their workshops directly in the shops or attached at the back of the houses are presenting a vibrant and diversified streetscapes of these areas. In some water lanes of local neighborhoods, workshops of bamboo crafts, metal utensils are still surviving and unpretentiously making living for a large amount of local population.

Cultural Activities--Scattered around the city are studios of embroidery, engraving, painting, calligraphy, and some traditional arts and crafts; some of them are located within converted historical buildings while the others are located in the artists’ apartments. In addition to the physical set up for these cultural activities, there are lots of festival performances, e.g. procession from Daoqing Street to Changmen Gate and ad-hoc activities, like outdoor painting practices by students around areas with poetic setting, e.g. Hillside Canal, Panmen Gate, and Maple Bridge Canal.
After analyzing the city of Suzhou in terms of time, place and people, the phenomenon of the water city is understood in narratives. The distillation of these narratives through the basic principles of permanence, change and reference, would deduce the unique guidelines upon which the hypothesis of historical contextualism can rebuild a model of interpretative interventions. These interventions with a clear design intention would generate a strategy of memory for Suzhou.

The Basic Principles

**Principle of Permanence—Continuity of Genius Loci**

With a notion that contextual preservation plays the role to continue the distinctive historical character of the old city, a character that survives these processes of change irrespective of time, so to respect history, the act is not simply to preserve or reconstruct old things as they were but to reinterpret and re-express the ideals of the past in the light of today.

It is noticed that the waterways play an important role in giving the unique character and anchoring the urban fabrics of Suzhou. As in the course of history of the city, the buildings and other physical structures had more than once been destroyed and rebuilt, only the canals remain basically intact as a famous Chinese historian, Gu Jiegang, explained,

"Suzhou city is the oldest city in China since the period of Chunqiu, the reason that it remains unchanged over such a long time is the canal system;"

so conserving the canals, utilizing and further developing them would be the act in continuing the genius loci of Suzhou.

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1 About 500 BC when China was occupied by several states.
**Principle of Change--Creation of Places**
With a concept of evolution, the physical form of a city, even that of a historical town, is constantly changing with a conscious will of selection. In this sense, new places are found within the old fabrics with growth that is sustainable. The mutation brought by exogenous influences would be absorbed in the local context, gradually adapted and changed into a hybrid existence that would quote the cultural idioms into its natural expression.

In the old neighborhoods of Suzhou, like Pingjiang District, the impact of modernization and the social restructuring of families from extended to nuclear have pressed the old houses to be upgraded and reorganized. However, with this concept of change, as the building type is evolving along the cultural traits of the water town, the new places of modified functions along the water lanes would reinforce the human scale and communal sense of the neighborhoods.

**Principle of Reference--Rediscovery of Urban Values**
In locating the preservation act in time and in space, the urban artifacts should provide perceptive reference as a link of the culture and a landmark of the district for the people. The reference being an abbreviation of the urban meaning would guide the people navigating along the time stream.

As the term “city” in Chinese literally means a walled town, on the cognitive level, the coherence of the old city of Suzhou relies much on the completeness of its city walls. In addition, the people always associate the prosperity of Suzhou with the commercial activities along the city walls between Xumen Gate and Changmen Gate. Thus, the restoration of the city walls with a new interpretative meaning other than the original defensive purpose would be a rediscovery of urban values in the present context.
The Preservation Guidelines

Having a belief in transformation and appreciation of subjective expression in the city, the general preservation guidelines are formulated as follows:

1. **Dynamic Evolution**--'Cultural heritage', generally designated as the possessions and values inherited from the past in the form of monuments, architecture, urban or rural structures, art objects, oral traditions and languages, constitutes a historic support and an integral part of the present life of the city. This vast legacy is not only a living reminder of historical evolution in the retrospective sense of the past, but is above all a dynamic and active part of daily life in the present, e.g. the canals should be used in the transportation system.

2. **Integral Creation**--Patrimony demands respect and admiration, but should also constitute an example and a stimulus to urban growth and creative innovations which, in turn, can be transmitted to a coherent future. Therefore, the past presents itself not in strata, but as a unity composed of elements or parts from different periods, each contributing to the making of a unique history, e.g. the city walls should present a continuous spectrum of age marks and demonstrate the possibility of accommodating innovative adaptation;

3. **Urban Coherence**--The preservation of architectural and urban heritage should be extended beyond individual monuments of historical values. Indeed, many are simple pieces of architecture of an erudite, vernacular and regional character which do not constitute exceptional landmarks but may be included in a larger system of collective environmental value. In this case, the notion of the urban and environmental complex operates as the most important quality, the value of
which resides more in the complex as a whole than in the component individual buildings. The latter must be understood and preserved in a system of relation and accompaniment where they will create a specific and original atmosphere, e.g. in the historical Pingjiang District, the urban values should depend on the overall neighborhood structure rather than individual houses;

4. **Imagery Reference**--In an urban context, in addition to the environmental value, some buildings are above all reference points in the image and streets of the city, imposing themselves as an urban value. In the case of museums and cultural centers, the buildings may acquire an essentially cultural value while pagodas and temples may acquire an emblematic function in the religious universe, e.g. the pagodas on Tiger Hill, in Beisi Temple, and Twin Pagoda Temple should form a visual correlation with the other specific buildings along the urban itineraries;

5. **Economic Adaptation**--In addition to the cultural and existential considerations, a possible economic importance should be considered resulting from the re-utilization of the buildings and the enhancement of the urban cultural patrimony in general. In this manner, only active conservation will permit the integration of the patrimony in the life and culture of the present. To conserve a building or complex by merely rehabilitating its physical characteristics and excluding utilization and possible adjustments to new functions implies a minimal historical value and a museum future, e.g. the restored individual merchant houses and rows of shophouses should be adapted as guest houses and commercial streets respectively.
The Interventions

Basic Concept
The project is intended to re-establish the role of the historical city of Suzhou as a traditional center through a strategy of memory amidst the rapid growing economy in Southern China. The task is rather different from revitalizing a single building, thus urban considerations of human activities, social conditions and environmental characteristics are emphasized. The main issue of the contextual preservation falls on the integrity of traditional context and contemporary requirements in both services and functions. Because the living conditions of contemporary city life are, to a large extent, different from the traditional ones, in the process of extracting, then distilling the essence of the water town, the content instead of the form, the spirit instead of the envelope are being abstracted and re-applied in the intervention strategy, i.e. "to carry on" the consciousness of the city of being a cultural water town with immense commercial vitality.

Design Intention
A work of urban reconstruction, part building part service, an in-fill project and a link to history, embracing utopia and nostalgia, a breakthrough and an art of memory, the design is intended to articulate the architecture and the city by paradoxically proposing itself as a work of continuity and discontinuity in the long and patient process of evolution towards a balanced existence of a historical town in modern China. Through an appreciation of the traditional form and the local urban and architectural language, the proposal is a manifestation of rebuilding a lost memory along the trails of the fragmented narratives. Consequently, the design solution would be the every model that precedes the similar problem of tradition in other Chinese historical cities.
**Design Guidelines**

Following the basic principles and preservation guidelines, the proposal is comprised of the design guidelines at two levels of urban design and architecture:

**Urban Intervention**--
- reviving the historical waterscapes of the old town to further develop the urban significance of the canal network;
- upgrading existing environment to suit modern requirement;
- restoring the city walls to perform a new role in the mutated urban setting;
- connecting the urban artifacts, activities nodes and the neighboring districts, so to integrate the urban design framework as a whole.

**Architectural Intervention**--
- maximizing the commercial potentials through a reinforcement of human interaction;
- promoting the cultural life by the stimulus of tourism and encouraging local tradition;
- adapting the historical patrimony with utilization purpose;
- improving the residential dwellings through self-regeneration process of matrix growth.

These main design guidelines with their corresponding design principles and objectives are summarized with a framework of strategy as shown in the following table:
<table>
<thead>
<tr>
<th>INTERVENTION</th>
<th>DESIGN PRINCIPLE</th>
<th>OBJECTIVE</th>
<th>STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Urban Intervention</strong></td>
<td></td>
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</tr>
<tr>
<td>a) reviving the historical waterscapes of the old town to further develop the urban significance of the canal network</td>
<td>1) habitable water environment</td>
<td>- to clear up the canal</td>
<td>- uprooting the pollution sources from industries and inconsiderate households</td>
</tr>
<tr>
<td></td>
<td>2) historical water scenic point</td>
<td>- to resume the visual coherence of the waterscape</td>
<td>- correlating water scenes along the canals into groups, according to their location</td>
</tr>
<tr>
<td></td>
<td>3) memorable waterscape</td>
<td>- to maintain spatial relationship and scale of the canals</td>
<td>- controlling heights, volumes of the new buildings along the shores</td>
</tr>
<tr>
<td></td>
<td>4) canal tourist trail</td>
<td>- to promote the cultural image of the historical town</td>
<td>- rehabilitating old structures along the canals</td>
</tr>
<tr>
<td></td>
<td>5) water-born shophouse</td>
<td>- to stimulate vibrant water commerce</td>
<td>- dedicating areas for water flea market</td>
</tr>
<tr>
<td></td>
<td>6) 'new' water lanes</td>
<td>- to resume the urban significance of canals</td>
<td>- recovering the quantity of canals up to 60 km</td>
</tr>
<tr>
<td>b) upgrading existing environment to suit modern requirement</td>
<td>1) identifiable neighborhood</td>
<td>- to identify neighborhood for the setting up of growth matrix</td>
<td>- designing entrance and upgrading the historical buildings</td>
</tr>
<tr>
<td></td>
<td>2) heart of community</td>
<td>- to give a place of communication</td>
<td>- locating community facilities around intersections of water lanes</td>
</tr>
<tr>
<td></td>
<td>3) self-control committee</td>
<td>- to control illegal buildings, irregular growth of activities</td>
<td>- setting up local control group to supervise and execute</td>
</tr>
<tr>
<td></td>
<td>4) increase open space</td>
<td>- to promote more interaction</td>
<td>- using incentive zones, removal of obstructive buildings</td>
</tr>
<tr>
<td></td>
<td>5) identifiable entrance</td>
<td>- to generate harmonic atmosphere among subdivision group</td>
<td>- unifying character among individual lanes</td>
</tr>
<tr>
<td></td>
<td>6) refuse classifying</td>
<td>- to improve the hygienic condition</td>
<td>- setting up refuse collection point, increasing receptacles in the alleys/lanes</td>
</tr>
<tr>
<td></td>
<td>7) service provision</td>
<td>- to upgrade the living condition</td>
<td>- provision of public WC, systemization of sewage drainage</td>
</tr>
</tbody>
</table>
c) restoring the city walls to perform a new role in the mutated urban setting

<table>
<thead>
<tr>
<th>Item</th>
<th>Purpose</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) city gate</td>
<td>- to identify the entrance to the town</td>
<td>- restoring the broken gateways</td>
</tr>
<tr>
<td>2) broken ruin</td>
<td>- to mark the passage of time</td>
<td>- retracing historic layers and presenting them in sequential locations</td>
</tr>
<tr>
<td>3) commercial strip</td>
<td>- to recall the water commerce along the walls</td>
<td>- transforming the walls into shopping areas</td>
</tr>
<tr>
<td>4) cultural trail</td>
<td>- to present the cultural development of the town</td>
<td>- incorporating educational and museum facilities in the restorations</td>
</tr>
<tr>
<td>5) habitable edge</td>
<td>- to integrate with the urban fabric</td>
<td>- developing a construction system to adapt the wall as part of the enclosure</td>
</tr>
<tr>
<td>6) water traffic terminal</td>
<td>- to encourage territorial travels by boat</td>
<td>- conforming the terminal as part of the wall at historical locations</td>
</tr>
<tr>
<td>7) linear park</td>
<td>- to regain the memorable public space</td>
<td>- freeing the top of the city walls as an accessible continuous green strip</td>
</tr>
<tr>
<td>d) connecting the urban artifacts, activities nodes and the neighboring districts so to integrate the urban design framework as a whole</td>
<td>- to relate urban artifacts via canal system</td>
<td>- identifying monuments and re-establishing their relationship with the canals</td>
</tr>
<tr>
<td>1) water traffic route</td>
<td>- to relate urban artifacts via canal system</td>
<td>- setting water bus stop along main canals, tourist spots</td>
</tr>
<tr>
<td>2) water bus route</td>
<td>- to re-utilize canals as traffic routes</td>
<td>- forming a water route system for local movement</td>
</tr>
<tr>
<td>3) connected water lane</td>
<td>- to revitalize water-related activities</td>
<td>- penetrating greenery edges into the water lanes</td>
</tr>
<tr>
<td>4) green belt</td>
<td>- to regenerate environmental memory</td>
<td>- freeing the narrow alleys from vehicular access, creating livable streets</td>
</tr>
<tr>
<td>5) protected play lane</td>
<td>- to regain the social activity of neighborhood</td>
<td></td>
</tr>
</tbody>
</table>
### B. Architectural Intervention

<table>
<thead>
<tr>
<th>INTERVENTION</th>
<th>DESIGN PRINCIPLE</th>
<th>OBJECTIVE</th>
<th>STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) maximizing the commercial potential through a reinforcement of human activities</td>
<td>1) eccentric commercial belt</td>
<td>- to maximize exposure to customers</td>
<td>- locating shopping lanes in an eccentric part of the neighborhood</td>
</tr>
<tr>
<td></td>
<td>2) pleasant shopping lane</td>
<td>- to accommodate commercial interaction</td>
<td>- arranging retail shops fronts along pedestrianized streets</td>
</tr>
<tr>
<td></td>
<td>3) corner grocery</td>
<td>- to provide expansion for ad-hoc commercial activities</td>
<td>- determining certain corner locations for street sellers</td>
</tr>
<tr>
<td></td>
<td>4) controlled open air teahouse</td>
<td>- to promote local and leisure food service</td>
<td>- allowing teahouses at shop fronts, but restricting cooking kitchen in the open air except at the 'night market'</td>
</tr>
<tr>
<td>b) promoting the cultural life by the stimulus of tourism</td>
<td>1) tourist route</td>
<td>- to provide a dynamic experience for discovery</td>
<td>- conserving the picturesque streets water lanes, arranging in a sequential order of interest</td>
</tr>
<tr>
<td></td>
<td>2) tourist-related provision</td>
<td>- to provide cultural link to both visitors and residents</td>
<td>- refurbishing appropriate old buildings in the form of visitor centers, museum, galleries and craft workshops</td>
</tr>
<tr>
<td></td>
<td>3) street performance</td>
<td>- to offer opportunity for ad-hoc/organized expression of the people</td>
<td>- introducing new open spaces associated with historic buildings around which tourist related activities can take place</td>
</tr>
<tr>
<td>c) adapting the historical patrimony with utilization purpose</td>
<td>1) merchant house</td>
<td>- to respect the architectural heritage</td>
<td>- converting into folk museum, guest house, managed by local community</td>
</tr>
<tr>
<td></td>
<td>2) shop house</td>
<td>- to provide mix use of commercial and residential module</td>
<td>- upgrading into hybrid commercial type with self-ownership</td>
</tr>
<tr>
<td></td>
<td>3) canal house</td>
<td>- to stimulate water lane interactions</td>
<td>- opening up both frontages to canal and street, maximizing commercial potentials</td>
</tr>
<tr>
<td></td>
<td>4) wall house</td>
<td>- to consolidate the image of city wall</td>
<td>- encroaching partially into the city wall, forming a habitable edge</td>
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</tbody>
</table>
| d) improving the residential dwellings through self-generating process | 1) improvement agency | - to set up a matrix for regenerating process
helping the neighborhood to organize improvement agency |
|   | 2) beautifying house frontage | - to unify the overall expression under control
recommending design principles for architectural features and finishing materials |
|   | 3) conversion method | - to assist the self-initiated improvement process
providing fund and guide to help buying construction materials |
|   | 4) coordinated building height | - to control the inconsiderate growth of buildings
keeping the building height to 3-4 stories and combining certain houses on the first floor into a continued streetscape |
Implementation

*Preservation, Redevelopment and Upgrading*

As the proposal stresses on the complementary support of both old and new development, the dynamic process of urban evolution should acquire preservation, redevelopment and upgrading at the same time. Preservation of the historical sites would stress on keeping the original flavor as well as attaining the balance between the commemorative values and the present day values. Redevelopment operating both the injection of new life and the removal of useless urban tissue, would be 'avant-garde' in the expression that it marks in the context of history. This section of the project should be initiated by the government to provide a directional vision of indicative significance for the latter stage of upgrading. Regeneration as a means of upgrading is the humble part of the proposal which would subordinate into the intensive matrix growth of the communities. Semi-autonomous agencies from the neighborhoods responsible for the upgrading work are proposed to execute the negotiations, relocation and compensation. Working closely with the residents of the old city, these community organizations would acquire a sensitive improvement to the overall environment. In this way, the old town would survive as a living entity that 'regenerates' the new tissue to substitute the unhealthy cells.

*Financing Mechanism*

In Suzhou it would be possible to introduce some special forms of funding arrangement that are summarized as follows:

- adopting the new tender practice in Suzhou to manage historical buildings of secondary significance;
- greater emphasis on the outright leasehold of shops and dwelling units, rather than subsidized rental;
• special town enhancement grants for public works from fund-raising activities or user charges for utilities via the improvement agencies of the communities;
• forward funding for improvement of historical buildings by public authorities to be repaid through visitor charges;
• percentage grants towards visitor attraction projects, e.g. museum, gallery;
• loans at preferential rates enabling people to borrow money, for dwelling improvement and the potential profitable commercial units.
GENERAL
STRATEGY

In the proposal, the integrity of memory is of prime importance that should be tackled in different dimensions of point, line, surface and volume as mentioned earlier in the chapter about theory of memory. So to achieve a comprehensive strategy that can reconnect the broken memory as a whole, the interventions pay particular attention to areas that are overlooked in the current preservation plan of Suzhou:

**Point**

In Suzhou, the 71 historical sites including temples, pagodas, and gardens are claimed by the government as important cultural heritage, e.g. Tiger Hill, Panmen Gate, Zhuozheng Garden, Xuanmiao Temple. These monuments can function as major points in punctuating the urban skeleton of memory. The way that they are preserved is an approach of basic repairs and renovations by traditional workmanship. However, an equal number of claimed historic buildings of old merchant houses, private gardens are still deteriorating and abused by transplanted households. In the overall strategy, they would strengthen the coherence of memory as secondary points by relaying between the distant primary points. To this end, immediate actions in recording, exchanging more attentive households and injecting new functions should be taken to rescue them from vanishing.

**Line**

The preservation of points is not sufficient to recall the collective memory of Suzhou, particularly that of the urban experiences. When the history is referred, it is easy to imagine that the city of Suzhou is organized by criss-crossed canals of lively, yet mellow ambiance. As the environment
is shaped by the urban activities that, however, existed symbiotically with the water-related spaces, conservation of linear urban forms of canals and moats along the city walls is essential for comprehending the dynamic urban life and networking the isolated monuments via water and land itineraries. In Suzhou, the water lane being a typical character of the city should be further developed as a transportation means so as to continue the will of the place.

Surface
In some areas of Suzhou, the genius loci is strongly captured by the neighborhood which has still kept the original urban texture dated back to Sung Dynasty, e.g. Pingjiang District. The preservation of these areas would provide not only the historic value of urban design but also a built field for the continuous embarkment of the daily life patterns. The strategy for these areas would be one of subtle transformation of the original built forms, keeping the basic urban structure intact and encouraging incremental changes under control guidelines.

Volume
The overall silhouette of the historical town represents the symbolic image of the city. Insensitive real estate development would easily disturb the skylight if the vertical scale of the new buildings is mishandled. Old monumental buildings, e.g. pagodas, temples, that have left memorable imprints to most visitors would anchor nodes on the urban area. These nodes would form an interrelated visual network above the whole city. These visual relationship could be reinforced by a contrast of volumes and selective disposition of built forms. While the overall control of building height would lay a bulk envelope to the surrounding areas around monuments, particular visual memory should be articulated by a consideration of sequential vistas along certain urban itineraries.
Re-orchestration

1. Territory
- connecting water towns of preserved local flavor by a loop of waterways;
- providing direct water access from the city to historically related towns.

2. City
- arranging historic trails of significant monuments along the time line;
- reinforcing the visual correlation between historical sites.

3. Ensemble
- re-structuring individual buildings into a coherent setting;
- intensifying the sequential happening of lively events along certain lines.

4. House
- reviving the water lanes into communal and accessible spaces;
- transforming the encroached houses into divisible accommodations with upgraded facilities.
Strategy in the Territory

- Diverting fresh water from Taihu Lake via Cross-ocean River to flush the stagnant canals in the city;
- Removing polluting industries away from the waterways;
- Reviving the historical scenic waterway of the Grand Canal from Nanjing through Suzhou to Hangzhou;
- Establishing Suzhou as the focus of the historical sites in the vicinity.
Strategy in the City
--reviving the waterscape

*Linear polar effect*--With the assistance of two longitudinal spines, Pingjiang Canal and Scholar's Canal, a polar effect would be induced between these two elements of permanence. By reinforcing the waterscape along them, capillary changes are stimulated via W-E running water lanes that, in turn, penetrate into the deeper tissues of the neighborhoods.

*Secondary nodal effect*--Once the capillary changes start, the existing monuments and gardens in the middle would function as referential foci to localize the changes and transmit the effect forward to the next points in a latitudinal sequence.

*Anchorage effect*--The spines start from two structural surfaces, protected zones of Pingjiang District and Panmen Gate, running in directions towards each other that, at last, would be reconnected into a close system with these two poles as points of anchorage.
Strategy in the City
--connecting the urban artifacts

Structural joints--operating in parallel with the revival of waterscape, the urban network of canals and streets would be strengthened by defining strategic junctions along the spines. Distinctive images of these junctions would be generated by revitalizing traditional buildings with new functions of urban significance.

Vectorial paths--between these junctions, major directional paths interchangeable between water and land accesses would be laid along canals and city walls to connect the memorable environments into a coherent picture of the urban history.

Intensified matrix--navigating down the hierarchy of the canals, there would be an intensification of the memory from cultural monuments to surviving historical quarters. With proper guidelines about the external areas, these quarters would be modified tastefully with active daily life in the matrix of water lanes.
Strategy in the Ensemble
--cultivating the built fields

Matrix growth--connecting to the overall canal network, the rehabilitated water lanes would stimulate incremental commercial activities that would induce an increase in land value. With this urban dynamics, the possible growth would be guided towards an integral transformation with the preserved artifacts within the area.

Local identity--within the neighborhood quarters, the old bridges, gateways and piers at the junctions of the water lanes would be restored to reinforce the sense of belonging and the buildings around the communal spaces would be adapted as meeting parlors and local teahouses to cultivate the local identity.

Living tradition--the local historical buildings managed by the community with professional guidance would function as semi-public places to receive visitors so as to elevate the dignity of the local inhabitants.
Strategy in the Street
--enhancing human interaction

Commercial precinct--based on the traditional street structure, streets around Xuanmiao Temple, Jinmen Gate and Changmen Gate would be pedestrianized exclusively as commercial passages juxtaposed by mix-use shophouses and the precinct defined by urban features of gateways, market towers and water wells.

Cultural corridor--besides the commercial activities, streets linking cultural spots of temples and museums, like part of Scholar’s Street, would tie up arts and crafts studios, antiques shops and provide walking corridor for festive processions from Confucius Temple to Changmen Gate.

Social module--in the local streets and lanes, a simple organization structure with gateways, courts around water wells and corner shops would be adopted as the basic social activity module in stimulating human interactions at neighborhood level.
**Strategy in the Street**
--re-ordering the spatial sequence

Shopping street--as there are basic behavioral differences between the customers and the local residents, the shopping street would be designed to enhance their activities and sequential approaches respectively. The customers participate mostly in external spaces within the envelope of street walls. Their behavior can be described as cyclical with many repetitions. Mostly, started at one point and aimless, yet undergoing certain common sequences, their path is dynamic in the sense.

Internal lane--the circulation path of the residents is quite different in the way that it involves a hierarchical sequence of both external and internal spaces. Seeking for the shortest path from the gateway of the shopping street to the internal lane, their route would be linear in sequence with definite purpose and longer duration. Their behavior can be described as more static.
In order to revive the livelihood of the local community under the new commercial dynamics, houses would be transformed in a multitude of ways and recharged with different functions:

1. **Evacuation**—neighborhood gathering place, at the junctions of water lanes to provide a semi-open space for communal activities. e.g. opera performance.

2. **Preservation**—folk museum exhibit, in the surviving merchant house to display the local lifestyle in the original setting.

3. **Opening up**—clothes bazaar stall, in shophouses where walls and primary structure are still maintained to give an urban continuity.

4. **Rebuilding**—teahouse and restaurant building, on demolished sites near the major nodes of the canals to regain the broken urban scale.
Using the type of long narrow shophouses, there is a variety of combinations that would be applied in specific neighborhood situation; some of them once existed in the past, some of them are still surviving, and the others are new forms made possible by the contemporary technology:

1. *Gate house*—spanning across the secondary lanes, found in the Qing Dynasty, applicable at the entrance to small compounds of coherent character.

2. *Passage house*—connecting between two groups of shophouses, a new form suitable to provide secondary entrance and extendible space from adjacent houses.

3. *Sky court*—a new form freeing the front bay of a shophouse for communal use at an elevated level.

4. *Connected court*—a modified expression to cater for the internal community of several nuclear families.
Strategy in the House
--ordering the coherent growth

Based on the basic type of jin, the neighborhood growth is ordered by the combinations.

A. LONGITUDINAL ADDITION

B. TRANSVERSE ADDITION
   - usually in 3 bays

C. LONGITUDINAL & TRANSVERSE ADDITION

D. VERTICAL ADDITION

E. LONGITUDINAL & VERTICAL ADDITION

Common Combination Methods
Special combinations allow mutations to take place under particular physical constraints.
SPECIFIC STRATEGY

To test out the practicality of the general strategy, this section is to demonstrate the possible interventions along the three spines of characters that together would concisely recomposed an overall view of the lost memory of Suzhou.

The Canal
Hillside Canal is one of the ‘extensions’ from the old city. Historically, being a water path towards the historical site of Tiger Hill, the canal reveals a spectrum of water-land relationships and along its length there are a sequential changes of functions and atmospheres from shopping precinct, to residential area, then to scenic attraction. The study of its existing condition and the corresponding urban intervention would recall the memory of the canal in Suzhou.

The Wall
From the unique watergate of Panmen to Changmen Gate, the beginning of Hillside Canal, the commercial flamboyance once depicted by the famous scroll, Prosperous Suzhou\(^1\) was shattered with the downturn of the walls. To recapture this part of the memory, this section of the city walls would be restored with a new interpretation so as to stimulate growth and establish the symbolic completeness of the town.

The Neighborhood
Pingjiang District is the oldest neighborhood in Suzhou still preserving the original urban fabrics. The regenerating mechanism in upgrading the neighborhood would offer a paradigm in improving neighborhoods of similar situation, and reconnecting them back to the present urban network.

\(^1\) The scroll was painted by Xu Yang in 1759 AD to present the cityscape of Suzhou to Emperor Qianlong
Strategy along Hillside Canal

1. using old water porch as entrance to Tiger Hill;
   pedestrianizing commercial precinct along ‘pilgrimage route’;

2. reinforcing greenery planting along existing hospital;
   adapting old merchant house into guest house;
   removing factories;
   relating Five People’s Tomb with Puji Bridge;

3. connecting three merchant house complexes into cultural center;
   encouraging original residential settlements;
   injecting artist village;
   converting row houses into youth hostel;

4. remodeling canal houses with both water & land accesses;
   dedicating water market area around the restructured Hongqiao Bridge;
   restoring Changmen Gate as the symbolic city entrance.
Sections along Hillside Canal I
--traditional scales of waterscape
Sections along Hillside Canal II
—distorted scales of waterscape
Urban Interventions along Hillside Canal
--rehabilitating the canal

1. **Historical landmark**
   - re-utilizing the water access to the historical site of Tiger Hill as an experiential memory;
   - using the pagoda as a visual reference to guide the pilgrimage approach;

2. **Scenic setting**
   - correlating Puji Bridge with Five People’s Tomb into a coherent environment as a scenic waterscape;
   - extending greenery belts along the edges as visual vectors to frame memorable vistas;

3. **Living community**
   - cultivating vivid livelihood with a mix of local residents, artists and visitors as a dynamic force to regenerate the canal neighborhood;
   - adapting historical buildings with cultural facilities as a living memory of the tradition;

4. **Commercial link**
   - reviving canal shopping as a reminder of the water-born commerce;
   - connecting the old fabrics of city wall and shopping street as a link to historic commercial strip.
1. Tiger Hill Area
- coach parking
- Tiger Hill canal route
- land-side flea market
- shopping street
- water bus terminus

2. Puji Bridge Area
- guest house
- restored Five People's Tomb
- plantation along the shores
- green edge of hospital
- water bus pavilion in front of Puji Bridge
- art galleries
- landscape garden
- cultural center
- artist studios
- plantation to soften the visual impact of railway bridge
Design Inputs along Hillside Canal II

3. Tonggui Bridge Area
- improved residential houses
- youth hostels
- tourist information center
- folk museum

4. Hongqiao Bridge Area
- water bus stop
- teahouses and restaurants
- opera house
- shophouses along canal
- water-side flea market
- restructured Hongqiao Bridge
- restored Changmen Gate
- pedestrianized commercial street
Tourist Trails along Hillside Canal
--interchanging water and land routes

1
- pilgrimage route to Tiger Hill starting from coach parking lots;
- interchanging at the end of commercial strip;

2
- traveling along the wide section of the canal;
- stopping over Five People’s Tomb;
- crossing Puji Bridge to the landscaped garden on the other side;
- interchanging at Puji Bridge;

3
- visiting the cultural center;
- staying in artist studios;
- walking to the opera house;
- interchanging at shopping canal;

4
- boarding at the pier near Tonggui Bridge;
- taking break in some restaurants or teahouses;
- walking down to the water market at Hongqiao Bridge and the museum at Changmen Gate.
1. **Shopping street**
   - adapting the canal houses near Hongqiao Bridge;
   - guiding frontage material and scale;
   - allowing second row extensions;
   - reinforcing the identity of each section by synergic effect.

2. **Food street**
   - following guidelines of the shopping street;
   - agglomerating canal houses with water access near Tonggui Bridge into teahouses and restaurants;
   - integrating canal features, with the building structure.

3. **Youth hostel**
   - adapting transverse canal houses at the opposite shore;
   - forming small community with adjoining houses.

4. **Guest house**
   - adapting merchant houses with private canal access;
   - subdividing pavilions into individual suits.
Architectural Interventions along Hillside Canal II
--transforming the canal houses

The proposed transformation considers, in addition to the architectural form, the phasing and its evolutionary sequence:

1. original section with a pair of street and canal houses ready to be transformed;
2. providing infrastructures and cleaning up the canals;
3. upgrading the structure of the street house with steel/RC beams;
4. fitting in additional slabs of mezzanine floor and skylights;
5. upgrading the structure of the upper part of the canal house while operating the commercial ground;
6. adding mezzanine floors and providing punctures facing the canal;
7. completing the shop and connecting with the canal and the street with gates, steps and balconies;
8. changing the frontage and planting to adapt the overall public circulation and to establish the image of the individual shop.
Strategy along the City Wall

1. using the restored Changmen Gate as a transition to Hillside Canal and a termination of the festive procession;
2. strengthening the specialty arts and crafts workshop streets towards Jinmen Gate;
3. incorporating part of the city wall restoration of Jinmen Gate into the indoor shopping routes;
4. rebuilding the broken walls by the encroachment of a new type, 'wall house';
5. preserving the ruins at the junction with Ganjiang Canal as a mark of the broken urban tradition;
6. reconstructing the territorial water transport terminal on the historical site of Xumen Gate;
7. inserting the historical museum into the broken walls;
8. preserving Panmen Gate as the public park area.

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Images along the City Wall
--fragments of a historical sediment

Broken Changmen Gate
Isolated Jinmen Gate
Irresponsible residential encroachments
Well-preserved Panmen Gate and the linear park
Urban Interventions along the City Wall
--restructuring the wall

1. Visual anchorage
   - defining the entrance of the old city at Changmen Gate as a reminder of the imagery memory;
   - correlating visually to Beisi Pagoda and Hillside Canal as a node in the urban network;

2. Catalytic growth
   - integrating commercial dynamics with the traditional workshop streets as stimuli to revive the folk culture;
   - encroaching the wall by wall houses as a capillary growth to reconfigure the missing enclosure;

3. Civil symbol
   - contrasting the broken ruins with the rebuilt terminal as a mark of the historical process;

4. Cultural path
   - reknitting the relevant cultural sites into a coherent path from the historical museum as a brief encounter of the culture;

5. Public platform
   - reconnecting the platform of the wall as a public green park to perform the people's expression.
1. Changmen Area
   - outdoor museum with ascending stair to the gate
   - parking lots before interchanging point
   - shoring to stiffen city wall
   - street furniture to designate procession route

2. Jinmen Area
   - workshop clusters
   - integral commercial precinct within reconstructed wall
   - wall house encroachment

3. Ganjiang Canal Area
   - broken ruins near Ganjiang Canal
   - traffic interchange
4. Xumen Area
- territorial water transport terminal
- connection of procession route along Daoqing Canal

5. Wannian Bridge Area
- historical museum
- cultural path to historical sites of Kaiyuan Temple and Confucius Temple

6. Panmen Area
- greenery belt
- linear public park
- tourist information center
- art gallery
Urban Sections along the City Wall
--correlating to the urban artifacts

1 restored Changmen Gate with an elevated platform relating visually to Beisi Pagoda along the ‘dotted line’, Beisi Canal;
2 transformed Jinmen Gate with an embodied commercial element offering a diachronic harmony in content with the adjacent traditional shopping precinct;
3 reconstructed water transport terminal harmonizing in form with its historical precedence while contrasting with the distorted scale of the buildings along the newly constructed Ganjiang Canal;
4 adapted historical museum within the walls initiating a path of coherent historical experience along the cultural places of Kaiyuan Temple and Confucius Temple;
5 preserved Panmen Gate with the bridge and the pagoda contrasting in form with the surrounding houses but presenting a visual coherence.
Architectural Interventions along the City Wall I
--rebuilding the gates

1. **Wall house**
   - innovating a new house type with standardized module and employing the wall shoring near Jinmen as part of the structure;
   - keeping the old wall intact and rebuilding the envelope to provide both covered and open communal spaces.

2. **Historical museum**
   - contrasting the present day technology with the broken ruins to capture the passage of time;
   - remodeling the interior for boat touring along sequential displays.

3. **Educational park**
   - extending the well-preserved Panmen Gate into the surrounding greenery for both tourist and educational purposes.

4. **Water transport terminal**
   - conforming water traffic terminal at Xuman Gate to the city wall;
   - reviving the land-water gates to control entry.
Architectural Interventions along the City Wall II
--transforming the ruins

The proposal is to recover the commemorative value of the broken wall for present-day use and capillary growth:

1. existing broken wall hidden by irresponsive encroachments;
2. removing the encroaching buildings and retracing the layers of the wall;
3. recovering the canal access and laying infrastructures;
4. shoring the unstable section and reshaping the original profile by concrete/stone panel walls;
5. fixing slabs and defining entrances with historical reference;
6. keeping the ruins intact and providing viewing platforms over if necessary;
7. combining the shoring structure to build ‘wall house’ as a new form of encroachment;
8. accessing the wall and enlivening the historical environment with attentive neighborhood.
Strategy in Pingjiang Neighborhood

1. reviving Beisi Canal as a major latitudinal water route to link up Changmen Gate, Beisi Pagoda and Zhuozheng Garden;
2. stimulating the urban dialogue between the gardens and the canals by developing communal spines;
3. identifying matrix junctions within the neighborhood and converting them into nodes with sequential urban characters
4. adapting old merchant houses and encouraging capillary change of residential houses;
5. developing greenery and improving the water environment at local level;
6. diverting local commercial activities along Pingjiang Canal from Guanqing Street;
7. recovering water lanes to complete local water network
8. strengthening the water paths to other urban monument, e.g. Twin Pagoda.
Water lanes in Pingjiang Neighborhood  
--veins of livelihood

Junction of Pingjiang Canal and Da Liuzhi Lane\(^2\)  
Recoverable water lane of Lujia Lane  
Connection of Pingjiang Canal to Yejia Canal

\(^2\) See *Communal Spaces and Canals* of this thesis, p.83
Urban Interventions in Pingjiang Neighborhood
--regenerating the neighborhood

1. Urban dialogue
   - connecting preserved monuments via water itinerary along Beisi Canal as a kinetic outline of the urban memory;
   - penetrating the tourist route into the neighborhood as a dialogue between the exogenous impact and the local response;

2. Matrix growth
   - organizing junctions to encourage human interactions as urban dynamics to stimulate growth;
   - self-generating process of improvement as an update of individual memory;

3. Capillary change
   - upgrading environment as an aspiration of collective memory;
   - inducing local commerce force as a catalyst for improvement;

4. Complete network
   - extending the water lane coverage as an internal order to revive the waterscape;
   - networking to other urban artifacts as a continuity of environmental memory.
Design Inputs in Pingjiang Neighborhood I

1. Beisi Canal
   - water bus stop
   - revitalized entrance squares to Zhuozheng Garden and Lion Grove Garden
   - plantation along tourist route

2. Pingjiang Canal
   - local restaurants and teahouses
   - location of urban features
   - neighborhood gathering place
Design Inputs in Pingjiang Neighborhood II

3. Pingjiang Canal
- plantation along the canal
- guest house adapted from merchant house
- neighborhood shops
- preserved opera house
- 3 recovered water lanes

4. Yejia Canal
- water bus stop
- remodeled entrance square to Pingjiang District
- canal network to Twin Pagoda
Canal Junctions in Pingjiang Neighborhood
--setting for communal interactions

1 where a bridge spanning across a water lane, reshaping the surrounding walls, planting willows and providing light-weight trellis for immediate residents;

2 where a street crossing a water lane, adding bamboo trellis outside the workshops, erecting gateways to lanes, providing bicycle parking, water bus stop, refuse collection point and public flower bed;

3 where a water lane joining a canal, encouraging corner groceries, evacuating a house for neighborhood gathering and identifying the place with partial wall enclosure;

4 where two water lanes joining a canal, stimulating local commercial activities, allowing extendible teahouses and restaurants, restoring memorial gateways and providing communal services, e.g. post office, public washroom, water bus stop.
Building upon a hypothetical unit with width of 6m and length of 18m, under the guidelines from the analysis, incorporating new construction technology and services to improve physical environment, the new model provides a means, not an end, to illustrate the potentials of employing the language of the traditional courtyard house in solving the contemporary problem of integrating new family structure with the old building form. In each column, the building starts as a box; light is available only at each end and from above.

1. how the primary geometry divides the main functions;
2. how the secondary geometry defines the circulation;
3. how the main structural platforms follow the primary geometry;
4. how the secondary geometry is reused to make associated rooms;
5. how the open spaces are incorporated.
Architectural Interventions in Pingjiang Neighborhood II
--transforming the merchant house

Transforming the merchant house into guest house with a flexibility of subdivision, the evolution is as follows:
1. original merchant house colonized by implanted households;
2. cleaning up the canal and restoring to original state,
3. providing infrastructure;
4. rebuilding the covered lane with double stories, upgrading the back pavilion with additional sun deck;
5. transforming the outer pavilions;
6. keeping the height of the first pavilion, adding one floor to the second pavilion while transforming the inner pavilions;
7. completing the front part, adding slab to the inner pavilions, and connecting various accesses;
8. completing the transformation, providing plantation and allowing lateral expansion.
With the new capitalistic impact, Suzhou is at the crossroads to reshape its historical environment that the city, on the one hand, is imminent to adopt the latest concept of urbanity without repeating the irreversible mistakes of 'modern' cities, and, on the other, accommodates the intensifying economy. In this intensification process, the integrity of memory is in a crisis that, if directed wrongly, would lead to an uncompromising chaos between imported models and detached livelihood; or otherwise would bring in all economic and cultural flourishes when there happens a generic integration of the new commercialism with the old urban fabrics of canal network.

When the urban history of Suzhou is reviewed, the flourishes were characterized by full utilization of canal system and the continuous natural growth of commercial urbanity within strong neighborhood communities. Taken these observations into the present perspective, the future of the old water town would be a continuation of the water-born commercial urbanity that would possibly be revived under the key issues of 'continuity', 'coherence' and 'adaptability'.

*Continuity*--Between the lost memory and the new urban value, the link is in the urban order that can regenerate the missing tissues. The appreciation of urban heritage of canal network is by its nature a cultural belief. To integrate the broken cultural fragments and their values in daily life or the socio-economic reality is, therefore, a practical act. In continuing the memory of Suzhou both in time and place, the proposal gives a physical manifestation of the possible linkage through the canal, the wall and the neighborhood.
Coherence--Between the new development areas and the old urban settlements, continuity would be maintained through physical connections and commercial ambiance of shopping canals and merchant streets. Incremental transformations within old settlement would contribute to the formation of urban 'junctions' which would relate at a large scale to the overall urban system. Building upon the foundations of the past urban fabrics, the revived canals and their associated edges would integrate the pertaining daily life patterns into the physical structures which, in turn, would regenerate lively urban forms.

Adaptability--In reconstruction of the existing old settlements of Suzhou, it is essential to provide an organic matrix for the natural growth of pluralistic urban expressions with unity. The new urban form would adapt the old fabrics of the canals, water lanes and city walls by transforming them into a higher-density urban system that would allow more intensive commercial, cultural and social interactions.

With these considerations, through an organized control of heritage policy and an orderly implemented 'strategy of memory', the government of Suzhou with its architects and urban designers should prepare themselves in maintaining a consciousness of history while reconstructing the water city with a taste of contemporary sensitivity. The interpretation of the tradition is, thus, neither historic nor modern, but simply the continuation of the unique water culture in the city with a strong linkage to daily life. To conclude, I would like to quote Alvaro Siza's expression on tradition,

"We have been privileged to have had direct contact with the people...That which concerns us then is this interior life of tradition which is dynamic and transforming. We have tended to work inside this real identity which is evolving."

\[1\]

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### Appendix I: Brief Chronology of Chinese History

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2600 BC</td>
<td>Creation of Chinese State</td>
</tr>
<tr>
<td>221 BC</td>
<td>Qin统一（Qin Shi Huang统一了各国）</td>
</tr>
<tr>
<td>208 BC</td>
<td>Warring States period ends</td>
</tr>
<tr>
<td>136 BC</td>
<td>Adoption of Confucianism as state ideology</td>
</tr>
<tr>
<td>220 AD</td>
<td>Fall of Western Han</td>
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<tr>
<td>220-280</td>
<td>Three Kingdoms period</td>
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<tr>
<td>265-589</td>
<td>Jin dynasty</td>
</tr>
<tr>
<td>589</td>
<td>Reunification of North and South</td>
</tr>
<tr>
<td>618</td>
<td>Tang dynasty begins</td>
</tr>
<tr>
<td>755</td>
<td>An Lu-shan Rebellion</td>
</tr>
<tr>
<td>840</td>
<td>Yellow Turban Rebellion</td>
</tr>
<tr>
<td>907</td>
<td>Tang dynasty falls</td>
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<tr>
<td>960</td>
<td>Song dynasty begins</td>
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<tr>
<td>1127</td>
<td>Northern Song falls, Southern Song begins</td>
</tr>
<tr>
<td>1279</td>
<td>Mongol conquest of Southern Song</td>
</tr>
<tr>
<td>1281</td>
<td>Mongol conquest of Yuan dynasty</td>
</tr>
<tr>
<td>1368</td>
<td>Ming dynasty begins</td>
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<tr>
<td>1644</td>
<td>Manchu conquest of Ming dynasty</td>
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<tr>
<td>1911</td>
<td>Xinhai Revolution</td>
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<tr>
<td>1912</td>
<td>Republic of China established</td>
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<tr>
<td>1949</td>
<td>People's Republic of China established</td>
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<tr>
<td>1976</td>
<td>Cultural Revolution</td>
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<tr>
<td>1982</td>
<td>Reform and Opening Up policy initiated</td>
</tr>
<tr>
<td>1993</td>
<td>China joins World Trade Organization</td>
</tr>
<tr>
<td>2020</td>
<td>China becomes world's second-largest economy</td>
</tr>
</tbody>
</table>

*Note: Dates and events are approximate and subject to historical interpretations.*
Appendix II: Map of Suzhou, Sung Dynasty, 1229 AD.
Appendix III: Map of Key Buildings, 18th century
Appendix IV: Modern Commercial Development in Guanqian Area from 1910-1990
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