Street design and human inhabitation - toward cities as the production of time, space and being

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Street design and human inhabitation
—toward cities as the production of time, space and being

by

Hua-jun Cao

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degrees of
MASTER OF ARCHITECTURE
MASTER OF COMMUNITY AND REGIONAL PLANNING

Co-majors: Architecture; Community and Regional Planning

Program of Study Committee:
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Ames, Iowa
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This is to certify that the master’s thesis of

Hua-jun Cao

has met the thesis requirements of Iowa State University

Signatures have been redacted for privacy
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ABSTRACT

The revitalization project in Ciqikou, Chongqing, contributed to the theoretical exploration of human inhabitation in this thesis. The failure and the success of each phase of the revitalization project of Ciqikou, implies further potential as well as common limitations of urban design, and more importantly, the subjectivity in our cities. The philosophical speculation of time, space and being inspires the beginning of the theoretic construction of this thesis. The comparison between the classical world view and the actual experience in our human world's production—cities, forces us to face the most primary and basic issue, the subject/object issue. The subsequent process is a review of the form and the meaning of ancient cities and the changing theoretical view of urban design in a selected city element, street. Through the examination of classical ontology, urban functionalism and modern urban theory and the study of historical urban development, this thesis addresses the subjectivity of people in our cities and further clarifies the primary concept of city streets. To enforce the role of subjectivity in our cities and to reveal the practical potential and value of urban theory, two case studies are examined: the urban revitalization project in Ciqikou, Chongqing and the urban structure of Shanghai districts. The inspection toward the street itself, the objective human production, expands rather than denies the validity of urban design practice in the contemporary theoretical discourse. The expansion will not end in either design practice or theory. Through the human production as well as modern functionalism, it will be constantly criticized toward the value of our world—what it was, is, and what it will be.
CHAPTER 1 THEORETICAL BACKGROUND

1.1 Problem Statement

People today have more interactions with machines than people a century ago. The power of mass production and international communication of technology and product conducts the physical world toward the same direction. However, although the international style gradually spreads into almost every corner of the world, the local and cultural essence reaches out to soothe people's minds which are restricted by today's digital reality.

Time and space have always been studied in architectural or urban design, or design in the urban scale. From ideal city plans to historic preservation, to city development, the objects and the programs associated with them are addressed and serve society well in a technical way. However, in many new cities, something seems to be lost—a spirit. I will argue that "People" are put into this city system as an object, rather than appearing as the master who creates the city, and who have control over it to fulfill their own emotional desires—such as communication, performance, and relaxation without constraints. "People" as an object, only get "what" (concrete yet not abstract) they want in a certain manner and at a certain location.

Designers and planners have realized the lack of passion as a problem in today's city. Jane Jacobs's theory is an outstanding example. She asked what caused the spiritlessness of a city, and pointed out that theories, including Le Cobusier's work and machinery theory, were a major cause. This realization pushes the work of historical preservation and urban revitalization. However, most of the time, when we go to a website to search for a city, we find "attractions" that do not appear to be attractive. Planners talk about "developing new business" to "attract" people to come and stay in a city, while it seldom appears to be successful. Historians talk about preservation, and worry about development, while often people hate what is being preserved. As it is, the city strives to keep an inner balance between people's emotional needs and the growing material needs. It remains confusing which one can bring back the passion of city life, the planner or the historian.
Certainly, there are two sides to everything, and we cannot go for a general conclusion without considering the specific environment of individual cases.

From my departure from China to my arrival in America, the first time I saw small American cities, I was astonished to find out that an ordinary place, called city, could be so devoid of living activities could hardly exist. However, many buildings and areas were on the list of the historical preservation society. As I looked at them, I wondered if the preservation had really been accomplished, since their souls seem to be lost, although not necessarily forgotten, and the physical objects were maintained. For example, on Chicago’s Michigan Avenue and State Street, every weekend from 4:00pm on Friday, all the performances begin out of shops on the pedestrian pavement. It is absolutely a positive thing, and reminds me of the European style of life, but not exactly. While, Chinatown, San Francisco, it reminds me of China—China 15-20 years ago. Some professionals criticized that American cities have never learned the art of growing old. By looking at the heavy stone buildings, renaissance style street lighting and seating, the cities still give us the feeling there is a disconnection between the history (or time) that the cities speak of and our everyday life.

1.2 The Everyday Life of People

Historically, designers and city planners seem to have a desire to see the city thoroughly as one entity from far above. Yet, people on an ordinary position, other than designers, are the real bodies who are experiencing and creating the city. According to De Certeau, they are “the ordinary practitioners of the city” who live “down below,” below the thresholds at which visibility begins. They experience the city through an elementary form—walking. De Certeau writes:

“They are walkers, Wandersmänner, whose bodies follow the thick and thins of an urban “text” they write without being able to read it. These practitioners make use of spaces that cannot be seen; ...The paths that correspond in this intertwining, unrecognized poems in which each body is an element signed by many others, elude legibility. It is as though the practices organizing a bustling city were characterized by their blindness. The networks of these moving, intersecting writings compose a manifold story that has neither author nor spectator, shaped out of fragments of trajectories and
alterations of spaces: in relation to representations, it remains daily and indefinitely other.” (De Certeau, 1984: 93)

However, at the same time, through networks, the city appears to planners and designers as a theoretical (visual) simulacrum, whose condition of possibility is an oblivion and a misunderstanding of practices. Urban design/plan practice, can hardly escape the “imaginary totalizations produced by the eye.” Yet, the story of a city is not simply as what we see in a picture. No individual, including designers and planners, is the “author” or the “spectator” of the story, but rather it is the everyday practice that organizes the paths and spaces created by individual bodies. “People,” hence, is the subjective element for performing the everyday practice of the city.

City design and street design is not merely an illusion of a city image, the subject is neither the city nor the city space. The subject is what practices the everyday of city—it is the ordinary practitioners—the “people.” De Certeau studied the characteristics of the everyday of city beyond its visual surface. He pointed out that “the everyday has a certain strangeness that does not surface, or whose surface is only its upper limit, outlining itself against the visible.” (1984: 93) He stressed the importance of the operation of everyday practice, and tried to “locate the practices that are foreign to the ‘geometrical’ or ‘geographical’ space of visual, panoptic, or theoretical constructions.” (1984: 93)

De Certeau further challenged the “operational concept” of the city defined by the possibility of a threefold operation: 1) the production of its own space; 2) the substitution of a synchronic system; and 3) the creation of a universal and anonymous subject the city. He replaced this concept with urban practice, which indicated the subjectivity of “people”—as described by him, the ordinary practitioner. Thus, the city street can not be seen as a substantial space only. De Certeau’s interests in “pathway” put more attention to how, through practice, the “pathway” was created. He said, “This pathway could be inscribed as a consequence, but also as the reciprocal…” He questioned Foucault’s analysis of the structures of power which tried to explain the capability of the mechanisms and technical procedures of organizing the “details” of transforming a human multiplicity into a “disciplinary” society, and so on. The basic problem of such a procedure is that it eluded
discipline without being outside the field in which it was exercised. De Certeau suggested the "theory of everyday practices, of lived space of the disquieting familiarity of the city." (1984:96)

Street is the one of the most important element in the city's spatial organization. It indicates the subjectivity of people in a city, and it is both the question and answer to how it is experienced by people. De Certeau writes:

... Their story begins on ground level, with footsteps... Their swarming mass is an innumerable collection of singularities. Their intertwined paths give their shape to spaces. They weave places together. In that respect, pedestrian movements form one of these "real systems whose existence in fact makes up the city." (1984:97)

Although it is easy to read the operation of walking on the city maps, but what has passed by is absent from the map. De Certeau pointed out that "the act itself of passing by" was missing is the surveys of routes. "The operation of walking, wandering, or 'window shopping,' that is, the activity of passers-by, is transformed into points that draw a totalizing and reversible line on the map." Here, "people" is the subjective being of their routes. "The trace left behind is substituted for the practice. It exhibits the "voracious" property that the geographical system has of being able to transform action into legibility, but in doing so it causes a way of being in the world to be forgotten." (De Certeau, 1984:97)

1.3 "People" as the Essential Spatial and Time Subject for a City

1.3.1 People as the subject

As far as this thesis is concerned, the core element of a space along the time line, (this thesis basically focuses on streets, linearly transformed in time) is "people"—people as the subject—"being" in time and space, rather than people as an object, who are "put" technically in the city machine, parallel to all other steady elements.
1.3.2 “Being” “time” “space”

Being is the essential problem of ontology. Generally speaking, being is the core's essence of existing things. It exists deep inside, wrapped and buried under abstract layers. Being (capitalized) is the primordial condition, which allows everything else (being, with a small “b”) to come into existence. By recalling the beginnings of history when Being unveiled itself in the thinking of the Greeks, it can be shown that the Greeks from the very beginning experienced the Being and beings as the presence of the present. Heidegger breaks from the classic concept of “being” as an abstract pondering of existence and throughout this work refers instead to “being-there,” which implies a more thorough connectedness to the world that unfolds over time. As he states at the end of Being and Time: “One can never carry on research into the source and the possibility of the ‘idea’ of Being, in general, simply by means of the ‘abstraction’ of formal logic, that is without any secure horizon for question and answer. One must seek a way of casting light on the fundamental question of ontology, and this is the way to go. Whether this is the only way of even the right one at all, can be decided only after one has gone along it.” (Heidegger, 1962)

Being is something to be experienced through time and space. Subject/Object issue will be amplified from biological to social, from bodily to urban, from space to architecture, and from particular to general.

1.4 Streets

This thesis is about “street life,” focusing on the three elements “time,” “space,” and “being,” which reflect the inner-relationships from between “history” and “reality”/”future,” between “individual space unit” and “regional shared space,” to between “subject” and “object.” The particular form of city/urban space (space modified systematically by humans that contains social function)—street, is chosen because of its linear property that forms the basic skeleton of the city space structure, and its abstract and compound social function.
1.5 Study Area and Thesis Structure

In this thesis, although the existing issues, such as historical preservation, economic development, urban revitalization, and land use planning are studied, the main purpose of this paper is not concrete research of these particular issues, but rather further analysis of the crisis in their relationships, and their individual contributions to street life considered here to be the top priority to form the spiritual city space. Moreover, by understanding “street life,” and recognizing the “subject” of city space on the time line, it is more meaningful to discuss the necessities, the criteria, and even the future impacts that should be concerned when we carry out studies as “preservation,” and “revitalization.” This study will extend the concept of these specific issues to the concept of street life philosophy.

Philosophy of “Time,” “Space,” and “being” (sometimes referred to as “motion”) has been studied and applied in architectural design, and even community design on a small scale in certain countries. But, it is usually neglected in the field of urban design and city planning, which brings problems, as mentioned earlier, the lack of street activities, the disconnection of individual space unit, and the hatred that could be perceived when preservation or development activities are carried out.

This thesis focuses on street design in respect to street life inhabitation. By answering a series of questions, the objective is to achieve a better understanding of street design perspective. The questions include:

Why and how did streets first come into being?
What are the different formations of street life around the world?
What generates street life?
What are the characteristics of street space—spatially and on a time line?
What is the relationship between street properties and inhabitation?
How to evaluate the quality of street life? How to stimulate “good” street life?
To answer these questions, this thesis will study the reasons and purposes for earlier street and street life through historical reviews and comparative studies. By looking at the development of the street and the city pattern, and the different purposes or intentions between different street patterns, this thesis will conclude what determines the form of today’s street, and the validity of the determining factors. This thesis uses case studies and comparisons to look at the three elements, “time,” “space,” and “being,” to reveal their inner relations.

Furthermore, the unique characteristic of streets will be studied in the respect of city space and time/history. The recognition of the major characteristic is the key to evaluate the efficiency of street in both city function and city life.

The street design process as well as the city plan in certain levels will be redefined in the respect of city subject, and “people” by referring to the earlier city and street development process. After evaluating the factors that generate and influence street life, and comparing the different city development trends and design strategies for different types of streets, an overall conclusion for how to design a street with respect to street life will be made and open for discussion.
CHAPTER 2 THE EVOLUTION OF STREET AND STREET LIFE

2.1 The Changing Attitudes of Street Life and Streets

As discussed in chapter 1, the comparison between the classical world view and the actual experience in our human world’s production, cities, forces us to face the most primary and basic issue, the subject / object issue. The subsequent process to deal with the issue in our selected city element, street, is a review of the form and the meaning of ancient cities and the changing theoretical view of urban design.

2.1.1 Past attitudes toward streets and street life

_ Time in Human experience has three dimensions. Apart from the activities of the present, man has memory to look back to the past and hope to look forward to the future. So far we are all the same. But great differences of attitude towards these three dimensions of time may be observed in different ages and may be found to correspond to vital differences in quality._ (Mattingly, 1966: 136)

Changing perspectives toward “streets” can be perceived from literature written in different eras, especially among those who studied “great” streets. One fundamental distinction in how people define a great street, or criteria people used to recognize great streets is the recognition of the importance of human activities, or in other words, the “Street Life.”

The first perspective began in 1892; seven great streets around the world were recognized in the book Great streets of the world: Broadway, Piccadilly, Boulevards of Paris, the Corso of Rome, the Grand Canal, Unter Den Linden, and the Nevsky Prospekt (Davis, 1892). What made these streets undoubtedly the best around the world? Was it the lighting, seating, distance and width, and marble? Let us look at Broadway as an example:

_ Broadway means so many different things to so many different people. The business man has his own idea of it, and it suggests something quite the contrary to his wife, and still another point of view to his son; in this it differs from almost every other great thoroughfare of the world.... When one reads of the Appian Way, one thinks only of magnificent distances and marble. The Rue St. Antoine brings up a picture of barricades and gutters splashed with blood; and the Boulevards are reminiscent of kiosks and round marble-top_
tables under striped awnings. But all Broadway is divided into three parts, and which is the greatest of these, it would be difficult to say. There is the business portion of Broadway, and the shopping district, and still farther uptown the Broadway where New Yorkers and their country cousins once used to walk to look at the passers-by, and where now only those walk, who wish to be looked at. (Davis, 1892:3)

People described and talked about their streets, not focusing on (although may concern) the benches, lightings, plantings, or the width, but also characteristics such as the sandwich man early in the morning, hot roasted chestnuts sold on the sidewalk, gentlemen who walk by the Trinity Church at 9:45am in the morning, etc. It is clear that the focus is always about what happened to whom at what time in a usual day, which inspired people of their concern of the city on the daily base. Here, the “street” was not seen as a simple space that speaks of its own physical elements, but a way to deliver everyday life at a ground level that is close to its people.

2.1.2 How DO people look at their streets?

The second perspective shows that most of the time today, people (including professionals) look at streets as an expenditure of the city machine, evaluated by the number (sometimes quality) of physical or economic elements. Under the industrialization trend, Le Corbusier came up with the great idea of “ideal city,” of which the city was referred to as machine and streets were the linear underground avenues to deliver functional materials. During the City Beautiful Movement, streets were designated as graphic linear elements to distinguish between different land functions and to enclose a dynamic shaped parcel. In both cases, land use and the comprehensive geometrical land plan took power over streets, so that the city's spatial elements excluded the space along the street. Streets are only concerned as an enclosure to form another city space (parcel, block, etc.)

Kevin Lynch’s study (1960) brought respect back to the street. However, his research focused on the visual order, while moving along the street. Node, path, landmark, edge, and district were the study elements used to describe and evaluate the versatility of street. This has been a great approach toward good street design that can physically guide users in a relatively easier and more comfortable way. However, streets were only Lynch’s second
concern in his theory, and they are simply about a pleasant appearance and people pass through the street comfortably, rather than making the street inhabitable for people.

2.1.3 A comparison between the two different perspectives—the respect of human behavior and the spiritlessness of modern cities

The earlier and current perspectives described above are quite obvious and speak for their own integration of street space. The view of the past shows, recreation/reproduction distinguishes great streets from other streets. People were seen as the master of the space. All other physical environments basically provided the stage for its masters whose daily routine, contacts, and even imaginations of expectations determined the quality of the physical space.

However, today’s perspective places people under the pre-set physical framework, based on a static projection. Street quality is defined through the evaluation of the number of lightings, seats, trees, pavements, view ports etc., while the quality of human activities, once essential, has been ignored. This inevitably leads to the spiritlessness of modern cities.

In the past, people were seen as the master of the space. Perhaps, the visual scene was not pleasant and would not stimulate people’s sense of excitement or calmness, but people—other people—could always catch one’s attention, keep one’s mind busy, realizing that life continues. In his/her view, people were the master of space. Meanwhile he/she was being seen equally at the same time, making him/her realizing its own existence. Passing through a street meant meeting other people, having a glimpse of other people’s lives. De Certeau studies cities through the observations of everyday practice, instead of looking down from far above. He emphasizes the ground level for experiencing the city. On the streets, people have a chance to interact with each other through daily routines and eventually share some common characteristics, which have the power to generate a unique spatial and civic character. The physical environment we care about, only serves as a stage, good or bad, a stage to allow its only true master—people, to perform and watch others perform their daily life activities.
There is an old Chinese saying “there is no street at the beginning. When more people walk through it, it becomes a street.” Today, when people discuss street improvement, they talk about adding lightings, benches, off-street parking, building new graphical pavement, bringing stores along the street or controlling traffic speed. But today, we still need to keep one thing in mind, that it is “people” who use and create them. When we talk about street, we ought to rethink the way that our ancestors thought about the street. When we design, we can manipulate people’s activities, torture their instincts, we can scare them or bore them away, or we can leave enough room for people to perform. In today’s world, the decision is up to the professionals, but the choice is always left to the people.

2.2 History of Streets

![Figure 2.1 Comparison between cities of today and historically](image)

Today, as the social economy and production continue to gain more power in the city, regulations and plans for future growth are still requested for both development and environmental concerns. The nature of such economic production determines the nature of the systematical plan. Meanwhile, the long existing natural chaos (although with certain hidden patterns) of human behavior calls for less pre-set technical constraints to reach its potential for a spiritual life. This brings a major conflict for street design. In order to
minimize this conflict and gain a better understanding towards how streets interact with people’s life, it is necessary to look back at the evolution of the street: how it provided the stage for different activities and then later fulfilled its social functions at the same time. (See comparison chart of figure 2.1)

2.2.1 The Emergence of the street—the “How”

Human life, at a broader level — public activity, is closely tied to daily traffic. Road and street, the basic linear open spaces of a city, not only carry traffic but at the same time give spaces for all kinds of public activities. In comparison, roads intend to mostly serve traffic needs, and streets intend to interfere with people’s daily lives and routines. In most cities, the area of the street takes up to a quarter of the total city land area. The rate may vary slightly, depending on the form of the street.

Historically, streets are the key for the development of towns and cities. The emergence of a street was closely associated with human settlements. The most suitable sites for settlements were beside watercourses, providing both drinking water and a means of communication. For example, in ancient China, the most prosperous southeastern towns were built over the natural rivers system. The so-called “one river one street” and “one river, two streets” schemes were the direct result of this linear riverwise development. (Wang, 1999:139)
In western theory, it was believed that the beginnings of civilization lie in the valleys of the Euphrates-Tigris, the Indus, and the Nile. As a matter of fact, the size of the settlements was directly based on the capacity of the human’s ability to travel on foot. The size seldom exceeded one-half a mile across—a 15 minutes leisurely walk. Women could carry the needed amount of water for about 500 feet. This also contributed to a settlement’s layout (Antoniou, 1994:6). Such linear properties of human activities resulted in the emergence of the linear open space—street/road, and then resulted in the base for successful settlements, eventually becoming cities, since such linear open spaces were tied to every person’s daily routine, and provided the idea places for the exchange of commodities, services, and ideas.

**Human Settlement**

![Diagram](image)

**Figure 2.3** The emergence of streets

### 2.2.2 The development of streets and why

The development of street coincided with the natural growth of human settlements; then later, religions and the division of social functions; and civilization. Civilization literally means living in a city. Multi-settlements resulted in a division of population that specialized in different social functions. Antoniou simply explained that the city population had to import food from the outside, but would export manufactured goods to the surrounding country.

Street development in the classical era had its own natural growing pattern—“the bottom up.” In classical Europe, the center of activity in a Greek Polis, or city state, was the agora, or marketplace. The town layout stayed in an irregular shape, until the Hellenistic phase. With
an increase in population and wealth, cities began to take a more definite shape, expressing a new order in the town plan. (Antoniou, 1994:7) As the late Hellenistic phase merged gradually with the Roman period, the Roman practice of town layout had its roots in military encampments. At an early stage, the Roman land commissioners evolved a system of subdividing towns into individual lots. However, the major street skeleton still had a rather natural-evolved base—two axial roads intersecting at right angles. The *cardo* (north-south) was often used for processions; the *decumanus* (east-west) was developed for commercial activities. (Antoniou, 1994:7) This “cross” street pattern was probably the earliest regulated street layout. The same phenomenon was also observed in numerous ancient Chinese towns and cities from the commodity exchange period.

As we can perceive from the examples above, the early single street developments were the children of the formation of city/town activities, and they happened where those activities took place (although expressed in today’s reversed way, the central activities took place along the major streets). However, the major streets were indeed formed by people’s subconscious—a subconscious not only exists within the individual but also within the society and its environment, which conducted people’s activities with a hidden order.
Figure 2.4 City patterns of three natural-grown cities: Nangxiang, China (top left); an Italian city (up right); and a Chinese city (below) (Wang, 2001:25)
<table>
<thead>
<tr>
<th>Feature</th>
<th>Disjoined Incrementalism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>Process of accretion</td>
</tr>
<tr>
<td>Design</td>
<td>On a relatively small physical scale; Disjoined increments; Iconic design; Pragmatic design</td>
</tr>
<tr>
<td>Results</td>
<td>Natural chaotic form; With certain pattern; Highly Inhabitable; Cultural context</td>
</tr>
</tbody>
</table>

Figure 2.5 Summary of the “bottom-up” street development process

2.2.3 The regulation of street patterns—Why, where, and how

As the population, the political power, and the social wealth increased to certain degrees, the city activities became more complex and multi-leveled. These activities, at different levels, naturally formed streets into different levels. Thus, new minor streets, as formed by the activities, came into being to support the existing streets, used to inhabit all activities. At this stage of street evolution, street patterns emerged.

**Europe in classical era**

The towns of Hellenistic times (from the mid-4th century) as mentioned earlier, had an increase in population and wealth that brought a new order to the town plan. But, this type of town plan was still a “bottom-up” plan. As small individual communities gained more power, the later Roman practice of town layout had to root in military encampments or *castra*, and the earliest concept of subdivisions took place at a second level of town layout (the first level as referred earlier, the “cross street” pattern).
Medieval Europe

In medieval Europe, the growth of commerce and trade was the chief factor in the evolution of the medieval town. Regular trade routes developed between sources and markets. Along major streets, central markets tied up streets commercial activities, and maintained its own importance. As culture accumulated, central markets became more than trading areas, but also central open space. Such central open spaces were an important feature in many Italian towns. “The Campo of Siena, laid out in the 14th century, is adaptable to many kinds of gathering and festivals, notably the Palio, or horserace, through the streets of the town. The broad, fan-shaped Campo is surrounded by tightly packed buildings, with access by way of a maze of narrow streets.” (Antoniou, 1994:9)

Early Islamic Cities

Early Islamic cities as well, were military camps called “fustats,” which were built either in the vicinity of pre-Islamic towns or completely isolated from the rest of the non-Muslim population. A major city component was the “suq,”—a marketplace similar to the agora or forum in Europe. The fully developed Islamic city evolved gradually, with fortified walls enclosing the jami (main mosque) and madrassa (place of learning), the religious and political centers of the community. The suq was the focus of commercial and social life, and the urban pattern was based on a controlled hierarchy of roads, spaces, and buildings. (Antoniou, 1994:7)

Ancient Chinese central cities:

In ancient Chinese central cities, the political body felt obliged to reinforce the census management. After the regulated street pattern for the central royal area with axis and ring-roads for central defense, the area where common citizens lived was regulated to gain a better understanding of the location, the size, and the population of different professions. Although land was regulated with a rectangular shape in many cases, it was still managed by the concept of street, not block, and allowed irregular allies existing on a smaller scale thus breaking the rigid pattern into a more livable natural chaos for inhabitation.
There were three main reasons for regulation for streets.

1. Trading (natural growth pattern, irregular);

2. Military (defense, retreat, regulated)

3. Census Management (regulated)

In general, the regulation of street patterns were adopted basically to serve either the current or near-future purpose of defense, or the emerging purpose of central political control, trade, and census management. At this stage, the intention of plan and the concept of land use control merged into the natural growth of street patterns. However, trading, the essential city activity, still naturally defined the essential city space, irregular linear street, and marketplace.

2.2.4 The influence of Renaissance design

"The elements of classical civilization adopted by Renaissance Humanism changed the approach to design to a more formal one. The discovery of the principles of perspective in the 15th century altered the architect’s conception of space, so that every element had to be related to the static viewpoint of the observer. The new type of street, with its imposing proportions and formal landscape, was often imposed on existing medieval forms." (Antoniou, 1994:9)
One thing needs to be pointed out here is that the changing conception of space did not change the way people utilized their streets. Rather, the changing conception stimulated the people’s perception toward street space. Daily city activities formed streets before designers imposed their spatial explanation of perspective on the existing streets. It was the design for street space, and it was neither primary design of streets nor plan for future streets. However, it actually stressed the importance of naturally defined (by human activities) properties of street, placing the primary concern on the inner street space rather than land use divided by street lines.

Antoniou described the image of Palma Nova, as the following:

“...Palma Nova, a Venetian town probably designed by Vincenzo Scamozzi (1552-1616), was a perfectly symmetrical spider’s web of streets radiating out to the nine-sided defensive perimeter walls. The hexagonal central piazza acts as an observation post from which the streets are seen in perspective...”
(Antoniou, 1994:9)

The application of Renaissance design principles opened the door for systematic plans, at first used on a small scale, and then in new towns. The pattern of paths found in large landscapes, such as Versaille, was based on the single scheme techniques, the same as those suggested for the layout of new towns. Therefore, the concept of plan was developed further in the Renaissance period. A new city plan intended to have an “up to down” trend, in order to achieve the ultimate spatial perception that was believed by the designers, rich and powerful men. Later, the natural growth gradually lost its power in creating new streets to this aesthetic and power imposed plan.

2.2.5 The growth of population and refuge beyond the capacity of the old street patterns; the potential of growing chaos

Antoniou pointed out in his book that with the colonization of the New World, the selection of sites for settlements became a major task of exploration. The “settlements” here reached much more dimensions than the settlements in early human history. First, “settlement” here involved a much larger population, with a more specific social purpose rather than the simple goal of seeking good natural resources of earlier human settlements. Then, it was happened
under the social context which defined rich and poor, racial types, and different political
powers, and religions. Regulations began to be written into law. The importance of essential
activities in market and along streets receded, giving high respect towards individual land
control and the land use system.

As European settlers entered the Caribbean Islands, Mexico, and Central and
South America in increasing numbers, Philip II of Spain in 1573 enacted the
“Laws of the Indies,” which established uniform standards and procedures
for planning towns and their surroundings. The anonymous author of these
regulations, America’s first planning legislation, detailed the selection of a
suitable site, the location of important buildings and spaces, and the
distribution of living areas. The Laws were certainly among the most
important documents the history of urban development and influenced the

2.2.6 Urban growth and industrialization: the emergence of automobile, new challenges
on the streets

The social and urban changes brought by the Industrial Revolution were rapid and
unprecedented. Cities were founded and doubled in size in one generation; factories, roads,
canals were built, housing grew. Street dimensions were regulated by different dimensions.
First, The Public Health Act of 1875 set minimum standards in Britain for the width of
streets and the construction, ventilation, and drainage of buildings, creating a monotony of
streets and houses still seen in urban planning. (Antoniou, 1994:10)

Although the growing public, private transportation, and the emergence of the automobile
contributed to the expansion of suburbs, the streets were required with new regulations to
control the traffic. Automobiles and pedestrians were mixed together, and soon severe safety
and efficiency problems stimulated new street regulations, mostly in favor of the new
technologies that changed the traditional roles of streets in city life.

However, there were some industrialists that tried to provide better living conditions. A
pioneering scheme in England was Titus Salt’s model village of Saltaire, outside Bradford
(1853). Other examples include the Krupp Works colony of Schederhof, Essen, in Germany
(1872-3), and Pullman City, Illinois (1893). The Garden Cities of Tomorrow (1898), by
Ebenezer Howard, offered a “healthy, natural and economic combination of town and country life” that formed the basis of many later planning techniques. (Antoniou, 1994:10) Although the growing impact of industrialization increased concerns for better living conditions, the effort remedies focused more on land function than the essential nature of human activities. They offered green and relatively more natural land for people outside the industrial zone and inner city system, separating commercial industry from daily life in order to minimize the industrial impact on living conditions. But at the same time, it minimized the most essential elements of city life that had been supporting the versatility of city life for thousands of years.

Instead, living in the suburbs contributed to industrial expansion. At the turn of the 20th century, more than 1 million people lived in the outskirts of New York. By 1928, 21 million motor vehicles were registered in the United States. Nevertheless, those efforts attempting to provide better living conditions, had little power to eliminate industry from overtaking people's lives in the city. As people moved to suburbs, the essential traditional city life lost its social status, and it probably only exists in people’s subconscious when searching for inspirational spirit through their everyday routines.

Figure 2.8 Highway system (Antoniou, 1994:11)
2.2.7 Post-war: new cities plan for urban growth and new street design theories/methods

The transportation industry stimulated peoples’ abilities to immigrate. Large numbers of refugees, growing technical development, and the need for political control called for systematic plans for new cities and urban growth. Allowing the potential industrial growth and leaving space for living became the planner’s dilemma through the process. Eventually, land use became the primary concern of city planning. And, most of the time, land use planning tended to separate residential zones from industrial and commercial zones in order to avoid not only environmental pollution, but also massive auto transportation where people lived. As a direct result, the streets that used to be inhabited for both living and trading, gave in to such a separation, and no similar alternative — an alternative physical space that was capable of containing city activities through people’s common daily routine— could be found to make up for the loss the everyday spirit.

Street in the “garden city” and visual order of street space in Lynch’s study showed the concern of negative effect of mass production and the growing interests toward natural environment. However, without considering of the street capability to carry city activities through daily routine, it left little room for planners and designers to maintain city spirit that went beyond a simple livable environment.

As in theory, Lynch believed that he would be able to observe specifically what about a city’s built environment is important to the people who live there.

One of Lynch's innovations was the concept of place legibility, which is essentially the ease with which people understand the layout of a place. By introducing this idea, Lynch was able to isolate distinct features of a city, and see what specifically is making it so vibrant, and attractive to people...

Imageability, another term introduced by Lynch, is the quality of a physical object, which gives an observer a strong, vivid image. He concluded that a highly imageable city would be well formed, would contain very distinct parts, and would be instantly recognizable to the common inhabitant. He also explains that a well-formed city is highly reliant upon the most predominant city element, paths. Examples of well-designed paths may include special lighting and having clarity of direction (not being comprised of confusing or
Lynch's findings have been implemented globally in city planning operations in recent years. He emphasized the linear element of city, path, as viewports for its inhabitant; it certainly improves the place legibility and did contribute positively in the city image. Yet, the part that how people inhabit the space remained neglected.

The theory was also expounded by Jane Jacobs. She pointed out the earlier city models destroyed the city spirit by posing city as a technical machine on peoples' lives. In her book *The Death and Life of Great American Cities*, she pointed out that the basic context of streets involves three elements: Safety, Contact, and Assimilating children. This conclusion brought back the respect of street life. However, although Jacobs had set up principles for street design, under the land use control, a single street usually lacked the "body" to start out real street life. The fact is systematic land use planning usually comes before single street design, and adequate research has yet to be completed so that with such a land use layout, people’s subconscious will be released to make versatility out of a daily routine so that spirit will be returned to the street and along the street into the city.

![Figure 2.9 Spatial sequence analysis (1) of Changshu Historical city, China. (Wang, 1996:223)'](image_url)
Figure 2.10 Spatial sequence analysis (2) of Changshu Historical city, China. (Wang, 1996:224)
CHAPTER 3 CASE STUDIES

Land use is the primary strategy adopted to separate living spaces from industry. The trend increasingly is for cities to become sprawling conurbations. Regardless the street life and city activities, to fulfill such a separation, are relatively easier to carry out by land use planning in new cities. But when it comes to old developed cities:

...while the developed world is preoccupied with increasing urban amenities, cities such Bogota, Bombay, and Cairo are facing a different set of priorities. In Cairo, some 150,000 migrants have to be accommodated annually, and nearly all the poor live in substandard, illegally constructed housing. An additional 2 million dwellings will be required by the year 2000. A new strategy is aimed at spreading populations away from the congested center...Urban growth is such that neighboring metropolitan cities are approaching each other along major transportation arteries to form a megalopolis, as evidenced along both coasts of the U.S.A. The Channel Tunnel is linking the heartland of Europe—London, Paris, Amsterdam, and the Ruhr Valley... (Antoniou, 1994:11)

Moreover, the current problems go beyond individual nations. As same technologies, science and industries spread through out the world, they bring similar problems among either new cities or old cities, as well as the planning strategies. Worldwide, planning activities require coordination and urban management on a vast scale. Meanwhile, similar strategies cause increasing pressures to retain the identities of individual cities through careful policies of conservation and rehabilitation.

Antoniou studied the past and present of 18 cities around the world to demonstrate the qualities and failings inherent in the process of urbanization. He wrote:

They deal with the sequence of development from the early beginnings of commercial organization and the emergence of culture in Athens and Rome, to the rapid growth of metropolitan cities such as London, Paris, New York, Hong Kong, and Tokyo. Washington D.C., laid out as a capital for a new and powerful nation, conveys the dynamic force of city development, from a clear site to a powerful government center through the process of urban design... other cities such as Prague, Florence, and Jerusalem have resisted the full impact of dramatic change in their centers and have retained the traditional qualities of human scale... Mexico City, Istanbul, and Moscow, have a glorious past, but are now coping with unprecedented urban problems. Such cities have scarce resources to deal with the needs of modern development.
Relatively new cities such as Sydney and San Francisco have taken advantage of excellent locations, contributing to the quality of life for their multicultural citizens... (Antoniou, 1994:11)

To study the specific problems that the cities with different backgrounds/environments are struggling with, we will look closely to two cases. They both show the conflicts between the nature of economic production, which determines the nature of systematical plan and the natural chaos (although with certain hidden patterns) of human behavior, which calls for less pre-set technical constraints to reach its potential. One case looks at Ciqikou, Chongqing, China, and its city pattern formed by three major streets. The other case analyzes the urban sprawl in Shanghai, comparing the city pattern and street life in the new commercial district and that of the old city center mixed with residential, political, and commercial elements. Both cases presented here are based on first hand experiences, communications with local residents and scholars and contemporary educational websites.

3.1 The Streets of Ciqikou, Chongqing

3.1.1 Background of the city

Today’s name for this area, Ciqikou-meaning the material-china in Chinese, named right after the emergence of a famous china factory that was found by wealthy business families in 1918. Ciqikou sits in the southwest mountainous area of China. It is located upstream from the Changqing River and Jianling River. With a natural harbor along Jianling River, it became the major material and resource transition location for downstream cities. In a mountainous location, water transportation is probably the best way for material trading, and it made this land the most prosperous city in Southwest China for hundreds of years.

Old Ciqikou had 12 streets and alleys, which were believed to date from Ming (1368—1644) and Qing (1644—1911) Dynasties, based on their building styles. The streets were paved with stone, and along each side, various stores stood side-by-side, naturally maintaining the edges of the street space. The most important major street was Jinrong Zheng Street (Zheng means front and major) located through the city and ended at the harbor. Major trading activities generated by the harbor, gathered along Zheng Street. Important business men
opened large stores at the harbor to receive and load materials and agricultural product. Major products included cotton, fabric, coal, gasoline, salt, sugar, western products, daily consumer products, hardware, local china and paper, and cigarettes.

When Chongqing was recognized as the second capital city of China, the statistics showed that Ciqikou had 1670 banks, stores, and various manufactures and 760 family stores, with over 300 ships and boats (10 tons/per ship or boat) coming in or out of the harbor daily. The most prosperous trading season, is the dry season (Lunar calendar August to April). Along the harbor and the river bank, people built temporary streets---upriver street, downriver street, and specialty streets---Wood & Bamboo Street, Metal Street, and China Street. Temporary markets were built at the street openings too, including pork market and rice market. Along side the big harbor were old traditional factories --- four silk factories, one wool factory, and two military supply factories (now steel factory and Jianling factory), and constructed their own harbors. From morning to evening, both water ways and the streets were full of trading activities and traffic flow. The Douya Gulf beside the big harbor sheltered four local organizations doing business in rice, wood, bamboo, and coal.

Moreover, natural resources and major exports or import industries generated the local city life. Almost every factory or organization (gangs) built their own community center. In Ciqikou, twenty-six food stores, twenty fabric stores, and one hundred and sixteen tea places and restaurants were built along major streets over time, fulfilling local daily consumption needs.
Along with being a trading location, Ciqikou was also a mixed big residential area as well, due to the traditional way of manufacturing. City life happened mostly along the bigger streets. Smaller alleys were the places for semi-public life among small neighborhoods. While business men went out for trading, their families, usually with a large group including servants, stayed in the neighborhood or went to the streets seeking daily supplies or simply communication with other families. This inspired the city with its most attractive feature—the tea house. (http://cqfj.online.cq.cn; http://www.tintcn.com; Date accessed: May 10, 2004)

3.1.2 Life along the streets—the role of the tea house

Tea houses usually opened directly to major streets, and spread along streets everywhere. During the second capital period, there were more than 100 tea places in this area, gathering the rich and the poor, individuals and gangs. The feature that made the tea houses the most popular place was the “talking drama”, and there were at least four major types. The drama was mostly about real news, and people would gather together get to know what was happening in the world or in a small family, and give their own opinions. Chat between people is one of the most popular activities, and was (is still) called “the dragon gate parade”. This showed clearly how people took communication seriously in their daily life. Moreover, the drama attracted people such as young housewives, ladies, or rich people seeking entertainment selecting the best actors/actresses. Immediately outside of the door of the tea
house (the door seemed to always be open), trading created this very local accent. People in
the tea house would pay attention to what was going on in the street, and people selling little
decorations would go inside the tea houses, advertise their items, or simply shout about their
commodities outside the door in the street, to see if anyone inside the establishment would be
interested in their wares. Even for the most inner-going personalities, the place had its
irresistible charm—the food. Although Chongqing is renowned for its home cooking, many
restaurants had their own secret recipes that you could only find a specific food at only one
place. To show their identities, a few restaurants would only sell their named dishes with
limited quantities at a certain time of a day. Even rich people would appreciate this rule, and
they respected it to show their own elegance. Therefore, at a certain time of a day, the street
would have people waiting in line outside on the street; they would chat, and if unfortunately
the dish ran out, the people who were left behind would talk to each other saying that they
would return earlier the next day. What else can possibly compare to this pure and simple
street spirit?

The concept of the tea house and the street space were so powerful that inhabited all different
types of people and activities. However, it is not a concept that was created by a plan, rather
it was created through years of the effort of these individuals who were only here at first to
get material supplies, and at the same time found his/her own way of leading a joyful life, but
when all the different individuals came together, the versatility of city life was created. And
then, it not only became a privilege to be in the place but also attracted more outsiders to come in. To put the development in a simple linear way, it would be:

Natural Resources—transportation for goods—individual business men—temporary dwellings—groups of business—need for longer term of stay—rich people bringing service people for themselves—people coming in to do service make money—growing need for restaurants—more local residences—drama bringing money into restaurants and were welcomed / trading for local consumption—chatting—trading + chatting + population = city life.

This type of growth is a natural “bottom-up” pattern, so that everything happens on a perfect human scale. The most suitable scale for city life took place in the street, as the linear relatively more flowing elements with tea places as the relatively still nodes spreading into every corner of the city along the streets.

Figure 3.4 The natural chaotic pattern (1) (Photo by author)
Figure 3.5 The natural chaotic pattern (2) (Photo by author)
3.1.3 The lost spirit

Industrialization grew rapidly; trading for goods changed its scale both in the types and the quantity. The amount of trading soon exceeded the capacity of the natural harbor, forcing people to find and build a new transportation center for goods.

In 1958, after individual factories moved out of Ciqikou to seek new locations for their heavy cargo ships, the major harbor of Chongqing was built at Hanyu Road. The harbor of Ciqikou was no longer used for commercial and trading use.

This shift greatly reduced the local population. Business men and families left, and then moved out with their entire family, individual service people fled to the big city, trying to find new constant customers. However, the scale of the city expanded. Traditional human scale services found themselves barely able to survive. Local residences and local manufacturers had less freedom to move out without restarting a new career. Worst of all, all the essential street life was abandoned. Although remembered and regretted by its people, they had no way to revitalize without a good financial reason. Figure 3.7 shows the differences between the new harbor and the old harbor. Note the rundown area on the bottom (Ciqikou) and the modern look of the new harbor of Chongqing.
3.1.4 Initial efforts to revitalize

Chasing the industrialization trend, Chongqing began to face series of urban problems. Most of all, people, including younger generations, found it uncomfortable to live along side the industries, leaving the daily life blank without communication. The government felt obliged to recover the identity of the city and found the lost pride of the people.

The government soon discovered the essence of Ciqikou streets life. This area was facing a severe threat of losing population, along with its street life. Local residences were trying to move out; there was no reason for them to stay and no way to make a living. Besides, the living conditions became unbearable, other than the lost spirit that used to be outside doors, the sewer, the deteriorating buildings, and insufficient power supplies had no revenue to renew themselves. To maintain the population, a few years ago, the government made a policy to eliminate emigration. Local residences living along the historical stone streets, found no way out!

Modern people in the new city centers, recall their old memories along those stone streets. Yet their businesses tied them to the new city with little identity, and even when they returned to Ciqikou, the streets without living spirit only brought disappointment and regret, and pushed them out. They had no reason to stay! Ciqikou, became a “bounded city”!
3.1.5 Remedies—the new scenario for economy strategies

Although the local architecture and local materials garnered a lot of respect for their unique structures and building styles, the most desirable feature is not about them. Unlike Suzhou Gardens (which used to be a private family housing for business people) that have a worldwide reputation for their landscaping and architecture, major buildings along Ciqikou were for public or semi-public use, mixed with small residential units hidden behind. They were
basically appreciated for the way people shared them. The streets carried the essence of city life and could not be restored nor bring inhabitants back by historical building reconstruction.

After a few years of individual building and street restoration, the “bounded city” phenomenon did not turn out better. A group of urban design faculty and students from Chongqing Architecture University took on the task with a passion toward the old street life memory and began to seek ways to revitalize this old city center. The government, at the same time, was willing to give any possible support to rebuild the old city identity.

The central problem, as discussed above, was how to make city life return to this area, but not to restore historical constructions. By looking back at the history, the reason for the prosperous activities was brought by the human scale local manufacture and service (tea place, restaurant), which at the first place was generated by major commercial trading activities that brought in the economic resources.

It would be impossible today, to reuse the harbor for trading. This would definitely be an inefficient way for today’s development. Other than this, what sections could stimulate constant revenue? Tourism could possibly be the best way to solve this problem. It is the most efficient way to bring outside revenue into one area. The questions are how to develop it, and who would be the potential customers?

The group of people who has the most desire to go to Ciqikou, would be the people living the surrounding areas of Chongqing, but outside Ciqikou. The basic reason is that the cultural life along the streets was local daily culture. The best spirit was in the routine of people’s daily leisure communications. People who live further away may be curious about it, but they are not adapted to it. It had a unique local identity, just like people in this region would have their original tea in the afternoon, but many western citizens would have afternoon coffee. The “bounded city” phenomenon actually proved the potential for this group of people.

To make the first move to revitalize tea places, restaurants, and talking dramas, the first revenue would not be available by itself. The government decided to pay the cost to the owners and the drama actors for the first stage. The goal is to rebuild the possibility for
people to recall the old street life and over time, the growing number of visitors seeking an afternoon tea with the “dragon gate parade” or the best performance of local drama would bring visitors into the city, so that the street life would be able to renew itself without government financial support later on.

A good economic scenario here weighed more than the simple improvement for the living infrastructure. The local residences were excited to start their career at their front door, and every time when a visitor came by for a tea or some local fabric, they began to tell him/her the legend behind the city.

The year 2000 was probably the turning point for Ciqikou’s history. A film producer was so touched by the inspiring traditional life; he made a movie, telling the daily stories of families and the happenings on the streets, and the “dragon gate parade”. It inspired people with their almost forgotten identity. The movers (bangbang) who are wandering along the streets of Chongqing city, tell their customers about the film, their pride of being a wander in the streets impressed people both in the city and from outside. Ciqikou gained great attention.

Figure 3.11 The revitalized major street—“Zheng” street, with a chain of stores (http://www.hebtv.com/2003/ca13560.htm; Date accessed, June 18, 2004)
through this; it became a home, an old family place for people in the city that people constantly came in for a street hotpot or to discuss small business.
3.1.6 A Human Scale Economy

One thing that has been hinted here is that the street life not only has its cultural value, but also economical value. Economy was the primary drive to begin street life in the region, but there has to be a Human Scale to actually generate street life and give constant support for it.

As discussed in Chapter 2 the emergence and the development of street were tied to the commercial route, and the major city activity was commercial activity. Such commercial routes were not for rapid transportation, but for walking people. Thus, street activities have the best potential when being generated by a human scale economy.

3.2 Life on the Shanghai Streets—Pudong District (new central business district) vs. Puxi District (old districts)

3.2.1 Background

Shanghai is probably the most dramatic city in China during the past century. Located on the ocean, with Changjiang River and Huangpu River running across the city, it is the largest international port in China for trading and finance today. Even, a century ago, Shanghai’s local civilization was at a high level, and was well-known for its poetic living style and philosophy. Yet, it is also the most sensitive doorway for foreign people to go through. The industrialized western economies and western political philosophies met the local human scale culture, and bore some interesting children.
The city has a total of 16 districts, among which the Huangpu district and the Pudong district play a comprehensive role in the city. These two districts are divided by the Huangpu River. The streets along the river bank are known world-wide for its unique street night life that combined both Chinese traditional entertainment and the western style of aesthetic standards. The famous “flower girls” were probably the children of such a combination.

(https://www.lookatchina.com)

However, ever since the economy developed in Pudong, no matter how magnificent a residential house can be built, there has always been a saying “rather a bed in Puxi, than a house in Pudong”. Today, Shanghai people are still proud to say that their homes are in the east, despite the first class building construction and international conferences growing rapidly. They believe the cultural background and this area will keep their identity for their history. The life philosophy explains that the people must have an elegant manner and deep thought.
3.2.2 Old district (west) and its streets—a human scale and “bottom-up” development

Shanghai originally started its civilization in the western area where the Huangpu district is located today. In the first year of the North Song dynasty (1023), Shanghai began its wine business along the banks of the Huangpu River, and since then Shanghai formerly gained its name as a dwelling place in document records. In the early South Song dynasty (1265-1267), Shanghai Town was recognized. Later in 1292, the government built Shanghai County. Since then, Shanghai formerly started its civilization for its natural geographic advantage. In 1842, under the influence of The Opium Wars, Shanghai was forced to open it door internationally. Countries all over the world came to Shanghai, made their own boundary, and built this land with different country styles. Shanghai became an immigrant city.

(http://www.chinacsw.com/cszx/shanghai/gaikuang.htm; Date accessed, May 10, 2004)
Local businesses met global commercial activities; traditional life style crossed paths with western immigrants. In the old districts, today's city pattern is a result of all these years of experiences and changes, and it is an accumulated effect of different historical fragments that were naturally or even randomly put together, than a pattern of consistent comprehensive plans.

The city expansion followed the extension of existing major streets that contain daily activities associated with human scale economy including food culture, hand-craft product commercial, small hardware businesses, and traditional community activities. The later improvement within these old streets focused on the quality of existing street conditions and the city functioned on a bigger scale. These improvements allow the districts to commute with international businesses, and carry out some urban scale economy or activities, while at the same time, maintain a human scale economy to support daily activities.

3.2.3 Yuyuan Garden and Nanjing Road

The street patterns in the old districts have experienced significant changes during different eras. However, its importance of being a downstream port of Changjiang River keeps bringing business into the city. Local culture along the street maintains its human scale and survives successfully under different street layouts. Yuyuan Garden is where Shanghai originally began its civilization 700 years ago. Today, its unique culture attracts 30 million foreign visitors every year, bringing revenue into this district and at the same time providing local residences a vivid daily life. (http://wm.eastday.com/shyy/index5.htm; Date accessed, May 02, 2004))
Figure 3.18 Yuyuan Garden, Ming Dynasty, the Year of Jiajing
(http://wm.eastday.com/shyy/index1.htm; Date accessed, May 05, 2004)

Figure 3.19 Yuyuan Garden, Qing Dynasty, the Year of Tongzhi
(http://wm.eastday.com/shyy/index1.htm; Date accessed, May 05, 2004)
Street activities begin in the afternoon and last until late at night. After work, people visit the streets on their way home, picking up some favorite dishes or some small, inexpensive products. Some will have afternoon tea with friends. Figure 3.21 shows images of a simple ordinary day, regardless of the season.
Nanjing Road is the most prosperous street in Shanghai, titled with “the first commercial street of Zhonghua”. It starts at the east from the river bank (immigrant district) to Yanan Xi road at the west and with a total length of 5.5 km. It is divided into west and east segments by the Tibet zhong Road. Nanjing Road was built in 1851 as a small path across the field. Since 1853, Fuli Company opened its business on the street, by the year 1862, 14 commercial companies, including Waton’s company and old Deji Pharmacy, and nine wool and fabric stores opened their businesses. With the city development and harbor bringing imported goods, Nanjing Road achieved rapid growth—hundreds of stores were built along the street, and Nanjing Road extended westward to Tibet Road and Jing’an Temple. Today, Nanjing Road is the largest retail region and commercial information center, carrying millions of people every day and night.

Although the physical scale of Nanjing Road is tremendous, spirit of the street that still lies within its human scale is tied with everyday life. Of the total 5.5 km length of Nanjing Road, the most prosperous section is a 1033 m long 24-hour pedestrian street formed in 1999. This
section contains major commercial components—“Yibai,” “Hualian,” “New World,” and at the same time, retail components for food, entertainment, and services that add versatility and attract populations on a daily basis. Figures 3.23-3.25 illustrate the average daily activities along the street from morning to evening.

(http://www.ctn.com.cn/china/shanghai/you1-34.htm; Date accessed, May 03, 2004)

Figure 3.23 Nanjing Road at night (2)
(http://www.lookatchina.com/web_ch/phpBB2; Date accessed, May 07, 2004)

Figure 3.24 Street breakfast

Figure 3.25 Nanjing Road at night (1)

3.2.4 Streets in Pudong—an urban scale and “top-down” development

The streets in the Pudong district were built with certain intentions. They did not grow with a natural extension, but grew as a bio-product of the boundary setting of land parcels. The theme of development in Pudong District was defined by the government, based on the
consideration of Shanghai’s unique location as an international port and its historical reputation as a commercial doorway to China.

Although the goal of development has been set solid, to build the commercial center of Asian, the construction happens merely based on the number and the size of parcels for each development, with a physical environment that meets the world’s standards. The theme of such development is almost a pure urban scale with activities associated with rapid traffic transition, and convenient global connections. However, the urban scale economy is not effective when it comes to city life, especial when it has no cross path with human-scale daily activities. The expensive central park was built and has brought to a second phase of construction. But comparing to the Nanjing Road and Yuyuan in the old districts, the central park has significantly less users all year round. Figure 3.26 also shows clearly the lack of inhabitation of streets in Pudong district and the plan and design of the district seemed to happen at the same level of where the image was taken—far above. The streets are always eight lanes, yet they carry little activities, and almost no versatility compared to the narrow streets in Yuyuan.

Figure 3.26 Pudong District (Photo by author)

3.3 Conclusions from the Observations of Ciqikou, and Shanghai Districts

The example of Ciqikou clearly shows a struggling situation occurring in the old city center when a city’s major economic activities shift away. The human scale components such as food, entertainment, and service activities lost their solid economic base and no longer
formed the street activities which caused the spiritlessness of the region. On the other hand, the example of Shanghai, demonstrated the poor capability of pure urban scale economy to provide a good street life even with its excellent physical qualities. Architecture in the Pudong District undoubtedly has achieved first class internationally, but when comes to the streets and the whole district, foreign architects and planners usually hold a critical attitude and wonder about the impact that may come later. It is a problem that comes with this pure urban scale economy—a scale that is not capable of supporting daily life, so it does not form a real comprehensive city center.

However, the case of Ciqikou also demonstrates that the street life not only has its cultural value, but also has economical value. In the case, street life is tied to its culture context, and when connected with the urban scale economy, its own economical capacity takes place and is able to sustain itself. Moreover, although the urban scale economy is not capable of supporting daily street life, it can benefit from a connected human scale environment and at the same time provides the human scale economy a solid outside economical support. The success of Nanjing Road and Yuyuan garden are the examples of good connections between human scale economy and urban scale economy that brings life to the streets.

Streets reflect the entire city’s image. It is more than just a physical element within the city plan. The street needs its own reasons to be there in the city, and its own ways to serve people and to support different activities. The quality of a street cannot be judged by its physical qualities and physical capacities. The great streets are those that carry constant city daily life, and such life is always closely related to a solid economic base that generates food, entertainment, and services sections within a human-scale.
As discussed in Chapters 2 and 3, a good street carries city life. However, the sight of people attracting still other people is something that city planners and city architectural designers seem to find incomprehensible. “...they operate on the premise that city people seek the sight of emptiness, obvious order, and quiet. Nothing could be less true. People’s love of watching activity and other people is constantly evident in cities everywhere....” (Jacobs, 1961:37) A human scale activity is the key for a good street to interact with people’s daily life, which in a bigger context is usually generated by an urban scale economy. When a healthy economy has been established, the problem comes to how a street space is used by different people in a city spatial context.

4.1 People properties—users of streets

As discussed in Chapter 1, average people are the real bodies who are experiencing and creating the city. According to de Certeau, they are “the ordinary practitioners of the city” who live “down below”, below the thresholds at which visibility begins. They experience the city through an elementary form—walking. (De Certeau, 1984:93) However, different individuals go on to a street for different reasons: some are on certain tasks with certain purposes, some are attracted to the street for certain interests, some take a street as a daily routine to commute, and some just randomly happen to be there. All together they influence each other and create a comprehensive street life. Jane Jacobs (1961) studied the contribution of different types of street users. Next, we will look at a portion of her category of the user types and show how they contribute to street life. Basically, there are two important types of street users: (1) people on the street with certain purposes and (2) passers-by.

4.1.1 People on the street with certain purposes (seller, consumer, public artist, residents)

“Streets should be for staying in and not just for moving through... For centuries, the street provided city dwellers with usable public space right outside their houses...” (Alexander, 1977:590) The primary users of streets are those who come into the street with certain
purposes. They can be sellers, consumers, public artists, and even residents who live along the streets. Their daily activities are tied to the street’s human scale economy with certain purposes. According to David Sucher’s *City Comforts* (1995), life attracts life; these primary activities will eventually attract potential users to complete a versatile city street life.

The primary users—people on errands, aiming for food or drink—generate activities which themselves are an attraction to still other people. Moreover, the primary users keep the street with a fairly continuous population. According to Jane Jacobs’s theory (1961), this reinforces safety along the street. It is positive to attract passers-by. This, in turn, increases the potential for contact and generates non-purpose oriented activities.

### 4.1.2 Passers-by (randomly through and must-through on daily routines)

Passers-by are those people attracted into the street without certain purposes. Some passers-by even pass along the street daily to commute from work to home or to school. The reason for them to choose a specific street as their daily routine is not just a simple concern of the most direct path. Usually, if the street is not way off their possible routine, these people mostly are attracted by the positive activities generated by its primary users. This requires the street to be a space for passers-by to stay in and not just a place to move through rapidly. Again, a human-scale economy is the key. It gives people, both primary users and passers-by “concrete reasons for using the sidewalks on which these enterprises face.” (Jacobs, 1961:36)

Moreover, other than a daily routine schedule for people who commute from work to home or to school, the type of businesses along streets determines the time of day (even season) that a street attracts the most population. For example, enterprises and public places used during the early evening and night time draw population into street space and generate other activities. The Yuyuan Garden discussed in Chapter 3 is a good example.

Most importantly, passers-by bring revenue into the street. Their existence keeps the human-scale economy fresh with outside financial support, so that both users of the street and the street economy play positive impacts upon each other. The streets of successful city
neighborhoods are always “equipped to handle strangers and to make a safety asset, in itself, out of the presence of strangers…” (Jacobs, 1961:35)

4.1.3 Street watcher (eyes on the street)

Some people come to the street and observe from a certain distance to watch what is happening in the street. Their love of watching activity and other people is constantly evident in cities everywhere. Moreover, primary users such as store keepers and other small businessmen can be great street watchers. They hate broken windows and holdups; they dislike having customers made nervous about safety. Eventually, these street watchers maintain a social order along the street and help build a safe environment for other users. Meanwhile, their presence on the street can help attract more people and generate non-purpose oriented activities. Jacobs pointed out that “a lively street always has both its users and pure watchers.” (Jacobs, 1961:37)

4.1.4 Master of streets

The street’s master is its people. Yet, city planners and city architectural designers find it incomprehensible, and they usually operate on the visual order of street space. A good street is determined by how people inhabit its space. Both Jacobs and De Certeau’s theories have stressed the importance of how people use streets. Jacobs discussed the issue on a practical-oriented level that, in general, describes what kind of street is most comfortable, both physically and psychologically, for its users. De Certeau further stressed that streets indicate the subjectivity of people in a city, and it is both the question and answer to the how it is experienced by people. The problem is not simply about the sight of streets, but rather how to have all types of users stay in. Therefore, a street, in space and time, carrying the subjectivity of people, has its own spatial and temporal properties that are meaningful to its people and street life.
4.2 Street Properties

Another point that needs to be addressed is the street being discussed here is a street with meaningful street/city life, so that the scale of such streets is one that can be perceived by everyday activities and involve a certain amount of city population. Thus, such a scale differentiates our streets from highways that are designed specially for transportation between large districts or cities and from smaller paths/roads used only by one or several individuals that do not represent city life.

4.2.1 Connectivity

Although the main factor for a lively street lies in the economy along the street, the fundamental functional property of a street is its linear connectivity. People commute from one place to another daily, and usually it happens between their work or school location and their home. As we have discussed the emergence of streets in Chapter 2, streets emerged within human settlements and connected people to the port for goods. The location of major paths was determined by an economic context in a large region, an urban scale economy, and some of them become must-through paths for a large number of the population. Small businesses will find it great advantageous to locate themselves along these paths to achieve the maximum number of customers, and these paths then become streets—streets with a human-scale economy along side—that connect people from one location to another.

1) Street, with all kinds of users and activities, is more than a path

An active economy and the human activities generated by it are the key factors that differentiate streets from paths. And, connectivity is still the major character shared by both path and street.

2) “Main Street” is usually not a street in a real sense for its lack of connectivity

However, connectivity is easily ignored when it comes to city planning, and especially the myth about “Main Street.” Many “Main Street” programs in the state deals with its economy and are positive for generating activities essential to street life. However, the streets with a
name of “Main Street,” usually in reality are not streets but “malls” in the real sense. In a
city’s everyday activities, these streets are not able to commute people from one place to
another. The way people use them is the same as the way people use malls or even big
grocery stores—people come in on a nice weekend for coffee and buy a few items, and other
times of the week they have no reasons to go through the area. Moreover, many stores that
planners and designers put along the street are actually within a human scale—typically
having a chain of retail stores, one or two levels of buildings, wider side walks, benches,
classical lightings, etc. Yet, the major and fundamental support for human-scale economy is
its daily constant population flow. It is not some special that happens only once in a while.
Without its daily support, the retail chains along Main Street are financially fragile. Thus,
connectivity is extremely vital to the success of a Main Street program. In many cases,
planners and urban designers make a lot of effort to draw all types of attractions to Main
Street in order to obtain a sufficient number of people to use the street and support its retail.
These efforts include mixing a variety of different retail stores, building nice street fronts and
pavement, providing spacious parking, pleasant plantings, and street furniture. These various
attractions will help to increase the number of users. Yet when the street is out of the way for
people’s daily routines and does not achieve its connectivity, all these efforts will at most
help to create a well-equipped garden, and the street as an economic body will fail to sustain
itself.

3) Locations are connected through streets

Connectivity is one of the natural properties of streets. It supports streets with a constant
number of people and stimulates the growth of the human-scale economy. At the same time,
connectivity involves at least two connected locations. In the case of Nanjing Road, Shanghai,
it is its connectivity that connects a human scale economy that happens in the western district
to the major port leading to the Pudong District, an urban scale economical center. Therefore,
the human scale economy, mostly appreciated by people and street life, gains a convenient
outside support to sustain itself and at the same time provide the urban scale economy in
Pudong with a stable population.
It is easy to regulate several streets in a city as the major streets for daily activities. But, do they really stand the test of getting involved in people’s daily routines? There are various ways for people to commute from work to home, a simple land use study to determine the locations where most people work and the residential areas is not always sufficient to determine the most effective route to develop a major street economic program. People may drive, they may take the city public transportation, or they may simply walk. In a very complex and unpredictable situation, under-planning or even no-plan can be better than over-planning which is risky and cost-effective. According to Dr. Shih-Kung Lai’s research results of “Cellular Automata,” (*Annals of Regional Science;* 2003), even when there is no plan, over a certain period, natural human activities will reflect a certain pattern, a pattern hidden behind chaos, and will lead to certain structures. Sometimes this pattern is long-lived. Therefore, when such a pattern reveals itself, it will naturally come with products, including major active streets. Then, when opposed with event planning to deal with certain issues like environmental issues that come with chaos, such streets will be most effective and grow on a right track for the city’s daily activity.

4.2.2 Continuity (with certain escapes)

Street, as a form of economy body is different from a shopping center or a mall. As a basic spatial component of cities, its linear space determines its continuous property. Although a lively street has people stay rather than move through, the traffic flow along a street mostly orients toward the direction of where the street comes and goes. This is a property that also relates to the street connectivity. Streets in Ciqikou connect the harbor and residence, with continuous stores and small manufacturing companies. It is such continuity that shapes its local human scale economy that it is highly appreciated by its people and street life.

The effectiveness of a lively street is most likely to be achieved where there is no magnificent obstacle, and where the street orientation is clear. The end of a dead-end street has the least economic value unless it opens to a plaza or a major city center, through which the street continues and merges into other streets.
However, continuity does not refer to a close-edge street. Jacobs (1961) argued that most blocks must be short so that streets and opportunities to turn corners must be frequent. It is true that streets with sufficient entries and escapes have good capability to absorb people and to achieve its best potential connectivity. However, when facing all the street openings, continuity is highly important to keep the street in a good configuration.

There have been many approaches in practice that make efforts (with or without the intention) to achieve a good continuity for streets. Fumihiko Maki’s theory toward street space is originally based on aesthetic concerns for a good environment, but certain rules, including the control for the building height along streets, the most suitable width for a street, and the building style, contribute to achieve a good continuity for street. Thus, it is very possible to avoid the segmentation problems that might come with escapes and entries. Moreover, at the same time, a well-configured street space can utilize these escapes and entries to create an interesting corner space to increase the street versatility.

4.2.3 Spatial independency and spatial configuration

It is a common problem for street design in the practical planning world to happen either on a too large scale or with a too close view. When street design proceeds on a large scale, street is easily taken as a two dimensional linear element to define land parcels and land use. On the other hand, if designers look too close at a street, the design tends to be more like a design for a shopping center or a single public building, so that the connectivity and continuity properties will be weakened as well as the importance of the street to the city. Either way, a street will not obtain its spatial independence either as a space container that inhabits life or as a public spatial element for city life.

A street has its own spatial independence. It is not a simple two-dimensional element that composes other spaces, and it contains independent space, just like other city open spaces such as plazas and squares. The spatial form of street space differentiates itself from other city spatial forms by having a strong two-way orientation. However, the street space, with strong orientations, has its spatial configuration, and edges. In reality, there are usually two
active edges that interact with other spaces. Figures 4.1 and 4.2 show some comprehensive street examples of spatial diagram.

Figure 4.1 Spatial street diagram (1) (Wang, 1999:122)
Stores are side by side alongside the street, where both drivers and pedestrians are able to enter.

Narrower shopping streets close to the center allow restricted access (one way, speed limit) for vehicles, mixing with pedestrians.

In reality, due to the inevitable rapid transportation needed on streets, street designs designated for walking people focus on the active edges. It is positive to make a good street design, especially for economic reasons. Yet, this is not sufficient. To achieve the best configuration of street space, it is important to keep the spatial body and its edges connected and responsive to each other. The fundamental activities along the street include walking/moving through (the original street function) and commercial activity which generates street life. Different types of activities respond to each other and crossover. Yet, pure functional activities happen at certain spatial dimensions. In a simple way to describe this, the major spatial body of the street is for moving through; the edges are essential to commercial activities which generate city life and attract people who are moving through. People, who stand in the major street spatial body, have the ability to be attracted by
activities from both edges. They have the choice to join either one of them without deviating from their routines.

However, in a lot of street designs, including some very successful street designs, street space usually does not achieve a good configuration. The spatial body and edges are disconnected, bringing certain inefficiencies. Although many detail designs can make up for it at some level and even the natural chaos can create certain patterns to compensate for the configuration on a smaller scale, it will improve the street spatial quality by intentionally avoiding breaking down the street configuration. To explain the spatial disconnection, we can look at Michigan Avenue in downtown Chicago, as an example.

Michigan Avenue has been a good carrier for Chicago city life. And, it undoubtedly is a street that Chicago people are fond of using and proud to have. Indeed, it can be viewed as a great street not only in an urban context but also for human activity. As for the connectivity and continuity discussed earlier, it is successfully involved in a large population’s daily routines. Moreover, with magnificent buildings, street front designs, well-thought length according to people’s walking capabilities, the economic retail chain appears to be prosperous throughout the year. However, one problem lingers, that Michigan Avenue, in the real sense can hardly be perceived as one configured space, despite the success along its street sides.

Michigan Avenue is divided into three major areas. The widest part is located in the middle for traffic—auto traffic. The two sidewalks along Michigan are only connected by the technical setting of street-crosses. When one walks along one of the sidewalks, he/she can hardly have an idea of what is happening on the other side of Michigan Avenue. So that Michigan Avenue only means one side walk to him/her, unless one needs to cross the street through traffic lights. Most of the time, he/she only has enough attention paid to his/her side of the street. As one is walking, he/she is not well-balanced, since the stores, the attractive things, are only on one side of him/her. Many street artists will locate themselves facing the stores on the same sidewalk, and it will help to balance the configuration on their side of Michigan Avenues’ sidewalks. Thus, Michigan Avenue, in a real daily sense, is made of two streets—streets not well-balanced on their own. Yet, technically, people tend to treat
Michigan as one street; they bear the heavy traffic, wait for the traffic light, and cross the street to look for some stores, since the economy of Michigan Avenue seems to spread out with certain patterns under one framework. At the same time, the width of the auto traffic area of Michigan Avenue suggests it is not designed for slow traffic. But, frequent traffic lights, designed for pedestrian crossing the street, break down the fluid traffic.

Therefore, the major auto-traffic is slowed down by pedestrian needs and isolates the two sides of Michigan Avenue for their pedestrians. People on the street can barely have a comprehensive understanding of the activities as a whole of what is happening along the great Michigan Avenue. From this perspective, Michigan Avenue is not a configured space, but a deconstructed collage of spatial pieces with poor links in between. As a direct result, the traffic becomes a constant problem.

4.2.4 City memories

Jacobs pointed out that “cities need old buildings so badly it is probably impossible for vigorous streets and districts to grow without them.” (Jacobs, 1961: 187) Street is probably the most powerful city component that records and reflects the time change in a city’s growth.

Streets are capable to carry city’s memories. Such memories are not only essential to build a solid identity for a city and its people, but also have the ability—when appropriately treated—to stimulate a sense of active city life in people’s mind. When old buildings or traditional street components are not abandoned and contribute to certain city functions or activities simply by being present, it is quite possible that people’s subconscious may create an active street life image, which, according to “life attracts life,” will draw people into the street and generate greater city activities. Ando Tadao described the shared memory by people as “Genius Loci” that has the power to recreate and represent the culture context.

Ciqikou, discussed in Chapter 2, is a good example. It shows how, once a human-scale economy is re-established, the past memory or even just an indirect cultural heritage, draws people back to its streets, despite the fact that this area is no longer a commercial center or a major daily routine for the city. Needless to say, major streets are tied to city commercial
activity and daily routines will become more memorable and appreciated with the presence of old buildings and constructions. Eventually, what is recording today’s time will become one of the historical segments for future reference. On Nanjing Road of Shanghai old district, it is clear to see that old constructions not only achieve diversity with a long cultural root, but also generate different forms and patterns of activities and city life.

Moreover, history along these streets stimulates a sense of solid background for the city. People tend to trust things that are able to stand the test of time. A good street mixed with both old and new construction creates a dynamic atmosphere that is reliable and also fresh with adventure.

Jacobs (1961) also describes a successful city district as: “a kind of ever-normal granary so far as construction is concerned.” She said: “Some of the old buildings, year by year, are replaced by new ones—or rehabilitated to a degree equivalent to replacement. Over the years there is, therefore, constantly a mixture of buildings of many ages and types. This is, of course, a dynamic process, with what was once new in the mixture eventually becoming what is old in the mixture.” (Jacobs, 1961:189) Moreover, she articulated the necessity for a city and street to have aged buildings for certain economic reasons. “Time makes the high building costs of one generation the bargains of a following generation...Time can make the space efficiencies of one generation the space luxuries of another generation. One century’s building commonplace is another century’s useful aberration...”

In some effort for historical preservation, there have been interesting, yet also effective, ways to deal with old and new constructions. In Chicago and Shanghai, some historical constructions were divided into pieces and reinstalled into the new construction at its original place, especially on lower stories that are built to human scale.

Nevertheless, street has a powerful capability to represent both time and space of a city. To maintain a certain history along the street --- not only a physical construction itself, but also the meaning and certain life pattern—is not simply to preserve an object. In an appropriate and dynamic way, old constructions will be a ingredient of city diversity and generate meaningful street life.
4.2.5 Hierarchy—the structure of street networks

Not every street in a city is a major street that inhabits major city life. However, it is almost impossible for a single street to achieve its civil functions without the support of a series of streets, roads, and even small paths or alleys. Each street belongs to a certain range of street hierarchy in terms of its ability to inhabit street life and the size of area under its influence.

Street hierarchy changes over time, indicating a geographic shift of major city economy, which may or may not be predictable in city plans. In real urban design and planning practice, the goal usually involves the setting for future industries and economies, so that "top-down" planning seems inevitable. The common mistake is either to pre-set a well-defined street hierarchy, according to the visioning of future development, or mono-program most of city streets.

However, even if future development is fully predictable, the natural pattern generated by human activities is not. There have been some interesting experiments on small projects. For example, once in a large residential complex project in China, designers intended to put a big central garden in its center location. Yet, how to develop the paths within this garden remained an argument. There were many concerns, including functions and geometrical aesthetic. In the end, designers decided not to adopt any of the schemes but rather put fresh soil and simple plantings in the area at first. After about three months, numerous footprints overlapped each other and formed an interesting pattern that did not quite match any of the previous design schemes. Designers then examined this pattern and developed the design according to the footprints. It turned out to be successful in terms of both comfort for use and management of the garden.

The same phenomenon may apply to the city as well. A fully defined street hierarchy may suppress potential positive city life. Alexander (1965) pointed out in his book *City is not a tree* a design with restricted hierarchy rules will only break our life down into pieces.

Hierarchy is a natural property for a street to exist in a large context. It is something we may be able to modify and understand, but we cannot take full control of it, especially down at a
human level. After all, the natural pattern always involves major chaotic patterns. What can be the rule of chaos? Therefore, with the respect of the natural hierarchy of street, under certain scale of city plans, leaving sufficient room to allow the natural chaos to form its own pattern will support a district’s potential.

4.3 Street Patterns

Street patterns indicates the city physical context, especially when a city is observed from far above, or place on a map, street patterns directs viewers to their primary understanding of a city. Urban designers usually work on a course scale, where the street pattern become a visual order of a city. Yet, at the ground level, a hidden chaotic order directs people’s experiences in their city. So how different street patterns affect the people on the ground goes beyond visual order from far above.

4.3.1 “Y” cross intersections vs. “T” cross intersections

The history of city development indicates that many major human settlements and town emergences are related to the linear development of streets. The earliest street pattern in city space is “one river, one street” or “one river, two streets.” When social evolution entered the commodity exchange era, the street pattern developed further, and gradually formed a “Y”-cross spatial form. Many ancient Roman cities and ancient Chinese cities were typically under such “Y” cross spatial forms. (See figure 4.3) Even today, many valuable areas of a city happen around “Y” cross street intersections.
Most of the time, the “T”-cross intersections is primarily a direct product of city regulations with political or military reasons. In ancient Greek cities, before the war with Persia, the form of city space was irregular. Acropolis, Athens is a great example. Its layout is not a rigid relationship of axis or rectangular. Yet in 1940, a study showed all the angles between major buildings and routes in Acropolis have a mathematical relationship based on the view ports, geography, etc. During 5th century BC, while rebuilding Miletus, for the first time in western countries, a perpendicular street pattern was used, and formed a Gridrion system. It was recognized as the starting point for western city planning theory. The use for the Gridrion system was popular in ancient Rome, for political power and military defense purposes. It existed almost only in a “top-down” city control and was rarely found in a “bottom-up” city development and growth. (Wang, 2001)

The “Y” cross street pattern implies a certain degree of chaotic pattern, so that it is more inhabitable than the “T” cross street pattern from a human scale point of view. The “T”-pattern is probably a faster way to organize city functions, when facing rapid growth or significant changes of the era.

As for street life itself, the “Y” cross street brings more benefits. In ancient Roman and Greek cities, the “Y”-cross intersection was where the most active commercial and civil
activities happened. Such pattern contributes to a good sense of space. The uneven land size and angle creates a space with tension. In many ancient cases, this tension tended to form a small open plaza on the land with the acuity angle during the natural street development. Also, if the “Y”-cross intersection does not serve as a civil center, open space on the smaller side of the land may not emerge. Instead, the store on the angle will be the most valuable. Moreover, when the two intersected streets are not significant in their width and are long enough, the region formed by the two streets is configured as a whole. The “Y” pattern creates maximum contactable edges for inhabitants within one region.

In short, the “Y”-cross street pattern creates a great contribution to human activities because of its good spatial tension on a human level. The “T” cross street does not have such affinities to its people. Except for a single attractive street that the “T” net work may have, the street system has little advantages for daily life. Nevertheless, the significance for the “T” cross street pattern does have an ability to maintain a good political and theoretical control of the city and as for modern civil events, it also offers better management.

4.3.2 Grid system vs. Non-grid system—Meaningful Grids

As mentioned above, the first Gridrion system in the western countries was adopted for rebuilding the city of Miletus during the 5th century BC. It was a sign of the emergence of rational in urban design theory.

Although, the grid system and the non-grid system have been discussed a lot both in theory and practice, one point still needs to be addressed that although the grid system is easily to be taken as a child of development of geometry and central government power, the grid system is more than a simple graphic creation opposed to the city. It is also an abstraction from reality or the observation of natural city growth—an abstraction that has been rationalized to be utilized in large controlled city development that happens in a relatively short time period over natural growth.

As a simple fact, even in the non-grid system, the grids always exist in the city. Figure 4.4 and 4.5 show the gridrion pattern in two natural grown cities. Streets must intersect with each
other to form a city skeleton, even in primary city forms. The difference between the grids in the two different systems is that the grids in a natural growing non-grid system do not share the same size and distance, while in a planned grid system they usually do.

More importantly, those grids in a natural growing system most of the time are more meaningful on their own, than those in the grid system. For example, natural grids have many kinds, including the two ends of a bridge over a river. The bridge is a street, especially when built for walking through; and when it intersects with streets parallel to the river, the two end points intend to be active locations for various activities.

While the grid system is a rational conclusion from the study of the city pattern, and when imposed on the city, the “grids” simply become an intersection of street networks with less meaning. Especially, grids under highly regulated plans are evenly treated, and can hardly coordinate with city life that contains various functions and forms of activities. The grid-system has its own advantage as an expression of central city power and fast growth management and planning. It is easy to understand when facing development, which usually is more technical.
4.3.3 Street networks

Street networks comprise the basic city skeleton. The components of its structure include streets, intersected streets, and intersections. Beyond the space along streets, in a street network, the intersections contain their own spatial meanings and are not simply a one-dimensional element on the city map.

If we look close at “Y” cross intersection, we may find its space has a better potential tension for inhabitation. A natural-grown street pattern favors such a form, and its street network is able to carry the meaning of city life. However, such a pattern contains certain chaos, which makes it difficult for a big city to gain full control over it. The regular grid pattern is a simplified graphic conclusion from the natural street pattern. It is desirable for political and industrial development purposes, and most of the time less meaningful than the natural chaotic system. A great city needs both an active city life and good development with good political control, which requires the street network to have both good streets and street intersections, just like an organic system with healthy bones and strong joints as well.

4.4 Current Problems in Street Design and Land Use Design

In many cities, the properties of streets are seldom considered comprehensively. Designs are either looking at streets from too far, in a real large context, or looking too close like an individual building design.

4.4.1 Problems in current existing cities

Land use planning tends to focus on the function of city land parcels, so that it is very technical based. It usually takes the largest share in a city’s comprehensive plan. As a result, street derived from such technical function-based plan, are most of the time purely functional, like the transmission in a machine. Moreover, transportation is a big issue in today’s world, and is a constant burden for development. As a result, streets are designed and calculated with a capacity for automobiles. Although the connectivity of streets in this type of design is
highly concerned and in many senses, fulfilled, the street becomes a two-dimensional element, and loses its spatial context.

On the other hand, today’s planning reaches a high level of parcel data management. Land use maps are drawn with a clear expression of each parcel. If we use the Mass-void analysis to study these maps, the space of land parcels usually achieves a good configuration. Yet, for streets, especially a single street, it is very hard to perceive its spatial content. The street network may be easy to understand as a whole for its geometrical characteristic, but such geometry only helps form space with tension by treating each street as a single line that bounds a space. However, a street has its own spatial context, and is not merely a tool to form other city spaces. These problems are caused by designing from too far away when planning for streets.

Another problem in street design is looking at a street too closely. In this case, street improvements are often highly concerned, and usually tend to happen when the street reaches a very limited range for the city. Things that people like to look at in this case, are street furniture—lightings, plantings, sculptures, resting benches, street pavement, street parking, automobile control, and, when the designs are more thoughtful, street fronts, stores, or even the type and number of stores. But, what difference does it make from a design for a single public building, or a shopping mall? Streets have more important tasks than a mall. They have the potential to carry daily city life and not just for people to visit once a week.

It is okay to design some types of streets with only transportation consideration, such as major highways and interstates. But these are not streets to fulfill the concept for city life. It is also necessary to design streets in detail, but it should happen when the meaning of the street has been established or the potential to form a meaning for city life has proved to be promising. Otherwise, the street life cannot be brought to the street by those improvements, and the investment put into the street improvements will not be economically efficient for the time and over the time.
4.4.2 Street design in new city districts

Rapid urban sprawl leads to the emergence of suburban cities and new city districts tied to the central big cities. Some existing regions around metropolitan cities become satellite cities over time. The influence from the metropolitan area gradually infiltrates outward, and combines existing conditions with smaller adjacent cities. In these cases, the major connections between the metropolitan areas and surrounding cities are major highways or railways, and as within the surrounding cities, they usually develop on top of their own original city pattern.

However, many large new city districts or even satellites cities for metropolitan cities come into being under a planned city government control. For example, La Defiance is a commercial and business extension with modern architecture and new technology for central Paris, and Pudong District was planned and built as the central business district for Shanghai. The street design under these circumstances is extremely critical since the new region formed its pattern based on a zero background and involved a large number of immigrants tied to its metropolitan area. The plan happened under control and usually with a clear desire of what additional function is needed for the old city and what needed to be placed in the new district. Thus, the development of the new district is a complete “top-down” procedure. Yet, pure functional street design regarding the connections between old and new districts is not sufficient to build a general sense of space in the new area.

Some people may argue that it is not very necessary to have a vivid street life in new districts, since the cultural function can be fulfilled by going to the old district. But we do not want to see a district dead after business hours during the evening. It is still important to have human factors in even pure digital and office environment, especially when the region is big enough to have its own residents, and cannot completely rely on heavy-duty road transportation between the old area and the new area. The pictures below show the comparison between streets in Pudong and Nanjing Road. Although Pudong is the most important international port for China, its lack of human factors makes it uninhabitable.
However, it is possible to stimulate street life in new areas. And, the historical city development, especially the “bottom-up” development can inspire the street design to a certain level in a controlled city plan. Historical cities started their civilization in a specific location for a good reason—agriculture, convenient transportation for goods, or military defense. Similarly, the new district emerges for a desired major function of the old city, and survives with comprehensive support from the old city. Such a relationship is able to imply or even define a basic district structure and a geographic orientation for development. Also, the new function forms a certain pattern of activities. A good plan should not impose a graphically understandable street network on the area. Instead, major streets should be designed according to the implied city structure. More importantly, the street design should not be precise nor rigid for any reason, but rather base itself on proximity and recency, especially when down to a continuous human level. District planning is not a one time, or even a defined period process. It involves an observation—an observation toward disjoined increments brought by human activities; and a process of accretion in certain design scales over time.

In a word, one can set up a certain function required by the old district in a new area in one step via a “top-down” plan, but a life pattern which can be reflected from the street life, does not form over night. It must experience a stochastic process, which requires both time and
space. A good street design respects this nature, and on a human scale, leaves room for the required time and space.

4.4.3 Street life design in old district

Problems also exist in old city centers, such as the case in Ciqikou, Chongqing. Such problem usually lies in the geographic shift of major resources or the economic center, accompanied by a heavy population and a worsened environment burden. The past prosperous street life activity disappears when the district loses its connection with a bigger scale economy—the urban scale economy. The loss of this connection significantly weakens the service sectors and small manufacture that rely on their traditional customers who are brought into the district by urban scale economy.

Therefore, to revitalize street life in the old districts, rather than simply preserve their historical appearance, requires a new economic reason. Although most of the time it no longer serves as the city center for major city commercial businesses. The common method is to develop tourism for its own citizens or outsiders, depending on its own culture and historical influences. For example, Ciqikou is a tourist place appreciated mostly by Chongqing people. Its strength lies in its people’s “Genius Loci”, a memory that brings people back to where they believe their roots began. Although, it has definitely lost its economic significance in the city and for the country, it plays an important role in its people’s minds for its cultural context, which people always link themselves.

Ciqikou failed many attempts to revitalize its street life, such as building reconstruction and immigration restrictions, until it redefined its meaning to the city population, emphasizing cultural activities, including food culture, tea culture, local handcraft techniques and local manufacturing processes, and religious activities. By doing this, it no longer continues as a significant economy district to the city, but it maintains and sustains the city’s cultural context, highly appreciated by people, and attracts a constant city population consistently throughout the year.
Some old cities are facing more difficult situations. The entire city is a historical district and one cannot make a whole city simply historical museum. In this case, a clear conscious determination of where the city goes must come prior to any future preservation or development plan. There are certain answers needed for this determination, including whether the city still attracts a certain number of inhabitants. If yes, then why, and what will the local citizens do for living. If not, where will people go, will there be a bigger market nearby to draw people. Those answers will help to evaluate the historical city structure as to whether it will have economic values for today, how much of their cultural essence is able to attribute to the overall value, and what kind other support is necessary to add economic value to cultural essence for today. The form of support can be an adjacent metropolitan city that is commutable both for people and goods on a daily base. Typical examples can be found in Paris, France with its business district “La Defense,” and Shanghai’s traditional district. For them, one major task is how to build the new city/district, and how to link the old and new areas together and fulfill a great city’s complete civil context.

4.5 Synthesis—Factors in Street Design

4.5.1 Population density

Street life is the key indicator for the success of street design and the prosperity of economy. The master of street space and street activities is its inhabitants, “people.” And, street life is also a collective effect of a group of individuals, where the street is active with daily life and a good constant population density is maintained.

Population density and active street life are co-dependent factors and have a possible regression relationship. The very first thing to study in street design is the specific area in the city context, how to generate or maintain a promising population density. These factors give a solid base for a successful street design. Otherwise, a street design could be completely meaningless to a city.

Although a good street shares a major part of the human scale economy in a city, to maintain a good population density requires a solid urban scale economy. A single street design,
provided with a series of retail chains, will barely succeed to sustain itself and maintain a certain number of population most of the time is today’s reality.

Ciqikou, as discussed above, originally had excellent street commercial activities and street life. It did not sustain itself once it lost its importance as a commercial port up-stream of Jialing River and Changjiang River. The only way to revive its street economy was to gain a new meaning for the entire city of Chongqing. However, it was not possible to revitalize this area to the same degree that it once had achieved. The best Ciqikou could do now is to keep its importance for cultural identity. Its size was dynamic and small enough for the city and the people to support its cultural center, at the same time to prevent the loss of local population. With a great population in big Chongqing, it maintained a constant outside revenue to sustain its local human scale economy.

On the other hand, some new business districts—although under a promising urban economy—fail to hold onto their population. No matter how well they are equipped with modern technology and architecture. The problem may be caused by the lack of a certain amount of human scale economy, capable to maintain a constant population.

The relationships among street life, population density, human scale economy and urban scale economy are described below. An active street life needs a constant population density. Urban scale economy generates human scale economy, as well as the possibility for a good population density; whereas, human scale economy has the ultimate power to attract and constantly hold onto this population.

4.5.2 Location for streets with potential active street life

The relationships among people, street, and economy are as described above. The locations for active streets are implied. City centers—culture center, business center, and commercial center—are relatively easy to identify through history, natural resources, and geographic conditions. According to connectivity and continuity of streets, all the important city centers, their functions and their inner relationships suggest an abstract pattern of areas, where
activity is most likely to happen, and possible routes. This will help a city plan where to locate major streets.

We can still use Shanghai, Nanjing Road as the typical example. The bridges connect the two districts, and Nanjing Road is one of the several alternative paths for the large population that commutes from Pudong to old districts everyday. (See figure 4.7) With a series of well distributed retail chains and markets along side, it maintains within itself a good human scale economy that attracts people. Then people attract more people, even for those who Nanjing Road is not the most convenient choice for direct connection between home, school and work. Its great location is defined by a close connection to its urban scale economic support and its own historically significant location.

When a city is extraordinarily large in size, it is also okay to locate a major highway in the most direct way to connect city centers, since the scale of the highway patterns is beyond human perception in daily life. Thus, streets that contribute on such a scale can be treated as purely functional highways. However, down to scale, the location of major streets with street life becomes critical again.
4.5.3 Implementation—Street design with respect to street life in the urban design/plan; approaches in planning practice

4.5.3.1 Street as a space for city inhabitation

In urban design, future industrial and business development is not the only goal. To achieve a better environment—natural and social, for human life, is the ultimate purpose for every move of all kinds of development. Street design in urban planning, therefore, should be considered more than a technical element for geographic developments, as it usually is in today’s practice. Social activities have a major share happening on major city streets, which reflect the city’s spirit. “Think of a city and what comes to mind? Its streets. If a city’s streets look interesting, the city looks interesting; if they look dull, the city looks dull.” (Jacobs, 1961:29)

Street is not a two-dimensional object, and it is not a building. It has its own space to inhabit city life, and the unique spatial characters lie in its strong spatial orientation, which comes with the street’s connectivity and continuity for city function. In land use, we cannot treat streets simple as parcel edges, but rather bridges that connect together parcels with various land use functions. Moreover, streets have space not only for traffic—although traffic, especially slower daily traffic, is the generator for daily activities, for a person to connect himself/herself with other people in the city—but also for street life. Therefore, street design, in respect to street life must happen in a three-dimensional spatial context, with certain orientation, and on the city or district scale.

4.5.3.2 A design/plan that allows a chaotic pattern and continuously develops under the observation of this pattern

Today’s planning usually happens in a “top-down” manner for certain established goals and purposes. “Top-down” planning process inevitably appears to involve a “Physical Determinism” more or less. Comparing to “bottom-up” city development process, it lacks of the “motion determinism,” based on imagination, repeat, frequency, and recency. Therefore,
a highly regulated plan eliminates the potential for human activity with a chaotic pattern as its nature.

However, when the planning scale goes beyond people's ability to perceive, it is okay to use physical determinism based on the development purposes and functional requirements. Street life will happen under a smaller district context that has the most contact with people's daily routines, which in turn generates city activity. A good design respects the nature of such activity with its chaotic pattern. It provides city activity with all required social functions and most importantly, the space and the time to allow city activities to form their unique patterns. Moreover, it should be a complex of "design and no design" process. "No-design" gives the space and time for street life to form a pattern through the chaos; while "design" observes this pattern over time and constantly adjusts itself to provide better conditions and to avoid unwanted chaotic situations for the inhabitants.
CHAPTER 5 – CONCLUSION

The expansion toward street design and the exploration toward the production of human world will not end in either design practice or theory. As far as this thesis concerns, through the synthesis of philosophical theory, historical review of cities as the production of human world, and the contemporary case studies, conclusions can be made to enforce both the validity and the potential scope of street design, as well as its limitations for subject / object issues.

5.1 Street design is a design with the respect to the rule of natural chaos

An individual’s life is under individual rule. When individuals’ lives with different rules come together at the same place, they form chaos in the space and such chaos transforms over time. Street design, with respect to street life, is a design in respect to the rule of chaos—a chaos created by “being”—and forms its pattern in the space over time. Such a pattern goes beyond the power of prediction and forecasting. Individual rules do not respond to each other primarily and are disjoined increments in space. When they inhabit the same space, a process of accretion compromises the increments together along the time line. A chaotic pattern can be traced during the process of accretion in a spatial form. It changes over time in response to the modification of individual rules and social context. In short, the entire process and its outcome follow the rule of natural chaos and represent themselves in a chaotic pattern. The spatial pattern remains relatively still in a certain time period.

Street space is the most important city space inhabited by city individuals and reflects the social context of spatial distribution, which transforms over time. The essential component of street and the city is its inhabitation—the street life.

The “city as a machine” theory as presented by Corbusier has lost its power today after the industrial revolution. Street life, the main reflection of city spirit, needs to reclaim its significance in people’s lives, city development, and cultural and historical identities. Neglecting the rule of natural chaos in street design is a result of addressing material needs as the only development purpose. This breaks the harmony of human nature. Therefore, with
respect to street life, street design of a certain scale is a combination of “Iconic Design” and “Pragmatic Design.” Such a scale is able to contain a social context, not too big, so it can be perceived by people, and not too small, so it is open to city activity. Street design at this scale needs to involve a mixed process of “design and no design” in order to take control of what a city wants to accomplish and at the same time leave time and space for street inhabitation to form its natural chaotic pattern. So, rather than a one-time incremental process, the design observes the inhabitation as well as the spatial transformation over time, and constantly develops and adjusts itself according to the transformation.

5.2 The Subject of Street Design is “People”— a Collective Individual under the Same Social Context

The essential element on a street is “people.” The theme of street design, thus, is about coordinating the will and actions of people into a street space. “People” here refers to a collective effect of numerous individual human beings—when they come together and respond to each other’s actions over time, certain cultures or traditions come into being and form its social context, of which certain patterns, spatial or temporal, may be found.

Street design is most critical when it falls into a scale perceivable by humans, and is important for city functions and patterning. When the scale is larger, it goes beyond people’s everyday perceptions; it is relatively easier to design such streets, considering the major function is transportation. There have been several studies, including Kevin Lynch’s study for Boston, toward highway design on this level, bringing human factors, such as visual order, motion, and various facilities. Therefore, the highway can be more pleasant to move through when fulfilling its transportation functions. Yet, highways on such a scale level, are not designed for inhabitation purposes, and are not able to contain social and cultural essence. Moreover, historically, such designs only exist when the world entered the technical production era. The concept of street design no longer carries its original meaning, and thus becomes a transportation design for a city machine.
On the other hand, when the scale of street becomes too small, it does not reflect a collective interaction of people of a city or a district. It no longer contains the social context, and does not reflect the major city spatial and historical patterns. It becomes rather a micro urban environment for several individual beings under the influence of a bigger scale city pattern. In this case, the design is more determined by specific individual needs and preferences, so that it is more predictable, flexible, and controllable.

However, when the street scale falls into a range perceived by human beings through daily activities, carries a major city context, and determines that major city’s spatial pattern, the subject of the street is “people”—“people’ as a collective effect of individual beings, which forms the social context and the city pattern. In essence, this also casts influence back onto the individuals. The design theme under this scale is neither “function” for the city machine, nor an individual oriented will or purpose.

In reality, most of the time, street design is concerned less about people, no matter what scale the design is. It is a false attitude to cast pre-set patterns onto a city on the critical scale based on certain purposes. The subject is “people”; it is not individuals, nor is it physical function. Certain individuals can hardly predict the collective effect of numerous individuals, and moreover, the design cannot be conducted by function purposes as well. The uncertainty of the collective effect explains the difference in culture and traditions around the world. Good examples of cities have good inhabitation along these streets, and most of the time, the pattern reflects the “Disjoined Incrementalism,” and involves the “Process of Accretion”. (Wang, 2001) Therefore, the street design within the critical scale must deal with this uncertainty to allow time, space, and its people to conceive its essence. A pre-set design for certain purposes will eliminate the “Process of Accretion.” The failure of the primary revitalization of Ciqikou proves this. However, the process is not completely unpredictable once it starts its evolution. Thus, street design is necessary to reduce unwanted effects that can cause social problems. The design theme then will be a process of observation of the “disjoined increments” in the respect of “people.”
5.3 The Economic Scales Involved in Street Design for “People”

The catalyst for good street life is commercial activities. Today, economic activities have a large share that happens at the urban or even the global scale. Yet, to contribute to a good street life, a human scale economy is the most important since it is tied to people’s daily activities in the city. It generates meaningful street life other than commercial activities, by serving people in a daily routine basis, and at the same time gaining a constant number of potential users to sustain and add versatility to street life to a certain degree.

A good human-scale economy survives along a good selection of major streets. It benefits from well-defined street spatial properties, and is tied to a larger scale economy which offers solid support for the sustainability of the human scale economy. Both the Ciqikou case and the Nanjing Road case in Shanghai demonstrate the relationship and the interactions among street life, a human scale economy, and an urban scale economy.

Street design can be meaningless without a well-supported human scale economy. Therefore, it is really important to identify the existing economy and potential human scale economy, based on its influence range and its resources of material and users.

5.4 Considerations of Street Properties That Generate Street Life

There are three major factors that must be established when studying street properties and using them to generate good street life. First, people must be the subject; they are the daily practitioners of city space. Second, the street spatial properties make the human scale economy possible, as well as a place for city activities. Third, street, as a linear spatial element, should be able to reach outside the resources in order to sustain its own inhabitation. This refers to an establishment between its human scale economy and the outside urban scale economical support.

Street, with meaningful spatial “connectivity” and “continuity,” maintains a constant population along its length, establishing a possible space for human scale economy, which will generate more comprehensive activities along street space—life attracts life. Both the
Ciqikou and the Nanjing Road cases demonstrate the positive contribution of street connectivity between outside economical support and its own continuous human scale economic chain. Moreover, the connectivity and continuity can also result in the distribution of the city’s population density, which is very important to street life, since “people” is the essential subject. Therefore, connectivity, continuity, as well as population density, need to be studied during the street design process and design observation in order to identify the existing and potential location for good street life and human scale economy.

Street is the spatial body that best carries historical memories of a city. History reflects city life along the time line, and memories keep bringing life back to where life is always found. Although historical preservation has always been highly valued, it needs a deeper context to sustain its meaning and contribute to today’s city life. Jacobs’ argument (1961) toward the necessity of a certain number of old buildings to maintain a good neighborhood indicates the importance of historical memories of a city.

The spatial independency of a street property is often neglected. Especially in land use and zoning, where the ignorance of spatial independency leads to a two-dimensional view of street, street becomes a simple linear element that defines parcels and land functions, and simply connects without the possibility for inhabitation. Recognition of the street spatial structure, the spatial tension, the spatial orientation, and the edges, is important to identify the spatial pattern and distribution of various street life activities. Figure 4.1 and figure 4.2 in chapter 4 are the examples of the spatial distribution of street activities, and similar spatial analysis should be studied during the street design process.

The answer to “why,” “how,” and “when” street life becomes prosperous and sustainable is concluded in the street properties. Therefore, it is very important to carry out street design not only from a far above level, but also from a position that one is able to perceive correctly the spatial and temporal properties of a street.
5.5 Discussion of Possibilities

The issue between people and street is a subject and object issue that involves spatial and temporal distribution and social factors. Figure 5.1 shows the relationships and connections between different elements essential to street life.

Street design on a certain critical scale has the responsibility to respond to “people” and a natural chaos generated by people’s daily activities. The most important process involved in the design is not to try to predict the natural chaos, but to observe the chaos and respond to the chaos in a way that encourages street life, taking full advantage of street activities with both economic and cultural benefit, and at the same time reduce the possibility of an unwanted negative impact such as environmental hazards and social safety problems.

The gap between street and street design can be summarized in figure 5.2. To minimize the negative influences from the gap, an observation process is necessary in a street design. The most important feature to evaluate a successful street or a street design is street life. This is not a physical standard.
More importantly, in the professional design world, we must give credit to the natural growth of city life itself, especially when it comes to a smaller scale. The trust between professionals and the city’s inhabitants must be built. After all, “people” is the ultimate master for its city space and it is “people” who write the city’s history. As for cities themselves, Jacobs concluded the trust at the end of her book, *Life and Death of American Cities*:

“Dull, inert cities, it is true, do contain the seeds of their own destruction and little else. But lively, diverse, intense cities contain the seeds of their own regeneration, with energy enough to carry over for problems and needs outside themselves.” (1961: 448)

Both the Ciqikou and the Nanjing Road cases prove the powerful potential sustainability that street life and the various street inhabitants can have when they are not suppressed by pre-set technical design.

Again, streets reflect the entire city’s image. It is more than just a physical element within the city plan. The street needs its own reasons to be there in the city, and its own way to serve people and to support different activities. In short, the great streets are those capable of various types of inhabitation and constant city daily life, which can be appreciated by their inhabitants. To determine whether a street or a street design is successful or not, one cannot
judge from far above. The only way to determine it is to experience within the space and time what a street represents.
REFERENCES

Alexander, Christopher, *A City is not a Tree*, 1965, Architecture Forum, April & May

Alexander, Christopher, *A Pattern Language*, 1977, Oxford University

Antoniou, Jim, *Cities then & now*, 1994, New York: Macmillan


Buisseret, David, *Envisioning the city; six studies in urban cartography*, 1998, University of Chicago Press: Chicago


Crang, Mike, Nigel Thrift, *Thinking space* 2000, New York: Routledge


Davis, Richard Harding, Andrew Lang ... [and others] Illustrated by A. B. Frost, W. Douglas Almond ... [and others], *The great streets of the world*, 1892, C. Scribner's sons, New York

Sucher, David, *City Comforts*, 1995, City Comforts Press, Seattle


Lai, Shih-Kung, personal communication, March 2004

刘敦桢, 《中国古代建筑史》, 1996, 中国建筑工业出版社


http://www.csiss.org/classics/content/62, April 2004


http://cqfj.online.cq.cn/ciqikou/ciqi2.htm, April 2004


http://wm.eastday.com/shyy/, May 2004

http://www.chinacsw.com/cszx/shanghai/gaikuang.htm, April 2004