The urban public space betterment and land use sustainability
Under the human behavior

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Abstract: This paper analyzes the differences between Chinese and western public life and environmental behavior habits. Identify specific needs for Chinese urban public Spaces. At the same time, the paper analyzes the problems related to urban construction in China, including micro-land use, transportation and urban pattern. The solution of Chinese urban public space layout is proposed and the prospects of sustainable urban public space. Urban betterment are prospected in the future.

1. Introduction
Public space is the stage upon which the drama of communal life unfolds. The streets, the squares and the parks of a city give form to the ebb and flow of human exchange. The dynamic spaces are an essential contribution to the more settled places and routines of work and home life also providing channels for movement, the mode of communication and common grounds for relaxation. Significant human rights that it can be shaped to define and protect and special cultural meanings that can best convey. (3 public space Stephen Carr)

2. Environmental behavior comparison and analysis based on Eastern people and Western people.

2.1 Open space perceptions and evaluations based on Eastern and Western culture.

| Frequency | China | British and American | Canadian |
|-----------|-------|----------------------|----------|
| Daily space | Mainly choose the easily accessible open space, such as, neighbourhood community parks. | Choose all types based on much better mobility such as neighbourhood community parks. | With similar mobility, has low participation in all types. It mirrors the lack of daily recreation activity participation. |
| Weekly space | Neighbourhood community parks. | Medium participation in all types. | Urban recreational parks and scenic areas. |
| Monthly space | High park usage. | Has medium participation in all types. | Participates frequently in regional recreational areas. |

This mirrors that the abundant natural resource around the city can provide good recreation opportunity but there are featureless natural resources which have similar attractions as other open
space types in the United Kingdom and United States. Limited quantity, high entrance fee, low accessibility and huge number of visitors are the main reason for less participation in natural resources recreation in china. For Chinese lot and neighborhood parks are most regularly visited on daily and weekly visits. For westerners it is not so obvious for the effect of proximity and easy accessibility factors in the open space visit. And there is not such a large difference among visit frequency of close-to-home open space and other types of recreation activities.

2.2 Time section and open space selection

Tab.2 Time section and open space selection

| Time in a day choice | Easterner | Westerner |
|----------------------|-----------|-----------|
| Chinese has a particularly high frequency of participation in daily use of tot lot and neighborhood parks with the morning time 6:00am till 8:00am, then after work 4:30pm being the busiest. | Comparably average use with all open spaces evenly spread through the day. |
| reason | Chinese can’t clearly separate recreation actives from life indispensable activities such as shopping and sending children to school, are vague boundaries between doing exercise, communicating with friends and food consumption. These activities all have comprehensive meanings and it is difficult to tell separate property to each, they are tied up to be a package. Where multiple actives are engaged in simultaneous conception of polychromic time activities. | They show agreements to monochromic time typical activities are dealt with in a discrete and linear fashion (hall, 1990). Westerner culture clearly separate recreation activities from necessary life activities.--- conception of monochromic time typical activities. |
| Latent needs of public space | A high percentage of Chinese need the quantity of tot lot, neighbourhood parks, urban parks and parkways. Increasing the quantity of scenic areas are less of a necessity in regional recreation areas. Most of the busy parklands are within urban areas. | They expressed little demand in increasing the quantity of tot lot, neighbourhood parks and community parks with more demand in scenic areas and urban park. |
| Conclusion | Small market place and walk-based parkways close to communities will be welcomed for residents daily life in China! | Based on monochromic time activities and nature-reliance trends, skate boarding and trails with real nature are more popular. |

2.3 Café-burger society and cuisine-sidewalk snack society, Pub and karaoke life, Street and tube band vs Square group dance enjoy.

Tab.3 Privacy and public space

| Seat in time | Easterner | Westerner |
|--------------|-----------|-----------|
| Less time in the morning and a longer time in the afternoon and evenings. | Less time in the mornings and afternoon and a longer time in the evenings. |
| The needs of space | Private gardens, hall lobbies and sidewalk shelters most of the time are in ally’s or cul de sacs. vague boundaries between private space and public space. | Need evening promenade The path is holing-through Exactly boundaries between private space and public space. |
Form
people would sit in a circle to celebrate and chat together at parties. people generally love the jolly time with their friends, and thus it sounds noisy in restaurants. people are well linked in many ways in a complicated style. In China the streets are very crowded at weekends.

In western countries: people would scatter by two and threes at parties. it is usually quiet while taking meals. people have simple, single directed relationship.

Conclusion
Privacy to be infinite amplification and this privacy is fragmented. In a public space people tend to sit in a small group. The public and private space boundaries are blurred.

Privacy is limited to within a certain space. Public spaces and private spaces the boundary is very clear.

2.4 Wall and gate Comparison.
In western residential areas you will see the front and back gardens have gates, each individual family has it’s own unit, there is seldom one communal gate to a shared living unit. In china you will see a wall and main gate to a shared recreational space regularly. The wall is the boundary of every residential unit and two or three main gates open to the road. but inside of the residential unit there are no individual gates. This means better public space and private space hence a better shared communal space exists. Private public space is very limited. Cities grew as accretions of these walled and main gate cells in china.

Fig.1 From author

Value base or unit that includes wealth, fame, power and world relationship.

Tab.4 value base

|        | Form | Function | Conclusion |
|--------|------|----------|------------|
| West erner | Western culture strives for personal achievement, it is more likely that individuals regard family as the part of the self or an extension of the self. in other words family is less perceived as an extension of society. For individuals to succeed in such a society family is part of their goals and is highly important. | Family is less perceived as an extension of society. | Family is more important to a westerner because family is part of themselves. |
| Chine se | Individuals are expected to follow the norms of society, the importance of individuals is at a low level, family is often perceived as unit of society or an extension of society, to which one belongs. individual status in the society is determined by his or her relationship with others in the family in the social group or in the society as whole. Thus we see that the third major factor for Chinese is social orientation and the fourth factor is family orientation. For individuals to succeed in such | Individuals are at a low level, family is often perceived as a unit of society or an extension of society to which one belongs. | Family is less important to the Chinese because family is only part of society. |
|        |      |          | Chinese need to spill their concerns over social groups like relatives, friends, neighbours, |
a society family and other social groups are important.
colleagues, enemies and societal movement. Clan oriented or paternity oriented.

2.5 the evolving concept of Chinese public space

| Phase | Function | Character | Place of public |
|-------|----------|-----------|-----------------|
| Public space in pre-1949 China | The function was played by shrines, which represented the most expensive semi-public spaces. for religious purposes but also to some degree as social gathering for children’s play. | Urban space was for a long time rigorously defined and partitioned. The walls created solid nested space.—from the massive walls that surrounded and organized Chinas street life was virtually non-existent. Parks were walled and gated | Temple fairs, Periodic market, Teahouse, Theatres, Chinese opera, Traditional performance. |
| Semi-public space | | Decreed boxes within boxes and cites within cities. | |
| Public space in revolutionary China | Based on the socialism's participatory ideals. China industrialization. | Wider roads, grand public monuments, large public squares and residential areas were formed from the low density soviet super block. Walls were placed to cause restricted movement. Cities grew as accretions of these walled and gated cells. The commercial and entertainment sectors within cities were sharply curtailed. further limiting the public life of urban residents. | Monumental landscape bureaucracies |
| Urban public space in post-reform China | After 1978 Toward international standards and models and toward the accommodation of rapidly increasing economic activities and population. | Emphasis on large public squares was replaced with a new emphasis on landscaping and fulfilling basic needs. Globalization: emphasis on western-style. Environmental and urban green that emphasis on a wide range of both short and long term needs. | Open wall park New urban plaza Western style pedestrian street |

We can draw a conclusion in china we need more semi—public social behaviour space under the entirely open public space .

3. Current problems of urban public space in China.

3.1 New problems of urban construction.
The super community has dominated the modern cities of our day. It is characterized by the same division as human space but does not effectively build its own system. There are two main types of super community: 1) The tower in the landscape. 2) High buildings layed out in a row. In both types, public Spaces and buildings lack urban strategy - just a commodity, without social effects. The
container just holds. People's lives are more happening outside the container -- in cities. This container is closed rather than Shared.

3.2 The lack of anonymous communication public space and lack of community belonging
Today people's patterns of life are fragmented in deed, with a strong need for anonymity, miniaturization, diversification, and sharing. public space also reflected in the strong lack of supply, people of different ages is nested intersection space of life, and this kind of public space intersection space presents NEARBY needs stronger than before.

actual urban public space is squeezed into the interior of a large individual plot. We need travel long distance and the open space is a consumption oriented space. With interest, the hobby is the basic space requirement is hierarchical and threshold. The universality of public space is replaced by commercialization. The large plaque in the open space of urban space is in the contradiction between the supply and demand. Living space is linked by urban roads. The real communal public space in the field are in shortage. In a residential area, which is designed based on the service radius. fully utilized, and most of it has been left idle. The core problem is the lack of neighborhood feeling. Public space also has no public role.

3.3 the residential is isolated by the gate and wall, the despair of the internal construction facilities and the increase of the maintenance costs of the property.
The concept of functional mixing is a universal concept, the question of function mixing is mixed within the land or mixed on the edge of the land. The function is mixed in the interior of the plot with a simple service radius to configure, it will produce a self-formed system of isolated islands, which is the consumption of idle type. It will lack of the functional space and communication. Functionality is mixed on the edges will create Sharing, vibrant places with each other. At present, the land unit represented by residential area is connected with the city road between 2 and 3 vehicles to the urban secondary road and urban branch road. In the construction mode, the image entrance or pedestrian entrance is generally aimed at the main road or secondary road of the city. The gateway is closed by the gate. The more complete the community itself, the more isolated the relationship between the communities. Construction facilities within the community are often poorly managed and abandoned in Chinese society. Become the face of an image that doesn't actually use meaning. At the same time, due to the scale of the community, the property management is more complicated, the maintenance costs will increase. In such isolated communities, the construction facilities are not fully utilized, the community belonging is shrinking and the public space is idle. It will be a barrier for public space mobility and sharing.

3.4 city branch network truncation, urban road congestion, street disappearance problems
The most terrifying consequence of the emergence of "residential communities" is that the most essential "street" of urban civilization has disappeared. As the most important street view in the urban landscape no longer exists. The soul of the city is lost, and the sense of community, comfort and intimacy are all gone. What people feel in the city is the crowded and noisy "big road" connecting different communities. Modern functional partition and "residential area" will bring the city's traffic congestion and the monotony of urban landscape, it will brings a deeper problem - social isolation and public life space will be squeezed and weakened.
3.5 Hyper urbanization idea never stop and public space problem

The aesthetic has become a market-led aesthetic – the publics, acceptance of postmodernist imagery being a reaction to a climate of repressed desire built up under the visual austerities of modernism. Since private owned public space has become the major form of public space provision in the city, this market drive method is not based on comprehensive plans in production a geographically equitable distribution of public space. This lack of supervening organizational principle leads to the fact that each space is self-sustaining and there is no link among adjacent similar spaces. As Kevin lynch does, that our cites reinforce the passive inactive mode of life despite the fact that we recognize the threats that this may have for heath.

Chinese public space is the soft underbelly of the city, personal space is crowding out problems, public space to remain silent don't know how to express or were taken away the right to speak. At present, the public space of the Chinese people's lifestyle is blurred and the boundaries of the private and public space are overlapping. For example Non-commercial ballroom dancing, casual passers-by, countless performance, ground calligraphy and group opera singing can draw crowds in hundreds.

In public space and communication: Drucker and Gumpert suggested that though intending to promote mix use incentive zoning result of pocketed public spaces is limited by zoning code’s control over city by segregating use. as result a lot of such public spaces deserted after work hours ,even though their design and management methods are dedicated to stimulate interaction.

While In china the residential area is always like a be sieged space one next to another. So-called public space is not shared to the public at all. Although they have a good design and scenery. Because most the residential open space in the center is not open to the public .most of amenities are interior – orientation.
3.6 morphology pattern

Fig.4 From Google map

current city form compare analysis based on Chinese and U.K road–street, residence ---community display Space relational, density Scatter land zoning and mix use border (which are porous, adaptable and positive) with boundaries (which are hard-edged, inflexible and negative)----morphology pattern.

4. Land use factors and approaches of sustainable urban forms

4.1 public space reconstructions

Accessibility is to promote the circulation of goods and personal safety, comfortable walking and environment. Convenient access to the street is a way to make up for the exclusivity of motor traffic.

Diversity manifests as the function of the city to provide more diverse choices for the public, while maintaining economic viability and job selection, while contributing to the livability and attractiveness of the city.

Compatibility is the balancing force of integrating urban elements and maintaining visual harmony under the premise of integration design. Maintain a unique sense of place.

Adaptability is the promotion of integrity and positive change. Streets and blocks adapt to new uses, Promote old city renewal, to achieve higher development intensity and better environmental standards.

Intensity of development is more compact and easier to concentrate in people and places, while increasing the availability of public transport services.

Recognition is a unique sense of place, the place characteristic, creation and protection of the quality of the urban area, unique personality through the maintenance and reuse of historical buildings and places of high degree of recognition are realized.

The establishment of network, sharing and landscape patterns in the system of systematic walking friendly exchanges.

4.2 method

For old areas of public space design, we need to comprehensively consider the present situation of the plot using system thinking and use "space between" connect with each other to avoid a single idea "pantry" fragmented solving the problem.

The restoration and betterment of urban characteristic areas is the inevitable demand of China's urbanization stage at present. The urban reconstruction with high development intensity is the inevitable way. During the development of urban public space, we are going to use a more
comprehensive way. To deal with city construction we need not only just a piece of space design, but also regional system connection. Accessibility, variety, compatibility, identification of synthesis to make a place for complex social relations.

How to coordinate the urban renewal process from the time, space, measures and other aspects of urban planning. Land mix and utilization methods and scale: land mix, land subdivision, street profile scale unit, human scale planning, establishment of minimum and maximum land unit size. Spatial coordination: to ensure the urban public space and private space, in the building monomer and group space, regional space form, new and old urban space coordination. Space diversity and vitality: make up for the two-dimensional abstraction in urban planning now, and the urban space caused by data rigidity is lack of diversity problem. Combined with the environmental behavior, the three latitudes of urban space patching can be thoroughly reconstructed.

4.3 re-thinking elements
1, micro land use 2, border and boundary 3, road and street 4, center land mix use or edge land mix use 5, public space in the world and Modern critique 6, market-led 7, public space need and passive life 8, re-thinking land mix use for public life 9, re-thinking walls and gate to public life 10, re-thinking the dwelling mode to the public life 11, re-thinking the scale of open space to the public life.

4.4 value
4.4.1 to realize the transformation of the city into the connotation intensive development mode
To avoid repeating the construction of urban infrastructure, urban micro land waste. Change urban scale and the appearance of speed type model to environmental efficiency under the environmental behavior. To realizes the urban stock land organic update, Urban microstructure to improve and complement the city short board.

The city public space is emphasized to improve the urban living environment, enrich the cultural connotation of the city and promote the quality of the city. The establishment of urban public space systems, the urban public space quantities, the quality of the proposed index system, the spatial scale, the form, the pattern and the layout of the qualitative opinions. Fair and dynamic public space construction is the key to the development of urban intension. From the angle of the material environment design to the human-centered transformation. From the reconstruction of the urban renewal to the urban cultural diversity, the attention to human environmental behavior and psychology need. To crate the social justice and the historical value betterment.

4.4.2 To make up for the lack of detailed planning of control
Urban decision makers understand the importance of urban design from theory and concept. However, it is difficult to face the implementation and operability of urban design. It is mainly manifested in the transition rigidity of urban planning and management. The plot control detailed planning of block segmentation makes urban land space and land space lack organic connection and mutual integration. Combining the basic theory of an environmental behavior and regulatory detailed planning. It will put forward the stipulation and guidance of model reference. Such as land properties and land subdivision, mix function, traffic rules, traffic organization, parking facilities, development intensity, environment capacity etc. The basic planning and design guide is formed to realize the coordination between micro-land use space. Ensure the progress of urban betterment.

4.4.3 Increase the anonymity and build the friendly public space in city
The basic principles of urban planning, such as space, place and environmental behavior, are used to shape anonymization and miniaturization. The continuous flow of an urban public space network and a high quality pro-public for the characteristics of revitalization of urban vitality.

In the high-density urban environment, it is possible to construct public Spaces that conform to human environmental behaviors, which can accommodate a variety of urban life. The establishment of
the miniaturized public space system plays an important role in the urban public space context. The function of our modern city is mixed, which is actually a kind of collocation, which leads to the dismemberment of urban life. Diverse urban life is cut in to pieces. Each element should interweave with each other and form an elastic growing system. Based on the environmental behavior of urban betterment a multi-functional mixed activated city by sharing populist, business, commerce, green space, recreation, fusion and mutual infiltration, realization of the development and optimization of public space.

Increase the supply of public space, optimize public space structure will improve public space quality. The key to constructing public space is to grasp the logic of urban life and urban behavior, which plays an important role in the recognition of urban areas. The anonymity of the public space can increase the exploration of existing landscape resources, the resource extension of the historical culture, and the natural environment response.

4.4.4 Optimize the urban space order, improve the mode of transportation organization and enhance the characteristics of the city

The betterment of the city requires us to organize the current situation, refine the problems, dig the resources and potential and rebuild the relationship between the complex urban with elements around vitality and characteristic demands. Through the public space context as the medium, the urban environment behavior is the internal logic then the complex urban elements is constructed.

Realize the public transport into the community and solve the last mile problem. Increase the walking road interface and bike network system. The stimulation of walking behavior is conducive to improving the efficiency of urban public space, stimulating interpersonal communication, and reactivating the urban public space. The pedestrian of urban public space is an important content of urban characteristic vitality. To form an adaptive walking scale and harmonious human-vehicle relationship, reduce the number of motor vehicles. Form accessibility, diversity, compatibility, identification, systematic urban environment. We will optimize the urban structure and achieve a 15-minute life cycle reform of urban environmental supply strategies.

5. Conclusion and outlook

5.1 Conclusion

Based on the comparative study above. How we enhance the Chinese citizen’s quality of public life. Nowadays in China the public spaces are used for private group meetings and all the public lives are squeezed into the huge open spaces. In reality most Chinese life needs are semi-public spaces and “near-by” public spaces those are the Chinese present needs and this kind of public space is seriously scarce.

5.1.1 Change from the design for the city to for the citizen design, from the power space becomes the right space. Transform urban space though urban design.

5.1.2 Modified china basic land use unit: from residential model to the open community and enclosed cluster. change the residential enclosed road to the public and change it as life Street. enhance the “near-by” public space possibility. dismantle the big gates and removing the walls of the resident unit. Adding the small gates for the clusters. The traditional pattern of residence layout need break though in the process of old city renovation.

5.1.3 Enhance the public space “near-by rather than center big square, big park, big store and connect them in network.

5.1.4 Enhance communities border and reduce their boundary---more accessible and shared space will appear
5.1.5 From central communal facility mix land use to edge-shared communal facility mix land use

5.1.6 The street furniture is changed to movable which enhances the needed facilities utilization rate and enhances leisure facilities to use elasticity.

5.1.7 From the aesthetic of the market-led to the aesthetic of economy sharing societies.

5.2 Outlook

5.2.1 Centre helped to reinforce isolation, edge and border helped integrating The activities in the pace, Where users come from, major design characteristic of the space might attract or discourage usage. The planners have since learned from this mistake. Other projects on the west side of Manhattan were located at the edges of community areas ‘in order to open the gates between different racial and economic communities’. In Sennett’s view, therefore, emphasizing the importance of the center helped to reinforce isolation. Whereas, ‘understanding of the value of the edge and border has proved integrating’. (Sennett, 2004, 11).

5.2.2 The road changes to the street and the bus runs into the community It is necessary to connect broken roads and the jingle road to inspire peoples gathering experience and opportunities. Increasing accessibility in a high-density plot provides the possibility of urban diversity. At the same time, the opportunity to reach public space is greatly enhanced. After the land subdivision, the walking opportunity is enhanced, the linear space that connects with each other combines public rest open space, the atmosphere of the street shows up. Eventually form a walking network, and the sense of the street arises. The scale of environmental behavior is used to define the distance between the streets and the scale. Form a dense network of spatial relations, small streets. Such a sense of historical public "micro-space" can be revealed, and the memory fragments of urban history can be revealed.

5.2.3 The residential area is transformed into the community and cluster closed The basic land units of the residential area are isolated from each other and lack organic connection. It is pure material space, although it is beautiful, but communication behavior is weakened. Based on this, the model of residential area is not adapt to such a high density urban areas. In order to build network, the open block with cluster closed will implement the quality of living environment. The idea of combining vitality with livability aim to repair the characteristic functional area of urban spaces. Living behavior can also be transformed from a single residential function into a neighborhood life interaction function. This mode of residential area will contain of strong adaptability of elasticity. Cluster closed can be done by residential commercial facility along the street, at the same time it can also be closed by landscape plants belt and also can be realized by green public leisure space, use landscape wall, etc. It reflects the diversity of landscape, satisfies the street space demand and satisfies the tranquility of the inner space of the living group. The enclosed landscape changes into open landscape, from the inner landscape to the shared block landscape. with the experience of the landscape. The street formation will realize the sharing of public Spacess and the slow-paced "walking friendly places. Eventually established network, sharing, community mode.

5.2.4 The space changes into the place and the park, square will be integrated The system relationship between complex urban elements is constructed by using public space medium and the internal logic of urban environment behavior. Adding urban facilities, enhance public space, improve travel conditions, protect the city's historical landscape to shape the urban form. Promote building, street space, skyline and color harmony in environment. Inner cities become an important place for citizens and tourists. By limited public space scale to achieve compact space, through the axis of relations and convenient to implement accessibility, Making street network by multi-functional to composite utilization of compatibility. Through space, place and integration area to
make easy identification, environmental quality of affinity. through scale, landscape units, cultural elements penetrating to implement integration features. landscape visual corridor combined with edge of building integration to characterize cultural quality and give the place spiritual meaning.

5.2.5 The negative space in the city is emaciated and patched and transforms into the functional space required in urban society.

First of all, add more mixed-use urban public space, and use city reengages to create urban public facilities. Secondly, ensuring and improving people's livelihood is the fundamental goal. Improve the urban basic public services and the life quality. we will focus on improvement for the convenience of business, pension, health, culture, leisure and other public service facilities, perfect the "community service", improve the quality of consumer services, and make people have more and more direct obtain sense. Third, we will use the urban space to make room for public service, and provide the space for the development of the airport facilities and logistic space in the future.

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