Aging in Place, Non-zero sum game

Implements life quality and living conditions for aged people who "Aging in Place", through the renewal and reconstruction of public spaces system in diverse scales.
Presentation Structure
The world’s population is aging!
The increase is projected to be especially significant in the less developed regions, especially in Africa and Asia.

China is expected to become the world’s most aged society in 2030.

Beijing has entered the aging society in the mid 1990s, and the population aging process continues.
World population is aging, especially in China!

Beijing has entered the aging society completely, and even in severe case!
Labour Shortage  
Slow down the urbanization process

Lower fertility

Increasing economy & social-welfare burden

Increasing dependency burden  
Especially with the implementation of “Family Planning Policy” in 1980s

Aging unfriendly city  
Especially in the initial stage of aging society in Beijing
More attention on the construction of the city center, and this stage laying the groundwork for the rich and relatively complete public space system in the city center.

Monocentric structure, brings big pressure on the traffic, bearing capacity of some basic facilities in the city center.

Construction the poly-centricity to release the big pressure form the city centre, all of these are of great value for the elderly group.
Physical Decline

Memory Loss

Slower Reaction

Deficient in Energy

Lower Incomes

Absence of Our Beloved Companion

Sketch by author

Object Group Research
Desire for Recreation

Starve for Companionship

Reintegrate into society

Sketch by author
A Theory of Human Motivation

Maslow's hierarchy of needs, 1943

Belongingness and love demands

Self-esteem demands

Self-actualization demands

Spiritual Supply Demands

Multi-scale Public Space System

Figure 10 Personal Space Division
Image taken from: Construction of external space, Yoshinobu Ashihara, 1962

Sketch by author
“Aging in place” is predicted to be the main developing direction of future pension mode in Beijing.
Beijing has entered the aging society completely, and even in a severe case. Aging population will slow down the urbanization, increase the social and economic problems, and lead to labour shortage etc.

Government give priority to “community-based care” and “home-based care” pension model, which means that “Aging in Place” become the main future trends in Beijing. Besides, as the vital carrier of the elderly “spiritual supply”, perfect community public space is the main guarantee for “Aging in Place”.

However, few spatial strategies and interventions are raised in order to adjust the step of aging situation.

This project takes Beijing as a case, to explore how can spatial strategy and interventions promote the life quality and living conditions for aged people who “Aging in Place” through the renewal and reconstruction of public spaces in diverse scales, and from a long perspective, make a “Non-zero sum game” outcome.

Context

Beijing has entered the aging society completely, and even in a severe case.

Reason

Aging population will slow down the urbanization, increase the social and economic problems, and lead to labour shortage etc.

Policy Framework

Government give priority to “community-based care” and “home-based care” pension model, which means that “Aging in Place” become the main future trends in Beijing.

Target Group & Public Space

Besides, as the vital carrier of the elderly “spiritual supply”, perfect community public space is the main guarantee for “Aging in Place”.

Shortage & Potential

However, few spatial strategies and interventions are raised in order to adjust the step of aging situation.

Problem Statement

This project takes Beijing as a case, to explore how can spatial strategy and interventions promote the life quality and living conditions for aged people who “Aging in Place” through the renewal and reconstruction of public spaces in diverse scales, and from a long perspective, make a “Non-zero sum game” outcome.
How to spatially “plug-in” interventions in diverse public space at different scale levels to enhance the living condition and life quality for people who “Aging in Place” in the central city of Beijing?

-----Take the study area (the research block is among the Shichahai Subdistrict and Desheng Subdistrict, which has the Hutong-Courtyards area as well as the Danwei Compound Unit area) as a planning part example, and take five strategic actions in the study area as community design and intervention practice.
Background of Aging population in Beijing
Background of Aging population in China
Background of Aging population in Global

In a word, "Aging in place" is predicted to be the main developing direction of future pension mode in Beijing. The Centre for Disease Control defines "the ability to live in one's own home and community safely, independently, and comfortably, regardless of age, income, or ability level" as 'aging in place'.

Motivation

"Self-helping" elderly and "Device-helping" elderly people are more suitable for the "Aging in Place" pension model.

Research Question

RQ1. What is the current shortage & potential of "Aging in Place" in Beijing?
RQ2. What are the policies for the integration of aging population in Beijing?
RQ3. What kind of people suitable for "Aging in Place"?
RQ4. What are special demands/lifestyle/mobility of people who "Aging in Place"?
RQ5. What kind of space can meet the demands of "Aging in Place" aged people?
RQ6. What is the current situation of these public space?
RQ7. How to promote the public space situation to satisfy "Aging in Place"?
RQ8. How to include these public space?
RQ9. Which instrument can facilitate the inclusion of aging population within urban regeneration plans?
RQ10. How aged people evaluate their life quality or what factors can bring positive influence to the aged people?
RQ11. How to balance the different demands between general residents' and elderly's?

Target Group & Public Space

RQ12. How to spatially "plug-in" interventions in diverse public space scales to enhance the living condition and life quality for people who "Aging in Place" in the central city of Beijing?
RQ13. What is the current situation of these public space?
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RQ100. What is the current situation of these public space?
1. Aging Population Definition, Current situation and effects in Beijing

2. Policy of Regeneration in Beijing

3. Case study of Aging in Place

2.1. Maslow’s Hierarchy of Needs

2.2. Environment Behaviour Studies (EBS)

2.3. The Necessity of Recreation for Elderly

2.4. Mobility of Elderly People

2.5. Evaluation of Elderly Life Quality

2.6. Chinese Aged Population Lifestyle Study

3.1. Value of Public Space

3.2. Management of Public Space

3.3. Design of Public Space especially for elderly

3.4. Characteristics of Great Public Spaces network

REFERENCES / BIBLIOGRAPHY

[6]. Beijing special service facility planning for the elderly, 2012.
[34]. Sugiyama, T. (ed.). Outdoor environments, activity and the well-being of older people: conceptualising environmental support. Pion Ltd.
Key Attributes & Indicators

ACCESS & LINKAGE

PHYSICAL SETTING

USES & ACTIVITIES

SOCIABILITY & CONNOTATION
STUDY AREA LOCATION?
Figure 10 Transformation of morphology and urban expansion in Beijing from 1973 till now

Information source: http://www.sciencedirect.com/science/article/pii/S0264275115001250  Map by author

Current Situation of Study Area

- Courtyard & Hutong System
- Danwei Work Unit
- Newly-built gated residential area
Figure 10. Current living and activity space in Central City of Beijing

Information source: Beijing Central City Regulatory Detailed Planning (2004-2020)  Map by author

Lack of diverse public space

High density of elderly group

Density of aging population (people/km²)

0-200
200-1000
1000-2000
2000-5000
5000-11638

Residential Area
Green public space
Figure 10: Subdistrict border and Study Area

Map by author
Hutong Area in Shichahai Subdistrict, pictures taken on Bell Tower  Photo by author

Danwei Area in Desheng Subdistrict, pictures taken on Liupukang Street  Photo by author
Field trip
Lack of public lights
Sitting places are welcomed
lack of diversity of activity facilities
Few people involved in the management
most of road signs are served for cars and vehicles
Discontinuity of barrier-free basic facilities
Occupation of pedestrian

Gated Danwei area and Residential area
Insufficient protection of history landscape
Occupation of public spaces
Less crossroads in gated Danwei
Little attraction elements

lack of diversity of activity facilities
Insufficient hardware
Disorder type of commercial operation
Loss of cultural in old and historical courtyards
Uneven distribution of big hospitals
Blocked ‘blood capillary’ roads
Generation of Overall Strategy

- **TOP-DOWN**
  (from government related planning documents)

- **BOTTOM-UP**
  (from residents’ demands and indicator analysis)
Design Challenges and Overall Strategy & Strategic Interventions

### BASIC INDICATORS

**ACCESS & LINKAGE**
- Road system reorganization
- Sharing parking space
- Road lane adjustment

**PHYSICAL SETTING**
- Improvement of spontaneously gathered public space
- Resetting the abandoned public space
- Optimize the slow traffic system
- Optimizing the electricity box
- Pavement improvement
- Increase more public lights

**USES & ACTIVITIES**
- More integration activity facilities
- Re-composition of street interface
- Resetting the abandoned public space
- Improvement of barrier-free facility
- Increase more public lights

**SOCIABILITY & CONNOTATION**
- More integration activity facilities
- Re-composition of street interface
- Resetting the abandoned public space
- Improvement of barrier-free facility
- Increase more public lights

### OVERALL STRATEGY & STRATEGIC INTERVENTIONS

**TRANSPORT**
- Smart bus station

**INTERFACE**
- Recomposition of street interface

**SPACE**
- Optimize the slow traffic system

**FACILITY**
- Improvement of barrier-free facility

**LANDSCAPE**
- Expand the green space
- Increase more public lights
- Pavement improvement

**TYPE OF OPERATION**
- Development of silver business

**ACTIVATE HISTORY & CULTURE**
- Volunteerism services
- Reinvention of history courtyards
- Re-composition of street interface
- Rotation system of supervision by residents

**MANAGEMENT & MAINTENANCE**
- Bring history landscape alive
- Public participation
Strategic Action 1: Gulouxi West Street Recomposition

Strategic Action 2: Give Back the Courtyards to Residents, Make history Reintegrate Into the Daily Life

Strategic Action 3: Spontaneously Gathered Public Spaces Regeneration

Strategic Action 4: Activate the Wall in the Gated Danwei Area

Strategic Action 5: Make Intergenerational Open Green Spaces

Map by author
Strategic Action 1: Gulouxi West Street Recomposition

Strategic Action 2: Give Back the Courtyards to Residents, Make history Reintegrate Into the Daily Life

Strategic Action 3: Spontaneously Gathered Public Spaces Regeneration

Strategic Action 4: Activate the Gated Danwei Wall

Strategic Action 5: Make Intergenerational Open Green Spaces

Design Challenge Definition
Strategic Action 1: Gulouxi West Street Recomposition

Strategic Action 2: Give Back the Courtyards to Residents, Make History Reintegrate Into the Daily Life

Strategic Action 3: Spontaneously Gathered Public Spaces Regeneration

Strategic Action 4: Activate the Gated Danwei Wall

Strategic Action 5: Make Intergenerational Open Green Spaces

Overall Strategy
INTEGRATED REGENERATION PLAN

Strategic Actions

1. Gulouxi West Street Recomposition
2. Give Back the Courtyards to Residents, Make history Reintegrate Into the Daily Life
3. Spontaneously Gathered Public Spaces Regeneration
4. Activate the Gated Danwei Wall
5. Make Intergenerational Open Green Spaces

Main Actors

- Elderly people
- Tourists
- Government officials
- Developers
- Designers
- Citizens
- Local residents
- Commuters
- Students
- Teachers
- Barkeeper
- Retailers

Existing Plans/Rules Involved

- Beijing Regulatory Plan
- Site Plan
- Beijing Urban Master Plan
- Plans for the Protection of the Famous Historical Cultural Metropolis of Beijing
- Standards for Accessibility in Buildings
- Site Plan
- Beijing Xicheng District Urban Design Guidelines
- Cultural Metropolis of Beijing
- Green space planning for famous historical and cultural cities
- Beijing Xicheng District Urban Design Guidelines Cultural Metropolis of Beijing
- Historical building protection and planning
- Regulations on the protection and planning of historical buildings
- Beijing Xicheng District Urban Design Guidelines Cultural Metropolis of Beijing
- Site Plan
- Beijing Xicheng District Urban Design Guidelines Cultural Metropolis of Beijing
- Beijing Urban Greenland System Plan
- Site Plan
- Regulations on the protection and planning of historical buildings

Proposed Plans/Rules

- Plans for the Protection of the Famous Historical Cultural Metropolis of Beijing
- Guidelines for accessibility facilities construction and renovation planning
- Beijing Xicheng District Urban Design Guidelines
- Urban road planning and design guidelines
- Regulations on the protection and planning of historical buildings
- Beijing Xicheng District Urban Design Guidelines Cultural Metropolis of Beijing
- Rules for illegal construction in Beijing
- Site Plan
- Beijing Xicheng District Urban Design Guidelines Cultural Metropolis of Beijing
- Green space planning for famous historical and cultural cities
- Beijing Xicheng District Urban Design Guidelines Cultural Metropolis of Beijing
- Regulations on the protection and planning of historical buildings

Existing Main Decision Makers

- Government officials
- Developers
- Designers
- Residents
- Elderly people
- Students
- Teachers
- Barkeeper
- Retailers

Proposed Decision Makers

- Government officials
- Designers
- Residents
- Elderly people
- Students
- Teachers
- Barkeeper
- Retailers

Stakeholders

- Elderly people
- Tourists
- Students
- Teachers
- Barkeeper
- Retailers

Values

- Tourism Value
- Silver business Value
- Tourism Value
- Reactivation of aged group-dominant public space Value
- Reactivation of aged group-dominant public space Value
- Reactivation of aged group-dominant public space Value
- Sharing Value
- Anti-urban fragmentation Value
- Creating Intergenerational Public Space Value
- Diversity of the public space Value
- Environmental health promotion
- Recreation of public space and basic facility
- Urban regeneration through upgrading public space
- Consolidating the public space network

Revise Goals

Operating Stage

- Short-term Goals
- Medium-term Goals
- Long-term Goals
PUBLIC SPACE NETWORK?
SHORT-TERM ACTIONS
Street Recomposition
MEDIUM-TERM ACTIONS
Reactive public space and Danwei walls
LONG-TERM ACTIONS
Upgrade the open green space
A fiction from Graduation Project

Aging in Place, Non-zero sum game

promote life quality and living conditions for aged people who “Aging in Place”, through the renewal and reconstruction of public spaces system in diverse scales
MAIN CAST

Granny Mu

Miss Mu

living @ E World: Economic World

living @ R World: Rescource World
It's 2050 now, there are more than 50% of residents are over 60 in E World. Some of the aged people are forced to postpone retirement age around 75. Besides, young people are working night and day to keep the world going round.

On the street of Beijing, lots of aged people are walking along the street. As we entering the “Auto Society” gradually, the scale of the city has been bigger than before, although the aged people prefer the smaller scale for the sense of security.
Where are they going to?
The tiny minority of rich aged people come to their “Old people’s Home” after retirement, where has the perfect supporting facility and providing good service at the same time. Solid walls were built as property line and safety line.

Government called them “Nursing Home”.

Most of the aged people come to the mountain area after their retirement, where located in the peri urban area, waiting for the final time of their life.

Old residents living here called it “Dying Hole”.
Why they choose to die lonely?
Government pass the buck?
Industrialization?
Mechanization?
AI-based automation?
DINK Phenomenon?
Shortage of the retirement pension?
Ageism?

So they have to choose die lonely with dignity.
Granny Mu, 76 years old, living in the E World. She retired from her work today. As an urban designer, who once worked the project involved the construction of “Nursing Home”.

Ironically, after the whole life hard working, she still cannot pay the high price for living in the “Nursing Home”. Now, she is on her way to “Dying Hole”.
Suddenly, she has the feeling that she is falling down.
When she woke up, she asked me “where am I?”
I told her we are in the R World, the parallel universe of her original World.

I introduced myself to her, “I'm one of the participations of urban planner group in this world, and I'm mainly responsible for creating diverse public space system for elderly group.”
She asked me where is the Dying Hole in this world, I told her “we don’t have the “Dying Hole” in R world, and I try to persuade her not thinking about “Dying Hole” just for a second.

And I took her to tour of this brand new world for her, she told me she was living in the Shichahai Area, so we went to there on foot.
I introduced the current Shichahai in R World to her, the local residents and tourists living together. The part remain pedestrian stage can help the local residents recall their memories of the original life, and to some extent it also has the tourism value for tourists, besides, we can also bring history alive by optimizing the current situation. Adding more activity centers or “slower space” on the pedestrian stage for the aged people.
Granny Mu told me, in the E world, tourists have taken up all the blocks in Shichahai Hutong Area, most of the local residents have to move out searching for a safer and more quiet place for living. Few remaining residents become the boss operating the Airbnb and Hotels for tourists.

She even met a tour guide, who has been argued against her in the E World because of illegal car parking problem. However, the tour guide now working as a volunteer in the “Senior center Courtyard”. 
When we walking through the Hutong Area, Granny Mu told me that in the E World, they only have the public house, which are only provided for people who still at work. She have to go to the “Dying Hole” for her later years after the retirement.
After a while, we walked to her house, where has been transformed to a “Historical experience center Courtyard” now, and her neighbour’s house became a “Senior micro-college Courtyard”, she really like the current function of her house, she told me she really want to stay here as a volunteer teacher in the senior college center, helping her achieve the self-actualization.
Granny Mu also told me that all the spontaneously gathered public spaces have been cleaned up in the E World, the vendors and some low-end industry workers have been evicted from their homes in Beijing. In order to keep E World in a good order. Lots of street food vendors she loved have been disappeared for a long time. She really missed the delicious taste.
Surprisingly, she ran into lots of street food vendors here, also met some old friends: Aunt Hu, Aunt Li, Uncle Chen. They had lunch together in the spontaneously gathered public space.
After lunch, we came to the Danwei Area. Granny Mu told me the Danwei wall in the E world has been built higher than before, people working and living in this close area, in order to increase the efficiency of the E World.
She told me she really loved this sittable wall and exercise wall in R World, easy to get home and here is really a good place for watching the pedestrian coming and passing by.
Finally we came to the open green park, we happened to meet people organizing an annual event of “Experience your later years”. Young people try to wear the special glasses and add the “aged make-up” on their face, they wear the Mobilistrictor, a special suit help you to experience the stiff joint, weigh down your body.

Granny Mu walked slowly up to the front of the stage, she told how aged people are treated in the Parallel universes- E World, she also told the young people try to be more patient with their parents as they growing old gradually, just like they treated you when you were a little baby.
At the end of our journey, Granny Mu told me that she really want to stay in the R world, however, she was still curious about how she suddenly crossed the universe of time and came to this Parallel world, so I told her the truth:

“Actually, I am you! I touched the secret trigger in this world, and helping you come to this Parallel world, every friend you met today have a young body in this world, and I’m the younger body of you. We have the right to choose whether touch this secret trigger and bring you to this world. If you want to stay in this world, I have to go back to your world, working instead of you.”
Suddenly, I woke in horror, found out that I'm still young.
But I don’t know which world I’m in.
BEFORE (AFTER)

Development of tourism industry
Development of silver business institutions
Development of residents leisure centers
BEFORE | AFTER

STRATEGIC ACTION 2  GIVE BACK THE COURTYARDS TO RESIDENTS, MAKE HISTORY REINTERPRETATION INTO THE DAILY LIFE

Funding support from government/Foundation

Courtyards reinterpretation

Public participation

Funding support from government/Foundation
STRATEGIC ACTION 3  SPONTANEOUSLY GATHERED PUBLIC SPACE REGENERATION

Reward system/Public investments
BEFORE | AFTER

Responsibility to the Danwei

Responsibility to the Developer
STRATEGIC ACTION 5  MAKE INTERGENERATIONAL OPEN GREEN SPACES

Bring the economical development in surrounding area
Thanks for listening my presentation!

**Aging in Place, Non-zero sum game**

--- promote life quality and living conditions for aged people who "Aging in Place", through the renewal and reconstruction of public spaces system in diverse scales