RETHINKING URBAN VILLAGE IN BEIJING
EXPLORING STRATEGIES FOR INFRASTRUCTURE AND PUBLIC SPACE, STRENGTHENING COMMUNITY LIFE

[URBAN VILLAGE] [INFRASTRUCTURE] [PUBLIC SPACE] [COMMUNITY LIFE]
WHAT IS URBAN VILLAGE IN CHINA?
UILLAGE

- Commonly seen on outskirts and the downtown of Chinese megacities
- Surrounded by modern urban structure
- A unique phenomenon during China’s urbanization

- Inhabitants: the poor and transient, manual laborers
- Space: super densified, infrastructure + space + social problems

- Services for the city,
- Cheap living cost for new comers
FROM RURAL VILLAGE TO URBAN VILLAGE
RURAL VILLAGES ARE ENCLOSED BY NEW URBAN AREA OF BEIJING

URBAN VILLAGE: BROADENED INFRASTRUCTURE, INVADED FRINGES, COMPRESSED PUBLIC SPACE

Source for data of Beijing’s urban boundary changing and urban village’s location: BEIJING URBAN VILLAGE SURVEY, 2008, BEIJING BUREAU

Source for description of urban village’s formation process: Mapping of urban villages in China. Zhengdong Huang, Qingming Zhan. School of Urban Design, Wuhan University

RURAL VILLAGES IN 40 YEARS AGO:
FARMLAND, STREET SYSTEM, PUBLIC SPACE

URBAN VILLAGE:
ORIGINAL RESIDENTIAL HOUSING
FARMLAND
TRAFFIC ROADS
MAIN PUBLIC SPACE NODES

AFTERWARDS DENSIFIED HOUSING
SKYSCRAPERS
MODERN RESIDENTIAL BUILDING WITH 6-8 STORIES
TRAFFIC ROADS

ORIGINAL RESIDENTIAL HOUSING
ROUTES: WALKING, SMALL VEHICLES

MODERN RESIDENTIAL BUILDING WITH 6-8 STORIES

1961 1997 2013

15 30km
BEIJING & URBAN EXTENSION
BEIJING: POLITICAL, CULTURE CENTER, CONNECTED WITH TIANJIN SEAPORT, MEGACITY

- TIANJIAN
- BO SEA
- TANGSHAN
- CHENGDE
- FENGNING
- CHICHENG
- ZHANGJIAKOU
- BAODING

1260-1368 AD
YUAN DYNASTY

- 1260
- 1368

1368-1553 AD
MING DYNASTY

- 1368
- 1553

1553-1911 AD
MING+QING DYNASTY

- 1553
- 1911

1911-1965 AD
REPUBLIC PERIOD

- 1911
- 1965

1978-2014

8% YEARLY

Source for original image which change the urban area: Boundary Planning Archive of Beijing, Beijing Municipal Commission of Urban Planning

PERIOD OF CHINESE ECONOMIC REFORM

1975
1988
1997
2002
2013

URBAN AREA
RURAL AREA
NATURAL AREA

[1] NATIONAL STADIUM
[2] NEW CCTV
[3] NATIONAL OPERA HALL
[4] NO.2 INFRASTRUCTURE
[5] YINHE SOHO

1260
1368
1553
1911

HEAVEN TEMPLE
FORBIDDEN CITY
INNER TOWN
WHO LIVES THERE?
8 MOST COMMON MANUAL JOBS “THEY” DO

[1] NEW COMERS (>80%)
- TRANIENT
- TENANT
- RENT BUILDINGS
- MANUAL LABOER
- YOUNG
- LEAVE FARMLAND TO COME TO MEGACITIES

- LOW INCOME,
  NOT WELL EDUCATED,
  TRANSIENT LIVING

[2] FORMER FARMERS
- PERMANENT
- LANDLORD
- OWN BUILDINGS
- GET PROFIT FROM RENTING
- OLD
- LOSE FARMLAND DURING URBAN EXTENSION
WHY DO THEY COME TO BEIJING?
URBANIZATION OF EASTERN CHINA: 1978-2014


BEIJING URBAN VILLAGE SURVEY. 2008. NATIONAL BUREAU

URBANIZATION OF EASTERN CHINA: 1978-2014

TOP 5 SOURCES OF MIGRANTS TO BEIJING

<table>
<thead>
<tr>
<th>Origin</th>
<th>Million</th>
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</thead>
<tbody>
<tr>
<td>HENAN</td>
<td>1.6</td>
</tr>
<tr>
<td>HEBEI</td>
<td>1.28</td>
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<tr>
<td>SHANGDONG</td>
<td>0.77</td>
</tr>
<tr>
<td>ANHUI</td>
<td>0.58</td>
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<tr>
<td>SICHUAN</td>
<td>0.53</td>
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</tbody>
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BEIJING URBAN VILLAGE SURVEY. 2008. NATIONAL BUREAU
INTERDEPENDENCE
BETWEEN URBAN VILLAGE(R) AND CITY/CITIZEN
URBAN VILLAGE(R)

- MANUAL LABORER
- ARCHITECTURE HERITAGE, REGIONAL LIFESTYLE
- FOOD MARKET, STREET RESTAURANT, GROCERY, WASTE COLLECTING
- CHEAP WAY OF URBANIZATION
- CHEAP RENTING FOR NEW COMERS
- RESISTANCE AGAINST REMOVING
- IMPORTANT SOURCE OF INCOME

CITY / CITIZEN

- WORKING PLACE, JOB OPPORTUNITY
- SOCIAL HUB, JOB INFORMATION EXCHANGE
- IMPORTANT SOURCE OF INCOME

- CITY DOESN'T NEED TO SUPPLY SOCIAL HOUSING FOR EVERYONE
- REDISTRIBUTE HUMAN RESOURCE
SITUATION OF URBAN VILLAGE
<table>
<thead>
<tr>
<th>SITUATION</th>
<th>PERCENT</th>
<th>LOCATION</th>
<th>STAKEHOLDER</th>
<th>REASON</th>
<th>PROCESS</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEING REMOVED</td>
<td>37%</td>
<td>NEAR URBAN CENTER</td>
<td>DEVELOPER, GOVERNMENT</td>
<td>[6] BIG LAND VALUE, GOOD PROMISING PROFIT, SENSITIVE AREAS</td>
<td>TO ORIGINAL INHABITANTS: FINANCIAL COMPENSATION, THE NEW COMERS HAVE TO SEARCH FOR CHEAP RENTING IN THE NEARBY URBAN VILLAGES; SOCIAL HOUSING IS FAR FROM ENOUGH</td>
<td>AN URBAN VILLAGE IN BEIJING CBD IS GOING TO BE REMOVED</td>
</tr>
<tr>
<td>EDGE-INVADED</td>
<td>41%</td>
<td>IN BETWEEN, NEXT TO TRAFFIC ROADS</td>
<td>DEVELOPER</td>
<td>[6] BIG LAND VALUE, GOOD PROMISING PROFIT</td>
<td>TO ORIGINAL INHABITANTS: FINANCIAL COMPENSATION, THE NEW COMERS HAVE TO MOVE FROM EDGE TO CENTER LEADING TO ILLEGAL DENSIFICATION BY ORIGINAL INHABITANTS</td>
<td>SHPAI VILLAGE IN GUANGZHOU, LONGFU SI VILLAGE IN BEIJING</td>
</tr>
<tr>
<td>TEMPORARY RENovation</td>
<td>2%</td>
<td>IN BETWEEN</td>
<td>GOVERNMENT</td>
<td>[6] SENSITIVE AREAS, POLITICAL NEED OR SITUATION IS VERY SERIOUS</td>
<td>PAINT THE WALLS, ORDER WIRES, SET NEW TRASH BINS, NEW PAVEMENTS, NEW SEWAGE, REMOVE SOME ILLEGAL BUILDINGS</td>
<td>NEW WALL PAINTING AND PAVEMENT IN PINGJIANG VILLAGE</td>
</tr>
<tr>
<td>LEFT OVER/SEGREGATED</td>
<td>20%</td>
<td>NEAR URBAN EDGE</td>
<td></td>
<td>LITTLE LAND VALUE, LACK OF FUNDING, FAR FROM SENSITIVE AREAS</td>
<td>SELF-ORDERED, WEAKLY REGULATED BY LOCAL ADMINISTRATION</td>
<td>FENCING FORMS AN SEGREGATION IN SHUIMO VILLAGE</td>
</tr>
</tbody>
</table>

[6] POLITICAL FORCE IN REMOVING URBAN VILLAGE: RAPID REMOVAL BEFORE BEIJING OLYMPIC GAMES

LOCATION OF THE SITE
IN BETWEEN A ROYAL PARK AND AN UNIVERSITY, GOOD TRANSPORT CONDITION: TRAM, METRO, VEHICLE ROADS, CONNECTED WITH CITY CENTER, OLYMPIC PARK

A RIVER PASSES BY THE SITE, NEAR TO THE ENTRANCE OF THE UNIVERSITY AND THE PARK
ANALYSIS OF THE SITE
ILLAGE

LANDUSE: COMMERCIAL INTERFACE, SERVICES FOR NEIGHBORING DISTRICTS, STUDENTS AND TOURISTS

MAIN COMMERCIAL ACTIVITY

- RESIDENTIAL
- EDUCATION/TRAINING
- BATHROOM
- COMMERCIAL
- OFFICE
- PARKING/VEHICLE REPAIR
- MIX OF RESIDENTIAL+COMMERCIAL
- PARK
- HOSPITAL

TRANSPORT: WEAK NETWORK IN EASTERN PART, CORE ROUTE IS IN THE MIDDLE, ENTRANCES ARE ONLY ON ONE SIDE

- VEHICLE ROAD
- WALKING ROUTE
- FENCES
- END OF A ROUTE

500m SERVICE RADIUS

ENTRANCE OF YUANMINGYUAN PARK

0 20 50 100m

ENTRANCE OF YUANMINGYUAN PARK

0 20 50 100m

ENTRANCE OF TSINGHUA UNIVERSITY

0 20 50 100m

ENTRANCE OF TSINGHUA UNIVERSITY

0 20 50 100m
VILLAGE

OPEN PART + DISCREET PART ------- ZONE IN BETWEEN DUE TO EFFECTS OF COMMERCIAL INTERFACE AND TRANSPORT

----- PENETRATION OF COMMERCIAL INFLUENCE

BUILDING QUALITY: LOW CONDITION FOR THE MIDDLE PART

GOOD  GENERAL  BAD
UILLAGE

HEIGHT OF BUILDINGS: WEST-LOW, EAST-HIGH, DUE TO HEIGHT REGULATION OF ROYAL PARK

1-2 STOREYS, 3-6m HIGH
3-4 STOREYS, 8-11m HIGH
5-6 STOREYS, 14-17m HIGH

LANDSCAPE: GREEN IS MISSING IN URBAN VILLAGE

GREEN
WATER

YUANMINGYUAN PARK
URBAN VILLAGE
TSINGHUA UNIVERSITY

0          20              50                     100m

0          20              50                     100m
TYPOLOGY OF PUBLIC SPACE
# Linear Public Space

<table>
<thead>
<tr>
<th>Narrowest Passage</th>
<th>Single-Side Parking</th>
<th>Single-Side Stay</th>
<th>In Between High Residential Buildings</th>
<th>Single-Side Commercial Street</th>
<th>Double-Side Commercial Street</th>
<th>Main Commercial Street</th>
<th>Fenced Boundary</th>
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<tbody>
<tr>
<td>Section</td>
<td>1.2m</td>
<td>1.8m</td>
<td>2.2m</td>
<td>2.5m</td>
<td>3m</td>
<td>7m</td>
<td>13m</td>
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<tr>
<td>Distribution</td>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
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<td>Interface</td>
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<td><img src="image10" alt="Diagram" /></td>
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<td><img src="image13" alt="Diagram" /></td>
<td><img src="image14" alt="Diagram" /></td>
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<tr>
<td>Activity</td>
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<td><img src="image16" alt="Diagram" /></td>
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<td><img src="image18" alt="Diagram" /></td>
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<td><img src="image20" alt="Diagram" /></td>
<td><img src="image21" alt="Diagram" /></td>
</tr>
</tbody>
</table>
UILLAGE

NODE PUBLIC SPACE

A PUBLIC: COMMERCIAL

B SEMI-PUBLIC: COMMERCIAL + NEIGHBORING MEETING

C INTIMATE: NEIGHBORING MEETING

D TRASH PILES: GOOD LOCATION, BADLY USED

E CONSTRUCTION MATERIAL PILES: GOOD LOCATION, BADLY USED

F CONSTRUCTION MATERIAL PILES: GOOD LOCATION, BADLY USED

GREATLY POTENTIAL: GOOD LOCATION, BADLY USED
PROBLEMATIC
**INFRASTRUCTURE: WATER, ENERGY**

- **Poor water network, sewage system:** influence on drinking, washing and bath. Water resource and bathroom do not cover every house, people have to share, while the quality is poor.

- **Poor electricity, energy network:** influence on cooking and night life. Electricity cover few houses, illegal wire connection, potential fire danger, influence on night life.

**PUBLIC SPACE: COMPRESSED OR TAKEN OVER**

**Valley is the most common space type.**

**TWO WAYS OF SPONTANEOUS DENSIFICATION**

1. Take over public street
2. Add storeys

**COMMUNITY LIFE: DULL, INDIFFERENT**

- **Children of new comers:** under 7 years old, spent summer holiday in UV, no qualification for Beijing’s education, stay in UV while parents are working in daytime.
- **New comers:** from 8-22 o’clock possibility of meeting.
- **Original inhabitants:** from 18-22 o’clock possibility of meeting.
POSSIBILITY+INTERVENTION:

CHEAP; EASILY IMPLEMENTED; SHARED BY UVers
STRATEGY:
INTEGRATED, CENTRALIZED INTERVENTION SYSTEM
INTEGRATED: BENEFITING (EACH) OTHER

CENTRALIZED: THE AREA SHOULD CONTAIN THREE CATEGORIES OF PROGRAMS
CONCEPT OF INTERVENTION SYSTEM
Stronger connection with the city are needed to reduce social segregation. Location as in between central area with interventions, space & buildings to be reprogrammed. Building quality of middle part is low. Better network needed in eastern part with most potential node space. Building quality of middle part is low.
MODEL OF WATER SYSTEM
RAINWATER COLLECTION

ROOF COLLECTION

GROUND COLLECTION

LOCAL GROUND TANK

RECEPTION POND

CENTRALIZED URBAN FARMING

PUMP

SWITCH

SWITCH

SWITCH

WASHING POND

STORAGE POND

SUPPLY EACH OTHER

RIVER (RAINY SEASON)

RIVER (DRY SEASON)

CITY SYSTEM

CO-COOKING

DRINKING

UILLAGE
LAYERS OF INTERVENTION
WATER: IN, COLLECTION

- Roof rainwater in tanks, for local urban farming: a small meeting point
- Ground rainwater collection, for local urban farming: a small meeting point
- Clean water from city system, for drinking and co-cooking

WATER: USE, OUT

- Use of harvesting water
- Big canal
- Storage pond which supplies canal
- Dirty water goes to city system
- Excess water goes back to river, in rainy season

Diagram:
- Use of harvesting water
- Big canal
- Storage pond which supplies canal
- Dirty water goes to city system
- Excess water goes back to river, in rainy season
- Switch
- Pump
- Filtration
PROPOSAL
LOCAL URBAN FARMING:
A LOCAL MEETING POINT

THE ELDERLY TAKE CARE OF FARMING IN DAYTIME:
A MEETING PLACE FOR ORIGINAL INHABITANTS AND CHILDREN

FARMING EDUCATION FOR CHILDREN

[33]

[31]
LOCAL URBAN FARMING: A LOCAL MEETING POINT
A FUTURE FOR THE COMMUNITY FROM WITHIN COMMUNITY
I WOULD LIKE TO THANK MY SUPERVISORS ANA, FLAVIA AND JAIME FOR THEIR PROFESSIONAL TUTORING AND PERSONAL ENCOURAGEMENT DURING THE PROJECT.

THANK YOU VERY MUCH TO MEIKE AND MY FELLOW STUDENTS FOR ALL YOUR HELP AND INSPIRATION DURING TWO FANTASTIC YEARS IN SWEDEN.

THANK MY FAMILY AND FRIENDS FOR THEIR GREAT SUPPORT DURING THIS HALF YEAR.

LAST BUT NOT LEAST I GIVE THANKS TO THE JURY AND AUDIENCE FOR YOUR COMING TODAY WITH GREAT INTEREST AND COMMENTS ON MY PROJECT.

WE BELIEVE SUSTAINABLE DESIGN CAN MAKE A BETTER WORLD!