New Beijing | A Renewed Vernacular

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NEW BEIJING
A RENEWED VERNACULAR
THESIS CONTENTION

NEW BEIJING
A MIXED URBANISM
This thesis looks to compare the current state of development that is occurring in Beijing to that which has occurred in New York City in the early 20th century. By looking at the analogous histories of both of the vernacular housing stock in these cities, the thesis looks to examine what will become of the vernacular housing that is rapidly disappearing in Beijing.

This thesis looks to define the meaning of "vernacular" in order to propose a new type of housing strategy that will not be held back by a nostalgic point of view, but rather create an architecture and urban scheme that contains the essence of what once was.

It is clear that in the past century, an increasingly flat world has drastically changed the lifestyle of urban residents. In cities with histories spanning centuries, the change in urban demographics along with their associated ways of living are reflected in the fragmented urban fabric. In Beijing specifically, the density of population along with the introduction of generic modernist housing towers have changed the lives of those inhabiting these structures in various ways.

With the introduction of western housing typologies, the urban environment of Beijing changed from a congregation of quadrangle communities into a disparate patch work of dilapidated modified quadrangles, communist housing blocks, and high rise apartments. In addition to an architectural gentrification that is occurring, in which a vernacular housing typology is being replaced by an architecture with no identity and no place, one must also be wary of the increasing influence of social gentrification and its effects on urban planning and architecture.

Ultimately, this thesis proposes an intervention at an urban and architectural scale that looks to define the term "vernacular" in material and immaterial terms and proposes an idea on how future development can become resilient to the negative aspects of social gentrification.
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PART 1

NEW YORK + BEIJING
ANALOGOUS HISTORIES
**Vernacular Condition** - Buildings were single family occupancy or had clear apartment structures. Housing conditions were very good and density was not an issue.

**Modified Condition** - Single family experienced rapid horizontal densification and consequent slumification due to incoming immigrants or migrants. In New York City, Irish immigrants fleeing from famine and German immigrants fleeing the war contributed to rapid population growth. In China, population growth was due to migration from rural areas to urban areas and refugees from domestic natural disasters.

**Demolition** - After slumification, areas are marked as “urban blight” with minimal real estate value. Entire neighborhoods are torn down to build other projects. In NYC, much of the tenement housing was knocked down under Robert Moses’s ambitious master plans. In Beijing, entire hutong communities were bulldozed, forcing those living there to flee.

**Public Housing** - Much of the time, after the existing housing is destroyed, ambitious plans of public housing are put forth. These tower in the park developments only serve to densify the existing area, but at the sacrifice of the existing community and culture.
URBAN ENVIRONMENTS
Robert Moses + Jane Jacobs

- Vertical Density
- Street Level Activity
- Pedestrian Walkability
- Infrastructural Efficiency

IDEAL URBANISM

MOSES URBANISM

JACOBS URBANISM
To understand the urban development of that time period of NYC, two figures we must discuss are Robert Moses and Jane Jacobs and their respective philosophies on social change. On one hand, you can pit the two against each other. One was the promoter of macro scale projects and had a top-down mentality and the other approached urban change in a more humanitarian, grass roots manner. On the other hand, both figures were successful in causing positive changes to NYC.

In the modern day however, I would argue that a third, “invisible character” should be taken into consideration, and that should be gentrification. Framing the development of urban environments through the ideologies of Moses and Jacobs, I believe that all existing cities fall within the grid of 2 sets of polarizing factors.

1. **The first set is vertical density vs. street level activity**
   - The higher our architecture, the less activity on the ground plane there is.

2. **The second set is infrastructural efficiency vs. pedestrian walkability**
   - One favors automotive transportation, which directly interferes with the mobility of pedestrians.
   - These sets of factors constantly push and pull against each other to create different urban moments, neighborhoods, and entire cities.

The ideal city is able to balance these 4 qualities, but often existing conditions and future needs throw off this balance. For Moses, his development of the city favored vertical density and infrastructural efficiency. If taken to its fullest extent, urbanism would be heartless, built to accommodate cars and creating high rises disconnected from the street level. For Jacobs, the development of the city favored street level activity and walkable neighborhoods. However, taken to its fullest, this urbanism would leave a city frozen in time, with housing prices that are too high and housing quantities that are too low for large amounts of people to inhabit the city.

So now adding the third set of factors of social diversity and gentrification, we get a matrix with which contemporary cities should be wary of in the future developments.
URBAN ENVIRONMENTS
ROBERT MOSES + JANE JACOBS + GENTRIFICATION

IDEAL URBANISM

Moses Urbanism

Jacobs Urbanism
To understand the urban development of that time period of NYC, two figures we must discuss are Robert Moses and Jane Jacobs and their respective philosophies on social change. On one hand, you can pit the two against each other. One was the promoter of macro scale projects and had a top-down mentality and the other approached urban change in a more humanitarian, grass roots manner. On the other hand, both figures were successful in causing positive changes to NYC.

In the modern day however, I would argue that a third, "invisible character" should be taken into consideration, and that should be gentrification. Framing the development of urban environments through the ideologies of Moses and Jacobs, I believe that all existing cities fall within the grid of 2 sets of polarizing factors:

1. The first set is vertical density vs. street level activity
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So now adding the third set of factors of social diversity and gentrification, we get a matrix with which contemporary cities should be wary of in the future developments.
Redevelopment of valuable real estate brings about luxury condos and apartments. High-end shops marketed towards tourists and not local residents. Residents of high-rise buildings are less likely to interact with street level events. Everyday pedestrians are tourists and visitors instead of locals. Average rent around modern day is $2500 - $3000 per month.
New renovations to existing buildings change the facade presence to the street.

Local enterprises are overtaken by national chains that are able to afford higher rents.

Park space is utilized by community and visiting tourists.
Street surveillance by everyday neighbors in low-rise residential buildings.

Active street life by local pedestrians allows for lively community.

Low height more inter of street li

Small manufacturing buildings still maintain community presence.

Average Rent around the 1960's is $110 - $150 per month.
Low height buildings allow for more interaction and surveillance of street life.

Active bar scene allows for safe street conditions at night and early morning.

Park space allows for break out space for community.

'c buildings allow for action and surveillance etc.'
Vernacular quadrangles create a separation of internal private space and external public space.

Proximity of commercial and residential program allows for walkable neighborhoods.

Alleyways act as public streets for communal activities instead of simple paths of circulation.
“Stoop culture” and “people watching” allows for self-surveillance of.

Privacy of Quadrangle allows for integration of various social and economic classes.
Difference in housing typologies creates perception of widened social and economic classes.

Mixed building typologies create complicated social relations in community.

Vernacular quadrangles lack their clustering qualities that create vibrant communities.
New typologies show loss of sense of culture and identity.

High-rise typology creates separation of residential and street-level interaction.

The diagram illustrates the impact of modern conditions on spatial and social barriers via new gated high-rise residences. The text mentions the loss of a sense of culture and identity with the rise of high-rise residences.
PART 2

Beijing’s Housing Stock
The 20th Century Block Attack
The following set of diagrams depict the rise of apartment buildings as they engulf and overtake the existing vernacular architecture. In 1930, all the housing stock of Beijing was quadrangle housing, but less than a century later, the quadrangle communities within the second ring road have been rapidly decreasing.
VERNACULAR SIHEYUAN

The vernacular Siheyuan was a typology produced through thousands of years of urban development. They represent healthy communities that are lively, intimate, and diverse. The quadrangles have minimal openings towards the alleys, which show a sense of privacy towards the exterior, but internal to the housing units, there are a series of courtyards that allow the members of the family inhabiting the rooms surrounding the courtyards to interact. The alley ways act as public space in which people in the neighborhood can interact and be social; in this way, a strong communal bond exists between the community.

**Positives:**
- Central location in city
- Close neighbor relations
- Life is within walking distance
- Clear order of spaces
- Lively and healthy communities
- Good standard of living
- Bathroom available per unit

**Negatives:**
- Inefficient use of space
- Representation of a feudal society
- Lack of modern utilities
- Low density housing
**MODIFIED SIHEYUAN**

Due to the migration of farmers and workers from the rural into urban areas, the quadrangles experienced a period of severe horizontal densification in which the single housing units became accommodations of multiple families. To maximize the small spaces each family had, many people built extension buildings that intruded in the original courtyard spaces. These shacks caused a slumification effect which severely lowered the quality of living in these communities. Due to decades of poor maintenance, these quadrangles also began to have structural and infrastructural problems.

**POSITIVES:**
- CENTRAL LOCATION IN CITY
- CLOSE NEIGHBOR RELATIONS
- LIFE IS WITHIN WALKING DISTANCE
- LIVELY AND HEALTHY COMMUNITIES

**NEGATIVES:**
- OVERLY-DENSE LIVING QUARTERS
- POOR LIVING CONDITIONS
- STRUCTURAL PROBLEMS
- SHARED WATER SOURCE
- LACK OF PRIVATE BATHROOMS
- OUTDATED HEATING SYSTEMS
- TRAFFIC PROBLEMS
COMMUNIST ERA HOUSING BLOCK

Communist era housing blocks reflected the first influences of western modernist housing blocks. This architecture was first introduced into Beijing via USSR planners. This typology was possible though the stabilization of the country and strengthening of industry in order to create materials such as glass, concrete, and metal in large quantities. Because these blocks were some of the earlier buildings to replace the quadrangles, they have been engrained into the urban fabric and often have small shops attached to their outer perimeters.

**POSITIVES:**
- More efficient housing method
- Integrated into urban fabric
- Modern utilities existent (shared)
- Easy construction
- Close to larger infrastructure

**NEGATIVES:**
- Limited internal social interaction
- Lack of connection to nature
- Moderate living standards
- Diluted sense of community
Typology Urban Texture

Detail

Programmatic Distribution

- Private Living Space
- Shared Common Space
- Horizontal Circulation
- Vertical Circulation
- Balconies
- Shared Bathrooms
HIGH-RISE APARTMENT

The high-rise apartment building has become a symbol of Asia’s industrialization. It’s ease of construction along with efficient use of space makes it one of the most profitable housing typologies in Beijing. Developers have opted to raze vernacular communities and replaced them with these skyscrapers that are not affordable to those who are displaced. Many of these are bare bone construction where only what is needed is constructed and nothing more; for example, the corridor spaces are often unfurnished and there is no lobby space.

**POSITIVES:**
- Highly efficient housing method
- Parking spaces provided
- Modern utilities existent
- Easy construction
- Close to larger infrastructure
- Private garden and park as part of amenities package

**NEGATIVES:**
- Limited internal social interaction
- Lack of connection to nature
- Moderate living standards
- Diluted sense of community
- Unaffordable to lower class
Luxury Condominium

With the increase of wealth in China, the ultra-luxury market has developed, allowing the few rich to own highly designed apartments. These apartments come with a high quality amenities package, but also comes at an incredibly high cost. It would be no surprise if the valuable upon which the vernacular housing is torn down and redeveloped for the luxury apartment market.

Positives:
- Highly Designed
- High Quality Amenities
- Private Balconies
- High Living Standards
- Status Symbol
- Large Living Areas

Negatives:
- Limited Internal Social Interaction
- Diluted Sense of Community
- Unaffordable to Lower Class
- Inefficient Use of Space.
TYPOLOGY URBAN TEXTURE

DETAIL

PROGRAMMATIC DISTRIBUTION

- Private Living Space
- Balconies
- Accessory Spaces
- Living Room
- Horizontal Circulation
- Vertical Circulation
MICRO-APARTMENT

With increasing real estate values and a constant amount of land, the only way to keep price constant is by building smaller living units. These micro-apartment buildings have not yet taken a strong foothold within the housing market within Beijing, but it is a clear upcoming typology that will arrive to the city in future years. These micro-units are also interesting in their ability to be built in a modular manner.

**Positives:**
- Highly efficient housing method
- Modern utilities existent
- Modular construction
- Close to larger infrastructure

**Negatives:**
- Limited internal social interaction
- Lack of connection to nature
- Moderate living standards
- Diluted sense of community
- Unaffordable to lower class
PART 3

LINJING HUTONG
A Disparate History
Located within the second ring road, the Lingjing Hutong area is an interesting example of a torn urban fabric. The area has a diverse mix of renovated quadrangle units, a sprawl of modified quadrangle units and apartment complexes. This site is an ideal location to display how large scale urban planning can begin to merge disparate populations.
Secondary courtyards allow for relief from enclosed buildings and act as areas for leisure with plantings or vegetations.

Hutongs act as public space rather than just circulation corridors. The hutongs can be used by children to play while the rest of the community uses it as walking space.

Enclosed courtyard space is a safe haven for children unsupervised. The courtyard space allows children to be active in an exterior environment.

Low-lying typology of the vernacular quadrangle is suitable for the elderly for its ease of accessibility.

Courtyard is often customized with vegetation and water tanks that bring life into the public space.

Vernacular quadrangle houses were meant for single family units with a highly hierarchical layout and clear circulation.

Large family hall is used for indoor family activities or for guest reception. The hall is usually flanked by residential rooms.

Semi-public courtyard spaces are shared by all family members. Activities in the courtyard range from daily exercise to chess playing.

In the vernacular quadrangle, each room has a specified program and occupant.

Pets and animals are allowed to freely roam the courtyard space instead of being penned up.

The scale of the street allows it to be inhabitable rather than just a corridor of circulation.

The vernacular lifestyle
The vernacular urbanism with its structured street grid and clear chain of circulation and separation of the public and private sphere, was composed on single family quadrangle housing. The courtyard within each quadrangle was used as a semi-public activity space that allowed for members of the family to congregate and relax. The street, or in Chinese, HUTONG, was a public space rather than just a corridor of circulation.
Introduction of bunk beds to house more people into every room. Represents a lowering of the standard of living.

Existing large structures are divided into smaller rooms in order to create more living units.

Smaller, unplanned corridors appear within the urban fabric to allow for modified routes of circulation. The small scale of these modified corridors prohibits meaningful and frequent interactions.

Emergence of dead space within the urban fabric, which is caused by the unplanned insertion of extension buildings.

After experiencing horizontal densification, a single family or multiple families occupied one single room.

Extension buildings are built into the semi-public courtyard space in order to combat increasing horizontal densification.

PRIVATE PRIVATE PRIVATE PRIVATE PUBLIC PUBLIC PUBLIC PUBLIC SEMI-PUBLIC SEMI-PUBLIC SEMI-PUBLIC SEMI-PUBLIC PRIVATE PRIVATE PRIVATE PRIVATE

The hutong remains an active and popular public space for interactions within the neighborhood.

The shrinking of the semi-public realm makes it so that an increased density of population can utilize the space.

Public bathrooms are introduced since private bathrooms have been converted into private living spaces.

The small scale of these modified corridors prohibits meaningful and frequent interactions.

Emergence of dead space within the urban fabric, which is caused by the unplanned insertion of extension buildings.

PRIVATE PRIVATE PRIVATE PRIVATE PUBLIC PUBLIC PUBLIC PUBLIC SEMI-PUBLIC SEMI-PUBLIC SEMI-PUBLIC SEMI-PUBLIC PRIVATE PRIVATE PRIVATE PRIVATE

The scale of the hutong have shrunk with the encroachment of extension buildings.

Extension buildings introduce new construction methods and materials to the existing palette.

Though increasingly rare, original structures remain integrated into the urban fabric.

Public bathrooms are introduced since private bathrooms have been converted into private living spaces.
In the next phase of urban change, this formalized, clear vernacular condition was modified due to rising population and large scale urban migration. The low lying typology adapted through horizontal densification, which meant the loss of open courtyard space, infringement on the hutong through the building of extension buildings, the loss of private bathrooms, and multiple families living in small, cramped living quarters, in other words, the urbanism that appears in much of the remaining urban fabric can be seen as a slum. New alleyways began to appear, but the scale of these spaces only allowed them to be zones of circulation rather than the public spaces the hutong were.
Large hutong remain as social, congregation spaces, but pedestrians must now share the space with vehicular traffic.

Generic development apartments place awkwardly on site create dead space in plan.

Negative space between buildings is used as parking, but does not promote social interaction as the hutong does.

Apartment typology allows for successful vertical densification.

Though rare, a few of the original vernacular structures remain.

Elders are confined within the building for much of the day and do not socialize with other residents of the building.

Standard of living drops as population increases in a limited area.

Larger, taller structures are introduced to the urban fabric due to increased urban migration.

Flat roofs are utilized as programmatic spaces.

Original, vernacular structures are replaced with new constructions as they become unsafe due to erosion.

Though rare, a few of the original vernacular structures remain.
The next phase saw the introduction of apartment complexes to create vertical densification, but we can see how the introduction of this type of planning begins to create divisions between previously interrelated communities.
Private Entrance
Hutong Communal Entrance
HUTONG PRIVATE ENTRANCE
PRIVATE ENTRANCE
PRIVATE ENTRANCE
PRIVATE ENTRANCE
Hutong Communal Entrance
MODIFIED HUTONG
Modified Hutong
MODIFIED Hutong
Modified Hutong
Modified Condition
MODIFIED CONDITION
Modified Condition
MODIFIED CONDITION
Modified Condition
Modified Condition
Hutong Life
Hutong Shop Front
Hutong Shop Front
HUTONG SHOP FRONT
HUTONG SHOP FRONT
Hutong Shop Front
Hutong Shop Front
PART 4

THE PROPOSAL
Works Cited


