Illegal Linkage: Transition of Beijing Informal Economy

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In 1987, I was born in a low-income neighborhood in Beijing. At that time, the streets were vivid and packed of vendors. My great-grandfather sometimes bought me sticky rice cake from the vendors after his morning walk. My father bought me crickets every winter, as most of local people’s interest. On the way to my grandma’s house, we cycled by cornfields and pigpens. I have been told here was the fringe of Beijing. We moved out of this neighborhood in 1992.
9 years later, when we finally could afford an apartment, we decided to move into downtown near the second ring road -- ironically next to where I was born. Now, the old neighborhood has been replaced by middle class residential towers. The vendors disappeared. The streets are regulated, widened and neatly paved. But I have no longer heard cricket sounds in the winter.
The vibrant informal* economies in Beijing provide efficient services and host dynamic cultures. However, many of them are defined as illegal, chased by city management officers*. I imagine, one day, there will be a new form of linkage leading informality towards legalization.
Beijing

AREA: TOTAL 16807.8 KM²
URBAN AREA 750 KM²

(MANHATTAN LAND AREA: 59.5 KM²)
ILLEGAL LINKAGE

– Transition of Beijing Informal Economy

WANJING XIAO

PRIMARY ADVISOR: ANDA FRENCH
SECONDARY ADVISOR: RANDALL KORMAN

This thesis is designed as a legal platform, linking illegal activities to formal legal pattern. Similar with this book, it provides a platform for multi-discipline discourse, linking common terms and key concepts, and hyperlinks with cross-connect passages and images. A * indicates a link to glossary at the back of the book or elsewhere in the body.
“Informality* is a framework or paradigm for understanding urban cultures of infiltration, the ‘quiet encroachment’ of informal markets within formal economies.” --Kim Dovey
INFORMALITY WORKS AS FIELD CONDITIONS, STITCHES THE GAP BETWEEN FORMAL PATTERNS
The effect of informal economy is deeply rooted in urban life and changes the way we live. While the city center absorbs the major positive effects from urbanization, it pushes small informal developments out to the fringe. These informal activities fulfill basic needs of the local society, provide effective patch for the developing city infrastructure, and host dynamic and lively Beijing vernacular and avant-garde cultures. In reality, its informality also challenges planning and economic regulations, leading to crises of illegality, place and cultural conflict.

This project contends that the transitional urban fringes are places where the informal economy grows in the most spontaneous and efficient form. By investigating the transitional urban fringe, one can study its informal urban behavior at local and long-term effects, enabling the social awareness and political force to manifest in an informal linkage leading illegal economy towards legalization, while encouraging a new form of “formal”.

Beijing Rural Urban Syndicate (RUS*) can serve as a model for transitional urban fringe. The site is located at one of the RUS neighborhoods -- Jiuxianqiao (JXQ*), near the airport, between the forth ring and the fifth ring. Due to population explosion, the urban space is stretching out of the reach of planned infrastructure. RUS, situated in this gap, provides customized response to the gaps and incoherencies endemic in official development plans, based from the missing services. Vibrant informal economies provide series of unregulated housing, informal farmer’s market and food vendor for taxi drivers. The influx of the Beijing middle class enjoys the benefits of informal services, and the migrants find their starting point by assimilating into urban wealth. Therefore, the informality reveals the fundamental needs of the society.

Additionally, informality is a paradigm for understanding infiltration of urban culture. Lacking of regulation and political pressure, the RUS provides
a loose environment encouraging the development of critical avant-garde art. The artists gathered in JXQ since the 1990s. Over the years, they have rented vacant factory space as studios and work on artistic creation, informally.

Looking through the lens of informality, one has an opportunity to reconsider urban culture and discover the basic social needs that are almost buried by political power and this economy driven urban explosion. However, the RUS is a mobile ring that is constantly under crises because of rapid urbanization, which shifts its economic structure, social ideology, life style, demographic structure and physical form. JQX, as part of this ring, is currently under demolition and renovation. At this time, will the city keep pushing this vibrant informal economy out to the periphery? Will the city eliminate avant-garde art as political obstacles? Facing these external forces, the current informal models can hardly survive. In addition, much of these informal services are technically illegal, as they built upon unauthorized and unregulated lands with the condition of tenure insecurity.

This thesis proposes a statistic informality prototype that is able to resist the clearance from urbanization. The new paradigm will be extracted from existing informality models act as a field condition to bridge the formality and the informality occurring in RUS. It will adopt the framework of heterotopia*, which David Grahame Shane describes as a mediator between top-down* and bottom-up* developments. A series of small scale interventions will be proposed to be parasitic and co-exist with the legal structure, which spreads out over the neighborhood of JXQ. Meanwhile the architecture will also provide a legal platform, leading illegality toward legalization. Thus, the project will test whether architecture can materialize the external forces and conflict, and upgrade informal structure as a linkage among varies cultures, different social needs, and the illegal and legal economy.
Site visit, on site documentation and demonstration are part of the core of this project. Due to its self-organizing nature, informality is almost invisible from urban fabric and not recorded or mapped. Therefore, it encourages this project to integrate architectural theory with the lively local conditions, which also allows this thesis to adopt this experimental methodology.
TOUR: INTO THE JXQ

Experiential site visit helps to map the invisible patch.
<table>
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<th>01 MARKET</th>
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<td>03 GATED COMMUNITY</td>
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<td>05 HIGH-RISE RESIDENTIAL TOWERS</td>
<td>06 LOW-RISE OLD RESIDENTIAL BUILDINGS</td>
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TOUR: INTO THE JXQ

IDENTIFY INFORMALITY

Unauthorized and unregulated occupation of land and construction upon it
Condition of tenure insecurity

This photo well illustrates the idea that illegal transportation stitches the regulated infrastructure.
THEORY

INFORMALITY

LOCAL CONDITION

THESIS FLOW DIAGRAM
Informality

Two types of urbanism

Top-down

Bottom-up

Parallel urban model

Informal urbanism

Function of informality

Informalsystem is not perfect

Critique

Failure of ecological city

Ecological city

Crisis of existing informality

Field condition

Precedents

Architectural solution

Heterotopia as mediator

Architectural expression

Contested site

Tour current conditions

Speculation

Design strategy

Structure of informality
INFORMALITY*: THE INVISIBLE PATCH
The population explosion is stretching Beijing out of the reach of planned infrastructure. A series of vibrant informal economy was created, providing customized response to the gaps and incoherencies endemic in official development plans, especially in terms of the missing services. However, due to their semi-legal or sometimes illegal status, these informal economies are largely invisible within the city. They tend to be located in the deeper space of formal urban block and are barely mapped or documented.
As part of the central idea of Chinese urbanization, surplus rural labor force is moving into the megacities and joining in cities’ production. The process of migration is mainly economically motivated, resulting from the income gap between the urban and rural residents.

Beijing, the capital of China, draws million of migrants every year, which leads to rapid expansion of Beijing and creation of high-density zone in the urban center.
DENSITY MAP

- $10^3$ PPL / KM$^2$

Data from analysis of Beijing Yural Urban Syndicate Management
To address the issue of uncontrolled migration, the Chinese government established several registration policies, including Hukou* system, to discourage the settling of migrants in megacities. However, rather than solving the problem, this policy causes further sprawl. The Hukou system prevents both legal and illegal migrants from living in the downtown area. The semi-legal status of migrants pushes them out and contributes to blossom around the urban fringe.

Meanwhile, due to the city renewal efforts, the old residential buildings in the downtown area are under demolition, which is another reason for massive relocation of Beijing local residents out of downtown.
The policies that were intended to prevent sprawl in fact are encouraging urban sprawl. While the urban center benefits from the massive migration, abundant labor force, and capital inflow, it also spreading its legal pattern outwards, marginalizing the informal activities. The city low-income population and migrants were pushed out to the urban fringe, which created a transitional zone between urban and rural areas, called Rural Urban Syndicate (RUS*).

This zone is included in the planned urban fabric. It hosts urban level density population with rural-level facilities, leading to the crisis and lack of infrastructure and essential services.
RING OF RUS
(Scale is not related to density)
TWO TYPES OF URBANISM

The term of Chengxiang Jiehebu or Rural Urban Syndicate (RUS) was officially defined in 1980; however, it had been used before as well. In the past, RUS served as an informal extension of urban area. RUS zone distinguishes itself from the urban center in geography and urbanism form.

There are two strains of urban planning in Beijing and two ways to look at and think about this city. The two types are visionary planning and organic emergence.

Type I is abstract visionary planning. It portrays the dominance of people over nature. A harmonious city must be planned by experts, to whom individuals and all the urban structures are vital parts of the planned collective living. This top-down development assimilates urban life and reorganizes urban space. Since Maoist China, Beijing has been planned to greatly focus on agrarian-industrial settlements. Later, during the period of the great urbanization, a series of policies, such as Hukou system, were designed to protect the city from over-heating. For many years, governmental instruction has been the strongest force that shaped the inner city of Beijing.

Type II, on the contrary, grows spontaneously at a self-organizing and self-regulating pattern, defined as organic emergence. Within this type, everyone can be an urban planner. Thus, city development is motivated by needs of its direct users. In other words, the residents creatively respond to specific conditions, which not only fulfill their needs, but also fix the leak from Type I failure. This bottom-up development in Beijing provides customized services for people living in RUS zone.
VISIONARY
EVERYONE IS IDENTICAL TO EACH OTHER
BUT NOT URBAN PLANNER

EMERGENT PATTERN
EVERYONE IS A PLANNER!
The harmonious city must first be planned by experts who understand the science of urbanism. They work out their plans in total freedom...once their plans are formulated they must be implemented without oppositions.

-- Le Corbusier
Perhaps the most powerful way of improving the fit of our environment, however, is to put the control of it in the hands of its immediate users, who have the stake and knowledge to make it function well.

-- Kevin Lynch
Most economists define informal activity through its form of employment and organization. Urban planners and architects mostly define informality as unauthorized and unregulated occupation of land and construction upon it, which is also in the condition of tenure insecurity. This project adopts its urbanism definition, focusing on its land occupation, structural regulation and functions.
Functioning as an urban machine, city center of Beijing is constructed through a top-down visionary planning shaped by political agendas. The center is precise, functional, and keen on technological advancements, almost inhuman in its essence. But it is not a perfect system as it frequently lacks a huge, vital component -- and so will create weirdly incongruous propositions or universal answers hopelessly misapplied. It will also miss the chance to explore the local advantages (The Chinese Dream, 221). These leak and failure lead the city to seek for patches, which facilitate the bottom-up development and mostly informal economy.

The informality survives and is nourished within these gaps, as shapeless liquid formed by the container it pours in. If we adopt Kevin Lynch’s definition, it corresponds with the ecology city model. The informality maintains an “organic” balance and self-organizing dynamism in the city. Lynch noted in the Ecological City that “it is homeostatic dynamism: internal adjustments tend to return the organism to some balance state whenever it has been disturbed by an outside force. So it is self-regulating. It is also self-organizing. It repairs itself, produces new individuals and goes through a cycle of birth, growth, maturity and death” (Shane, 66). In the case of informality, the outside force is the top-down development. Therefore, the life cycle of informality maps and reveals the success and failure of top-down development. For this reason, Informality can serve as a base model. By studying its dynamic feedback system, one can understand the city as a whole, learn the lessons from previous planning failures, and come up with more effective urban model.
FOOD & OTHER GOODS

TRANSPORTATION & SERVICES

HOUSING & INFRASTRUCTURE

CULTURE
INFORMALITY

DATA FROM OBSERVATION
FOOD & AND OTHER GOODS

TRANSPORTATION & SERVICES

HOUSING & INFRASTRUCTURE

CULTURE
FORMALITY

DATA FROM OBSERVATION
Black taxi provides effective patch for the wide areas in between transportation terminals and terminals to communities.
The planned infrastructure tends to skip certain neighborhood within the city.
RUS, situated in this gap, provides customized response based on the missing services.
LONG LIVE BEIJING CULTURE!
From Ming dynasty (1400s), Beijing has been establishing its unique vernacular culture. This culture has been passed down, inherited, and developed through the local informal economy and manifested in the evolution of the contemporary Beijing lifestyle. Furthermore, the loose environment from informal space encourages the development of critical avant-garde art since 1970.
THE MISSING PATTERN OF FOLK CULTURE

FLOWER, BIRD, FISH, INSECTS MARKET

EXAMPLE
Most of Beijing folk culture markets originate from Hutong traditional alleyways. Unlike many other open-air markets in Europe, these folk culture markets are located in dark and narrow space. Although functioning informally and lacking basic hygiene-related services, many local Beijing people find their spiritual home within these markets. It is not only a space for consumption, but also a social place that allows people with similar interests to communicate and share experience with each other. These markets are initiated in the inner city but have hardly penetrated the barrier of RUS* zone.
THE MISSING PATTERN OF AVANT-GARDE

798 ART DISTRICT

EXAMPLE
Away from political pressure and surveillance, RUS has become the paradise for Beijing contemporary art. From Yuanmingyuan area and east village in 1980s to 798 in 2000s and Songzhuang in 2010s, the avant-garde artists settlements formed, died, and relocated for several times, but have always remained within the RUS ring.
RUS is situated under the process of Urbanization. It presents the transformation of rural space blending into urban fabric. With urban expansion, RUS is not only shifting geographically, but also experiences changes in its economic structure, social ideology, life-style, demographic structure, and physical form.
RURAL URBAN SYNDICATE
URBAN: TIANLONGYUAN (TTY)

POPULATION: 30,000
LOCATION: Beijing, north, outside the 5th Ring Road
DEMOGRAPHIC: relocated Beijingers, people from Dongbei (area in the north of China)

TTY is the new build component of the Tiantongyuan–Dongxiaokou RUS*. An expansive development housing many relocated families from the hutongs* in the center of Beijing, it offers a clean modern environment, but far out on the 5th Ring Road in a formerly undeveloped area, it lacks vitality and local services.
With the decentralization of urban population and economic activities, a gigantic buffer zone is established between the city center and traditional countryside, which is referred as Chengxiang Jiehebu, roughly translated as Rural Urban Syndicate (RUS).

--[Analysis of Beijing Rural Urban Syndicate Management / The Chinese Dream]
Hutong has been largely demolished, which relocated local residents from inner city to RUS. 1990s

After 1989 political suppression, avant-garde art in Beijing was revival. Artists were union and moved to RUS. Group exhibition appeared. Early stage of 798 Art District.

Floating population in Beijing numbered around 3.2 million -- roughly 30% of total population.

Peak of self-organized group avant-garde exhibition. Dashanzi International Art Festival (DIAF), curated by local artists studio -- Thinking Hands, brought international attention to 798 as an art district.
FRAMEWORK OF INFORMALITY
LOCATION: PEDESTRIAN, NEAR RESIDENTIAL BUILDINGS OR OFFICE SPACE: SMALL WORKING SURFACE, LARGER PUBLIC SPACE FOR CUSTOMERS, IDEALLY CLOSED TO STREET, EASY FOR PARKING

LIFE STYLE

RURAL   URBAN

SYMBOLIC MEANING

Mixture of social groups, reflect the missing service from formal community.

STREET VENDOR
LEGAL STRUCTURE
EFFECT
FLOW
LOCATION: PEDESTRAIN
SPACE: LARGE OPEN SPACE FOR GOODS
DISPLAY, NEAR HIGH PEDESTRAIN FLOW

LIFE STYLE

MATERIAL

BICYCLE/ TRICYCLE  CLOTH

SYMBOLIC MEANING

Mixture of social groups, reflect the missing service from formal community.
LIFE STYLE

RURAL  URBAN

SYMBOLIC MEANING

Rural facility houses urban density. Feedback system from users and local policy.

UNREGULATED HOUSING
LOCATION: OLD LOW-RISE BUILDING
SPACE: INFROMAL STRUCTURE ADJACENT TO EXISTING LOW-RISE BUILDING, PROVIDES SHELTERS, INFRASTRUCTURE IS EXTENDED FROM LEGAL BUILDINGS

ORGANIZATION

STRUCTURE

BEARING WALL

MATERIAL

BRICK

REUSE OF MATERIAL
BLACK TAXI

LIFE STYLE

RURAL  URBAN

SYMBOLIC MEANING

EXTENSION OF LEGAL INFRASTRUCTURE
LOCATION: PUBLIC STATION AND COMMUNITY GATE
SPACE: TAKES SMALL AREA OF ROAD SPACE, REQUIRES PARKING SPACE IN FRONT, OF TERMINALS AND COMMUNITY GATES
AVANT-GARDE ART

ORGANIZATION

LIFE STYLE

SYMBOLIC MEANING

INFORMAL PATTERN MIX WITH FORMAL STRUCTURE

SYMBOIC MEANING

INFORMAL PATTERN MIX WITH FORMAL STRUCTURE

68
STRUCTURE

MODULATED STRUCTURE
CLEAR LONG SPAN

MATERIAL

REUSE MATERIAL FOR OTHER PROPOSE
CONCLUSION OF EXISTING INFORMALITY MODEL

VISIBILITY

ALMOST INVISIBLE

STRUCTURE & MATERIAL

RESUSE MATERIAL AND STRUCTURE BUILT FOR OTHER PURPOSE
A city management officer chased an informal business owner for punishment, even though the owner was hiding into a public bathroom.
Nevertheless, the system of informal urbanism is not perfect. Informal activities occupy unauthorized space and provide unqualified services, which make such zones spatially and materially illegal. Thus, Chinese government sees informal activities as problems downgrading city image rather than opportunities to reconsider urban services. Several laws and regulations have been enacted to cleanup informal economy in the city. Many government officials aim to build “vendor-less” city as their political achievement. In addition, the difference of perception to informality intensifies the conflicts between citizens and government and leads bottom-up development to crisis and failures.
During the past two decades, Beijing urban renewal movement repeatedly challenged the informal activities in the city. From 1990s Hutong demolition and relocation to recent East CBD Plan, the gentrification process has been widely altering the city’s fabric, stimulating the economy along with washing away its authentic culture carried through informal activities. As Beijing Morning posted in 2009, the last vernacular pet market was demolished and relocated. Many local Beijing people are worried if the gentrification process may erase the history of Beijing, creating the crisis of place identification. To understand this transformation, one should look deeper into its driving force and reveal the relation between political regulation and informal ideology.

CITY BEAUTIFICATION

VERNACULAR CULTURE  LIVING/SERVICES  MIGRANTS / CONTEMPORARY ART
ILLEGALITY

In Beijing, most of informal economy challenges pertain to spatial and material illegality. For instance, street breakfast vendor is one the most popular informal business in Beijing. Every day, numerous vendors provide various breakfast choices, including pancakes, buns, and congee. For Beijing working class people, these vendors represent a vital part of daily life. However, city managers see them in a different way. Without any business certificates, these vendors are not unauthorized to occupy pedestrian and bicycle lane and are, therefore, violating city regulations. The food safety issue was recently reported as well, becoming one of the public concerns with regard to street breakfast vendors. Illegality associates with informal business becomes a reasonable excuse to push for the gentrification.
Street BBQ vendor are the most popular ones in night markets. The government includes this into illegal businesses list due to its pollution and unauthorized space occupation.
Due to their illegal nature, informal activities can be easily downgraded. Consequentially, the culture embedded in these activities faces the crisis of cultural discrimination. In Beijing, the clearance of the last vernacular market is the epitome of the occurring crisis. Guanyuan Market, founded during the Qing dynasty, has been known as the largest flower, fish, bird and insects market in the city. It was located deeply inside Hutongs; it was peaceful but dusky. Many local people come to the market not only for buying pets, but also for socializing. However, as many other informal businesses, Guanyuan Market was also associated with poor hygiene conditions, which downgraded the vernacular pet market culture into lower class. Gaowei, Secretary General of Beijing Institute of Folklore, said in interview with Beijing Morning that “it is the public attitude killed this folk culture. Today it seems only ballet dancing and opera are culture, vernacular part is not”. (Beijing Morning, Zhang) The cultural discrimination resulted in the market demolition in 2009.
Other than the traditional culture, the latest avant-garde culture in Beijing is currently under gentrification as well. Unlike other cultures downgraded due poor to physical conditions, Beijing avant-garde culture challenges the politics’ nerves by being a political obstacle that government strives to get rid of. In Beijing 798 factory district, numerous artists moved in and found their studios. They are fearless and honest in criticizing Chinese political issues through their art. They are political sensitive, many of whom are even limited in publication rights. They have been gathering and working in abundant warehouse until 2003, when a local developer proposed to gentrify and redevelop the neighborhood. The artists argued that the area’s culture value should safeguard them from gentrification. They organized three international art festivals from 2003 to 2006, gaining a lot of attention from local government. The district government saw this art factory as a hot sweet potato, hurting and beneficial at the same time. They declared 798 a Creative Industry Area in 2006. This political shift marked that the local government politically controls the area through developer and rent gaps. In 2006, the 7 star developer declined to renew the lease of artist Huang Rui, a key organizer of previous art festivals and a figurehead of 798’s cultural regeneration. When Huang Rui left the area, the developer used the rent gap that Smith described in his article to squeeze out a large numbers of informal artists out of the area as well. (Smith, 426) Today, the site is physically kept, even though it lacks the underlying culture. It became a theme park.

**POLITICAL OBSTACLE**
Chinese Artist: Huang Rui
He has been limited in his publication rights and public performance rights.

VS.

Patriotism Dance Drama
Conflict between vendors and city-management officers has existed for years, but the government has made little progress in reducing it. Now many observers fear that the economic crisis could make the tension even more acute. The central government fears that financial uncertainty could provoke greater social instability, fanning incidents like the Beijing standoff between the chengguan and citizens into bigger outbreaks of violence. The slowdown will also force more migrant workers who can’t find steady jobs in factories to make money peddling on the street, provoking further fights with management officers.

It’s precisely because the Chinese bureaucracy’s idea of an ideal city doesn’t include peddlers and street vendors that the chengguan developed into such a powerful institution. ...“Some government officials are oblivious to reality, and aim to build a vendorless city as their political achievement,” He says.

--TIME

The rejection from government to local informal activities directly projected in the physical destruction of informal facilities. Reacting to the cleanup movement, a new form of policing was developed. Chengguan, a Chinese phrase for city management officers, was created as a main force to clean-up informal businesses. Ironically, this policing system is informal as well. They are not police or army and frequently use unauthorized violence to punish informal business owners, sometimes even beating people to death on the street. Rather than solving the problem, this invention intensifies the current conflict between the government and local residents.
INFORMAL POLICING SYSTEM
CRITIQUE OF EXISTING INFORMALITY MODEL

Current models can hardly resist the cleanup.

Failure of bottom-up system
(using Ecological City as parallel model)
1) Information network is not as transparent as in theory, fail to maintain the dynamic feedback system
2) Unequal power break the balance
3) Down-grade some forms of culture due to their informal nature
4) In the end, one to one correspondence between flow, form, structure and process would mean the death of spontaneity.

Operating the city with only top-down or bottom-up is not possible.
Perhaps the most powerful way of improving the fit of our environment, however, is to put the control of it in the hands of its immediate users, who have the stake and knowledge to make it function well. If users are in control... then a good match is more likely.

-- Kevin Lynch
The city operation system is unbalanced. One side is government’s force and the other side is informal business. Facing this urban gentrification process, the current informal model can hardly survive. Without these containers, could the dynamic culture survive? What will informality in 2020 be like?
TOWARDS HETEROTOPIA*

MEDIATOR!

STREET TROPICAL-FISH VENDOR

[Image of urban landscape with skyscrapers and a field]
Today, the top-down planning overwhelms the organic balance between formal and informal, planned and spontaneous, making the urban system less efficient. To repair the disconnected feedback system, new architecture can serve as a mediator, bridging the top-down and bottom-up systems. What is the field between the two? Where does this reversed figure-ground condition exist? The field is the exception of both – heterotopia.
ARCHITECTURE POSITION -- FIELD CONDITION

STAN ALLEN
FIELD CONDITION
One of the potentials of the field is to redefine the relation between figure and ground. Hence, the study of these field combinations would be a study of models that work in the zone between figure and abstraction, or systems of organization capable of producing vortexes, peaks, and protuberances out of individual elements that are themselves regular or repetitive.

Field conditions are bottom-up phenomena, defined not by overarching geometrical schemes but by intricate local connections. Interval, repetition, and seriality are key concepts.
There are also, probably in every culture, in every civilization, real places -- places that do exist and that are formed in the very founding of society -- which are something like counter-sites, a kind of effectively enacted utopia in which the real sites, all the other real sites that can be found within the culture, are simultaneously represented, contested, and inverted. Places of this kind are outside of all places, even though it may be possible to indicate their location in reality. Because these places are absolutely different from all sites that they reflect and speak about, I shall call them heterotopias.

-- Michel Foucault, “Of Other Space: Utopias and Heterotopias”
Heterotopia contains feedback system mechanisms that monitor and adjust the shifting balance of centering and sorting.

The “mirrors” of the utopia and heterotopia... give urban actors the chance to identify their needs in changing and flowing situation.

To understand heterotopia in city modeling, this set of precedent study focus on three projects, covering three levels of heterotopic effect.

**PRECEDE NTS**

**CURRENT**

HUTONG BUBBLES
by: MAD
Beijing
2009

**CHANGING**

HOTEL EXPERIMENTA
by: Jan Konings
Amsterdam
2008

**FUTURE**

METRO CABLE
by: Urban-Think Tank
Caracas, Venezuela
2007-10
PROGRAM: bathrooms

PROGRAM: hotel with related service programs

PROGRAM: metro station, gym, housing, library, music factory
**HUTONG BUBBLES**

**Visibility**

![Eye Rating](image)

**Lifestyle**

| Existing | Future |

**Symbolic Meaning**

Different from what it reflects creating a network help to preserve and improve the current condition.

**Organization**

Network reflects to current condition.

50m radius
HUTONG BUBBLES
by: MAD
Beijing
2009

PROGRAM:
bathrooms

REFLECTIVE

STRUCTURE

SIMPLE CONSTRUCTION
SMALL SCALE REFLECT THE CONDITION OF CONTEXT

IMPROVEMENT HELPS PRESERVATION
TO BE DEMOLISHED

MATERIAL

REFLECTIVE MATERIAL RESPONDING TO ITS CONTEXT
HOTEL EXPERIMENTA

Through the shift of property ownership, the hotel pattern is changing and mapping its context condition. Also all the service programs are integrated to the community.

LIFE STYLE

SYMBOLIC MEANING

Through the shift of property ownership, the hotel pattern is changing and mapping its context condition. Also all the service programs are integrated to the community.
STRUCTURE

Rent and renovate vacant apartments for hotel room and service space. When the apartment sold, the hotel move out and find a new place.

MATERIAL

N/A
Program is proposed not for current condition, but designed for future. Metro system maps out the existing neighborhoods in city. By parasite to metro lines, the new programs can form an effective network to hit the target neighborhoods.
METRO CABLE
by: Urban-Think Tank
Caracas, Venezuela
2007-10

PROGRAM:
metro station, gym,
housing, library, music
factory

PROJECTIVE

STRUCTURE

MATERIAL

N/A

STRUCTURALLY ATTACHED
SOCIAL / POLITICAL CONDITION

The illegal nature of informality obstructs its development.

Working in single nodes is a weaker form and not able to resist outside force.

The regulators fail to get sufficient feedback from users, which made the top-down planning harder to refine itself. The informality hides away from regulation, which made bottom-up development illegal.

The informality only responds to current condition. It is not needed in future. This made informality easier to be cleanup.

Current informal activities hide deeply into urban fabric, made it almost invisible, causing crisis of discrimination. This increases its chance of being violated by unauthorized policing force.
SPECULATION

Regulation
Combine the informal programs with police stand to spatialize the tension between informality and regulation system.
Provide surveillance, protection and guidance to informality
Architecture spatialize the regulation process

Network that ties the organ back to the city fabric
Spread out the informal architecture along with existing network
Provide effective patch for the current and future users

Feedback system
Provide fast and transparent information through the network of police stands; help informal programs serve the neighborhoods legally
The informal programs interact with local community, providing the feedback from residents to polices, improving their working efficiency

Projective
Design not only for current condition, but also for the upcoming future
Leaving productive informalized effect for the future

Visibility
The visible regulation process protects the informal activities from violation.
Architecture inside out
JXQ* AND
THE UPCOMING OPPORTUNITY
JIUXIANQIAO is located at the edge between urban and RUS zones. As an epitome of RUS, it hosts dynamic informal economies, which are currently threatened with urban renewal and gentrification process.
SITE: JIUXIANQIAO (JXQ*)
THE UPCOMING OPPORTUNITY

AGRICULTURAL/INDUSTRIAL PRODUCT FLOW TO THE CITY
Cultural Infiltration

Art zone

Folk Culture

CULTURAL INFILTRATION
When we took pictures on site, some security people tried to drive us away. They know they are informal. They are afraid of publishing. We jumped on the motorcycle and run after photographing.

798 is very formal and commercial now. We went during national holiday, it was packed with tourists and wedding photographers.

It has very dynamic business. You can almost find everything you need.

Xiaochenge Zhuang? Informal settlement? It was last year. It is under demolition now, from the riverbank to the inner block. My new office is around there.
1

Dazhong Electronic City
program: Retail

2

Abundant Factory

3

Xiaochengezhuang
program: informal settlements, market

4

Danwei
Program: low-income / factory workers’ housing
1. Electronic City
Program: office, retail

2. Hengtong Business Park
Program: office

3. Yitigang
Program: office, international hotel, shopping mall

4. Lidu No.1
Program: residential
AIRPORT HIGHWAY
JIU XIAN QI
AO STREET

119
1950s

JXQ was planned as an industry zone. New factories built.

Housing were built for workers by factory

1990s

Economic structure shift. Factories reduced or stopped production, leaving vacant space.

Artists rented factory space as studio and exhibition space.

Some factories are renovated as office space.

2000s

International manufacturing companies moved in. Building more factories.

Collective housing stopped. New gated communities have been built for middle class. New factory workers, migrants and low-income local residents moved to informal housing.

7 star group, a developer, take over the 798 property. Transformed 798 to district makeup. Rent raised, artists moved out.

The East CBD project put JXQ in the demolition and relocation zone. More office towers are planned or built.
Factory
Users: factory workers

Residential
Users: mostly factory workers and low-income people, recently middle class moved in
*During construction, temporary housing will be built for construction workers on the site.

Business
Users: white collar
THE REGULATION SYSTEM

Police pavilion is the major regulation system currently operating on the site. Police pavilions were created to support the urban beautification movement, which required them to be planted into the informality intense neighborhoods. They form a communication system and function through networking. Most of the stuffs are not police officers, but city management officers and volunteers. In theory, they do not have authority to punish people. Thus, police pavilions are built primarily for surveillance and regulation propaganda against informal activities.
Existing Police Pavilion in JXQ
RE-MODELING
INFORMALITY
The illegal nature of informal activities leads it to the crisis of cultural and political discrimination, threatened by urban beautification process. The forced cleanup movement on informality blocks the communication, overwhelms the balance, and intensifies the conflict between regulators and informal program users. On the contested site, architecture can act as a field condition mediating the top-down and bottom-up systems. Thus, the project should produce an architecture that does not attempt to solve the conflicts but rather can serve as a vehicle to specialize the regulation process, enabling the social political tension to improve the informality system. Eventually, it will productively bring back and generate legalized informal effects.
Since police pavilions target at informality, they map out the location and potential user neighborhoods for informal sectors. Learning from the precedent, parasitizing the desired program on a network that targets at the same neighborhood will help to spread out the program more efficiently. Thus, this project proposes the informal activities as parasite on police pavilions, which will provide legal space and establish a feedback system between policing and informality. This will help the police regulate illegal business, while the informal business can provide feedback from residents to regulators by detecting and mapping out the needed programs.

**Linear scientific codes with the nonlinear self-organizing capacity of rhizomic assemblage**
Many workers and residents on the site are highly dependent on informal economy. The upcoming redevelopment plan will break their current balanced eco-system. To keep the neighborhood livable and productive, the proposed program should be based on the missing informal program in 2020. This program will be distributed through the police pavilion network.
**CURRENT**

- Demolition and Relocation
- Cutting off water, electricity
  - Program: Bathroom

- Cleanup
- Eliminate local street food vendor
  - Program: Food market

- Political Pressure
- Push away contemporary culture
  - Program: Art studio

- Cultural Gentrification
- Eliminate informal vernacular culture
  - Program: Fish & bird market

**FUTURE**
1990 2000 2010 20??

- VERNACULAR BEIJING LIFE STYLE
- LIVING/SERVICE
- MIGRANTS AVANT-GARDE
- RURAL
- TEST GROUND

THE MISSING PROGRAM

food | pet market | art studio | bath
ECO-SYSTEM*

DEPENDENCY OF INDIVIDUALS TO ACTIVITIES AND PROGRAMS
By overlapping the pattern proposed for 2020, some pavilions are used more frequently than the others are. This project will working in detail on one of the contested pavilions, situating between new construction and demolition zone, used by all three types of users.
CURRENT

INFORMAL SETTLEMENTS  CONSTRUCTION WORKERS' HOUSING  NEW DEVELOPMENT  LOW-INCOME / FACTORY WORKERS' HOUSING

SECTION A-A
PROGRAM/SCALE ESTIMATE

REGULATION RADIUS

1000 sqm

80M

1000 sqm

15 sqm

ONE COMBINED PAVILION
By measuring the distance between current police pavilions, I found that each police pavilion guards 80m radius area, within which around 1000sqm informal programs are under surveillance. This thesis estimates that 1000sqm informal programs can be parasitic to one pavilion. Thus the informality is neither too large to control, nor too small to unauthorized violated by regulators.
now: low income residential
2020: Li Du 1 (middle class gated community)

now: construction site
2020: international hotel office
now: construction site
2020: shopping mall
metro station

now: informal settlement
2020: green space
sports ground

now: factory
2020: factory
## DESIGN GUIDELINES FOR ONE UNIT

### REGULATION

| **SOCIOPOLITICAL CONDITIONS** | Informal business and culture are easily to be downgraded due to its illegal nature. |
| **ARCHITECTURE SOLUTIONS** | Combine informal program with police pavilion, enabling the tension between regulation and informal programs to regulate informality. |

### FEEDBACK SYSTEM

| Regulators are disconnected with informal program user, which breaks feedback system and makes the city functioning less efficiently. |

### FIELD CONDITION

| Current informality model is not projective. |

| Scale shift is happening on site. |

| Mixed user group on site regulation feedback system field condition visibility scale program combine informal program with police pavilion to repair the feedback system. |

| Architecture as a field presents a process. |

| Architecture inside-out / literal visibility and conceptual visibility Bridge the different scales. |

| Provide program in different level and be beneficial to all. Pet market and bath as living facilities for workers. Pet market, art exhibition and thermal bath as recreation for middle class. Art studio and living facilities to bring artists back. |
### Visibility

Informal program is invisible, which makes them to be downgraded and abused by city management officers.

#### Scale

Scale shift is happening on site.

#### Program

Mixed user group on site

<table>
<thead>
<tr>
<th>Architecture inside-out / literal visibility and conceptual visibility</th>
<th>Bridge the different scales</th>
<th>Provide program in different levels and be beneficial to all. Pet market and bath as living facilities for workers. Pet market, art exhibition and thermal bath as recreation for middle class. Art studio and living facilities to bring artists back.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police Office</td>
<td>Foyer</td>
<td>Pet Market</td>
</tr>
<tr>
<td>15 sqm</td>
<td>50 sqm</td>
<td>450 sqm</td>
</tr>
<tr>
<td>Art Studio</td>
<td>Bath / Toilet</td>
<td></td>
</tr>
<tr>
<td>300 sqm</td>
<td>400 sqm</td>
<td></td>
</tr>
</tbody>
</table>
PROGRAM FOR ONE UNIT

- **POLICE OFFICE**: 15 sqm
- **FOYER**: 50 sqm
- **PET MARKET**: 450 sqm
- **PUBLIC SERVICES**: Total 300 sqm
- **ART STUDIO**: 300 sqm
- **BATH / TOILET**: 400 sqm

TOTAL: 1200 sqm
OLD GUANYUAN MARKET
TOTAL AREA: 4000 SQM
INDIVIDUAL STORE: 10-50 SQM

WATER CUBE PAVILION
-- MVRDV
TOTAL AREA: 8050 SQM

798 ART FACTORY
EACH UNIT: 400-3000 SQM

FREI PHOTOGRAPHIC STUDIO
HERZOG DE MEURON
FOOTPRINT: 460 SQM

SHUANGXING THERMAL BATH
TOTAL AREA: 170 SQM
BATHING AREA: 80 SQM

VALS THERMAL BATH
-- PETER ZUMTHOR
TOTAL AREA: 4000 SQM
OPERATIONS

2010

NOW
2020

“what if” 2020
NEW CONSTRUCTION
CONSTRUCTION WORKERS ON SITE

DEMOLITION & RELOCATION
CUT OFF ELECTRICITY & WATER

white collar
office

worker
housing
THE MISSING SERVICE
PUBLIC BATH & TOILET
ART STUDIO /PET MARKET

flow

effect

white collar office

worker housing

FLOW

EFFECT

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THE EFFECT FROM PAVILION AS FIELD
PRODUCTIVELY RE-GENERATE
LEGAL INFORMAL PROGRAMS
Architecture acts as a field allows existing conditions to determine its hybridized form. Architecture form is designed to present this regulation process – pixilated providing measurement for the process, or as a shell housing the process.
Bridge the scale difference

Large scale development

Small scale informal settlements
The regulation process is visible.
POLICE PAVILION

MATERIALIZED ENERGY AS PROGRAM
CREATE ALLEYWAY CONDITION
BRING IN THE INFORMALITY SCALE

FOLLIES DISTRIBUTION
AFTER CLEAN UP

LANDSCAPE INFRASTRUCTURE
**Glossary**

**Cleanup / Chai**
n. demolition. The Chinese character chai has become a well-known symbol for demolitions due to urbanization boom. The urban renewal projects took place since 1990, began from the city center – hutong areas. With this movement, many traditional old buildings have been downgraded, leading to the problems of losing authentic culture.

**Enclave, Armature, Heterotopia**
n. three primary urban elements. (from Shane)

**Eco-system**
n. dependency of individuals to activities and programs.

**Hukou**
n. household registration, local residency license. With hukou, residents have legal access to education, medical and other public services in their registration city/area. Its geographic specific nature ties residents to their registration place and reduce individuals’ mobility (moving to other cities).

**Heterotopia**
n. the exceptional space. See page 94

**JXQ**
n. a neighborhood in Beijing, near the airport express way, between the 4th and the 5th ring. This site is currently under East CBD plan, which put the neighborhood in demolition and relocation zone.

**798**
n. a celebrated international art district in Beijing. Local artists have moved in since 1990 to take the advantage of low rent and large space.

**RUS**
With the decentralization of urban population and economic activities, a gigantic buffer zone is established between city center and traditional countryside, which is referred as Chengxiang Jiehubu, roughly translated as Rural Urban Syndicate (RUS). [Analysis of Beijing Rural Urban Syndicate Management / The Chinese Dream]
Urban Fringe/Margin/Periphery
The edge between urban and rural, do not imply its nature as a buffer zone.

Top-down Development
One urban planner dominates over nature.
The harmonious city must first be planned by experts who understand the science of urbanism. They work out their plans in total freedom...once their plans are formulated they must be implemented without oppositions. -- Le Corbusier

Bottom-up Development
Everyone is a planner.
Perhaps the most powerful way of improving the fit of our environment, however; is to put the control of it in the hands of its immediate users, who have the stake and knowledge to make it function well. If users are in control...then a good match is more likely. -- Kevin Lynch

Informal Urbanism & Informal Economy
Any exchange of goods or services involving economic value between people outside the scope of 'normal and formal 'business. -- Wikipedia
System of trade or economic exchange used outside state controlled or money based transactions. Practiced by most of the world’s population, it includes barter of goods and services, mutual self-help, odd jobs, street trading, and other such direct sale activities. Income generated by the informal economy is usually not recorded for taxation purposes, and is often unavailable for inclusion in gross domestic product (GDP) computations. -- Businessdictionary.com
Most economists define this activity through its form of employment and organization. Urban planners and architects mostly define informality as unauthorized and unregulated occupation of land and construction upon it, which is also in the condition of tenure insecurity. This project adopts its urbanism definition, focusing on its land occupation, structural regulation and function.

Policy Sprawl
n. the phenomenon by which China’s planning and building policies most often result in the opposite of their intended effect.
References


Cruz, Teddy. 2008. *Non-formal expert: Levittown retrofitted: An urbanism beyond the property line*. In GSD 08 platform., 68–73Harvard University Graduate School of Design.


