LOCALIZATION OF GUANGMING NEW TOWN

Integrating the new town development in Shenzhen metropolitan periphery

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PART 1. INTRODUCTION
PART 2. CONTEXT & PROBLEM FIELD
PART 3. NETWORK ANALYSIS
PART 4. STRATEGY
PART 5. SCENARIOS
INTRODUCTION
New town:

the internal demand of the central city

a redistribution policy to benefit the whole metropolitan region
RESEARCH QUESTION

Main research question

How Guangming new town and old town could mutually benefit from each other?

Sub research questions

How do new towns as a modernization strategy work in China?

What’s the problem in the localization process of metropolitan peripheral new towns?

What kind of urban system can be helpful to the interaction between new town and the existing one?

What kind of identities that deserve to be maintained as well as promoted within both the new and the old town?

What is the alternative planning framework that can facilitate cross-boundary collaboration?

Key words

modernization strategy, metropolitan periphery new town, passive urban renewal, social-spatial interaction, complementarity, mutual benefits
SHENZHEN: SEZ EXPANSION AND WORLD CITY

- from monocentric to polycentric
- land shortage
- from world factory to world city
- upgrading strategic areas by regional infrastructure
Dynamics of a specific area now largely depend on decisions elsewhere, with no involvement by the local authorities, and which are sometimes hard to reconcile with local problems.

Manuel Castells
PROBLEM STATEMENT

Ignorance of the old town

Social and economic segregation

Land speculation and passive urban renewal: destroy the existing identity and social network

Top-down planning approach: blue print planning

New town construction ignores local context

Source: Andrew Reynolds
PROJECT AIM

Question the current role of new town and old town in the current planning and study the existing local contexts in search for a process-oriented, relational and flexible planning framework to optimize the whole new district and fulfill the role of both the new town and the old without demolish all the existing networks.
Problem Statement
negative influence between the old and new town

- lack of involvement
- blueprint planning
- top-down new town planning model
- ignorance of the old town
- social and economic segregation
- and speculation and passive urban renewal

Aim
1+1>2 situation, fulfill the role of both

Research Question
How

Analysis
network as a tool to study the context

- Mapping
  - layer approach, existing conditions and potentials
- Stakeholder interview
  - learn the exiting social network
- Existing plan study
  - learn the planned physical network
- Fieldwork
  - Observation and data collection
- Case study
  - cooperation and complementarity
- Theory study
  - strategic, synergy, top-down model

Expected Final Product

- Review paper
- City scale network system
- Spatial plans and design
- Process oriented-planning framework
EXISTING NETWORKS ANALYSIS
People's cognitive feeling of the urban space is continuous, which physically and mentally requires a sense of continuity.
THEORETICAL FRAMEWORK

Analysis
network as a tool to study the context

downarrow
create and connect nodes to form networks, and use network to guide development

SCALES
macro scale
todo or scale
micro scale

NODES AND GRIDES
urban elements and
grids grew oriented to
urban grids

infrastructure
commercial
housing
open space
industry

DYNAMICS
inherent quality and
identity maintenance

INTERACTION
mutually benefits:
cooperation or comple-
mentarity
economic functions
urban facilities
residential and business
public service
open space
recreational facilities
labors

Regional scale:
existing contexts

City scale:
main study area
intervention

Local scale:
background
METROPOLITAN SCALE NETWORKS

INFRASTRUCTURE

AFFORDABLE HOUSING

COMMERCIAL HOUSING

INDUSTRY
DISTRICT SCALE NETWORKS

SOCIAL DAILY ROUTES
DISTRICT SCALE NETWORKS

Figure 34. Infrastructure extension of Guangming new district
Source: The base map is from the Master thesis ‘Farming Guangming’ by Jiayao Liu
DISTRICT SCALE NETWORKS
LOCAL SCALE NETWORKS

INFRASTRUCTURE

Road networks
LOCAL SCALE NETWORKS

SLOW TRAFFIC NETWORK

Metropolitan green way plan
LOCAL SCALE NETWORKS

PUBLIC TRANSPORTATION
LOCAL SCALE NETWORKS

HOUSING TYPES

Urban villages in new town

New urban village

Danwei housing

Old urban village

Commercial housing in new town

Social housing

Commercial housing
<table>
<thead>
<tr>
<th>Format</th>
<th>Density/F.A.R</th>
<th>Access</th>
<th>Green space ratio</th>
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<td>Porous</td>
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<td>Box warehouse</td>
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<td>Gated</td>
<td>Green in between</td>
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<tr>
<td>Social housing</td>
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<td>Central park</td>
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</tbody>
</table>
LOCAL SCALE NETWORKS

HOUSING AND COMMERCIAL NETWORK
LOCAL SCALE NETWORKS

WATER NETWORK

Open space of Guangming new dist
LOCAL SCALE NETWORKS

GREEN NETWORK

2003

2007

2011

2014

Open space of Guangming new district

2003

2007

2011

2014
CONCLUSION

NEW TOWN

car-oriented grid,
ignorance of existing contexts,
good metropolitan connection,
lack of local social and economic ex-change and vitality,
isolation of urban village

Fix and form new local social and eco-nomic networks to generate vitality

OLD TOWN

human scale street
community feeling
street life
place attachment
affordable housing
place attachment

Keep the existing social network
and identity, fix infrastructure net-works
STRATEGY
STRATEGY FRAMEWORK

Existing network analysis
City is a product of networks: to organize people and society.

Metropolitan network
- Infrastructure network
- Industry network
- Social network

Local network
- Infrastructure as basic facilities
- Existing road network
- Slow traffic network
- Public transport
- Housing and commercial network
- Social network
- Green network
- Water network

Goals
- Starting point -- boundary area: to fix and protect the existing networks, and foster new ones

Scenarios
- Buffer zone concept
- Mix-use concept
- No intervention

Key words
- Connectivity
- Livelihood
- Identity
- Biodiversity

Interaction/synergy & Identity keeping

Strategic intervention
- Boundary theory (Richard Sennett): more attention should be paid to the borders in order to cultivate complex interaction

New town principles:
- Centrality, transit-oriented, public transport oriented

Old town principles:
- Scattered destination, small-grid street pattern, mixed use pattern, from trees to networks, housing affordability, slow traffic oriented

Long-term strategy

Form new local social and economic networks to generate vitality

More networks connecting new town and old town

Keep the existing social network and identity

Good metropolitan connection, lack of local social and economic exchange and vitality

Based on local physical, social and economic networks

Interaction/synergy & Identity keeping

Boundary theory (Richard Sennett): more attention should be paid to the borders in order to cultivate complex interaction

More networks connecting new town and old town

Old town principles:
- Scattered destination, small-grid street pattern, mixed use pattern, from trees to networks, housing affordability, slow traffic oriented

Long-term strategy
EXPECTED FINAL GOAL

New town: modern, fast, green and vitalized

Dynamics: keep its inherent identity and quality
Interaction: complementary to each other

Old town: local, slow and human-scale

Continuity
Cultivation

Expected new town vision

Expected old town vision
Source: Rebuild Christchurch project, http://www.rebuildchristchurch.co.nz/
Contemporary city planners put their focus too much on the centre of a community rather than emphasizing the border conditions. These borders are supposed to ‘create conditions’ for a socially sustained collective life in cities which could cultivate complex interaction.

Richard Sennett
STARTING POINT: BORDER AREA

Starting point -- border area: to fix and protect the existing networks, and foster new ones

Image exploring the idea of boundaries

3.2 SECTIONS: BORDER
ORDER SOUTH

HIGH DWELLING'S DENSITY
MEDIUM DWELLING'S DENSITY
LOW DWELLING'S DENSITY

Leisure
Green
Commercial
Traffic
Hospital / School

PUBLIC
SEMI-PUBLIC
PRIVATE
AGRICULTURE
CONSTRUCTION

3.2 SECTIONS: BORDER SOUTH
STARTING POINT: BORDER AREA
BORDER AREA ANALYSIS

KEY WORDS

Connectivity

Liveliness

Synergic border area

Identity

Biodiversity

Infrastructure

Green

Culture

Commercial

Residential
BORDER AREA ANALYSIS

CONNECTIVITY

2015

2002
BORDER AREA ANALYSIS

LIVELINESS
Gated
Diversity
Dead zones
BORDER AREA ANALYSIS

IDENTITY

- infrastructure
- green
- commercial
- residential
- cultural
BORDER AREA ANALYSIS

BIODIVERSITY

Figure 39: Environmental hazards in Guangming
Source: Jiayao Liu

Figure 40: System of Maozhou River. Source: Shenzhen
SCENARIOS
SCENARIO CONCEPT

Buffer-Zone Concept: synergy by ecosystem

Stop the move of large-grid
Create more meeting and recreational spaces
Fix the existing green and water system

Transition-Zone Concept: synergy by mix-use functions

Create a mix-use area to reduce the form impact to the old town grid from the new town
Obey the rule of the market
Guide urban morphology and landscape change gradually
BUFFER ZONE CONCEPT

RISK
BUFFER ZONE CONCEPT

Social Housing

Trees

Networks
BUFFER ZONE CONCEPT

BIODIVERSITY

AVERRAGE RAIN

HEAVY RAIN

WATER INTAKE AND SCREENING
TERRACES FOR AERATION AND BIO-PURIFICATION
HEAVY MEATAL REMOVEL AND BIO-PURIFICATION
AERATION AND BIOLOGICAL PURIFICATION
WATER SETTLING AND PRECIPITATION
SUBSURFACE FILTRATION
NUTRIENT REMOVAL
TRANSITION-ZONE SCENARIO
**Government – Local**

*Needs*: Economic development, regional competitiveness, improved public service provision

*Influence in development process*: High

**Developers**

*Needs*: maximum profit

*Influence in development process*: High

**Local Residents**

*Needs*: More affordable housing, better public services.

*Influence in development process*: Low

**Migrants**

*Needs*:  
- Ensure their legitimate living rights  
- Affordable housing  
- Need to integrate into the city  
- Jobs

*Influence in development process*: Low
TDR

Current situation

Old town

New town
Max distance 400m
Max distance 600m
West side bus lines
New Metro Caopu station and east side bus lines
EVALUATION

Main research question
How Guangming new town and old town could mutually benefit from each other?

Identity/quality keeping
- Social integration
- Ecosystem
- Appearance keeping
- Gradual

INTERACTION
- Functional complementarity
- Appearance changing
- Less gradual

LOCAL SCALE: CONNECTIVITY > LIVELINESS > IDENTITY / BIODIVERSITY
THANKS