ARCHITECTURE  建筑 文化 歷史  CULTURE  HISTORY

Post-colonial Hong Kong’s urban space and cultural protection under globalization

Multi-functional Civic/Culture Centre
Contents

- General Context and Research Question
- Area Selection and Analysis
- Concept and Aims
- Building Design
  - Form Investigation with Context
  - Floor Plan Design
  - Section Design
  - Facade Design
  - Detail Design on Facade
  - Space Design (perspective inside & outside)
  - Landscape Design (Roof Park)
- Structure Design
  - Constructing Process
  - Specific Construction —— Ties
  - Joints Among Construction Parts
  - Movable Joints Between Parts
  - Detail of Library Roof Window
  - Layer Detial of Green Roof
- Climate Design
  - Ventilation
  - Heating & Cooling
  - Air Conditioning
Globalization:
If, therefore, the word ‘globalization’ signifies anything about our recent historical geography, it is most likely to be a new phase of exactly this same underlying process of the capitalist production of space.

——David Harvey

Global city:
Global cities’ uneven development was usually polished as ‘our shared future’ by government officials, urban planners and multinational consortia. The use of urban space is dominated by these existing powers, while disadvantaged group was increasingly marginalized.
Global City

The global capital and global finance depends on a growing network of global cities, because essentially it needs space. The politics of space comes in when the expanding financial centers require new built environments. When people work in these spaces, they also require homes, services and thus a new global centre is born. Such growth also leads to top level concentration of power, because it facilitates the working of global politics and economics.

—–Saskia Sassen

General Context and Research Question

Map 1: Global city-firm networks

Acknowledgements - Michiel Raats and Wilfred Sleegers.
Faculty of Applied Economics, Erasmus University Rotterdam.
Client, Netherlands Environmental Assessment Agency (MNP).

A = total connections.
B = basic materials connections.
C = manufacturing connections.
D = trade connections.
E = producer services connections.
The dual city stands for social polarization, which, in a minimalist understanding, is usually measured as income polarization associated with processes that take place under globalization. In Saskia Sassen’s well-known argumentation, finance and specialized service industries restructured the social and economic order of global cities, that is, these sectors are held to produce an occupational structure that leads to social polarization in the class structure giving it an ‘hourglass’ shape (Sassen, 1991). Saskia Sassen pointed out that Global city should be understood as dual city which was made up of two social strata: new elite or international business people and low income ‘others’.
The mainstream of Hong Kong urban space discussion on aerial view cannot accurately reflect the daily life of urban status. In contrary, exploring urban space of Hong Kong should from microscopic, bottom-up (cultural), and ethnographic-historical points of view.

——LEE Ka Kiu    The Chinese University of Hong Kong
Bottom-up (cultural) Point of View——Before 1960s

Decadence
Historical imagination, the citizen’s belief that they might have a hand in shaping their own history, gets replaced by speculation on the property or stock markets, or by an obsession with fashion or consumerism.

——Ackbar Abbas

In the book, Hong Kong: Culture and the Politics of Disappearance, Ackbar Abbas described Hong Kong’s culture as “decadence.” He defined this term by describing an energy that gets largely channeled into one direction, the economic sphere. It was this kind of decadence that made Hong Kong culture difficult to be found.
Reverse Hallucination——not seeing what is there
Perhaps the most striking feature of all about Hong Kong's cultural space today is the radically changed status of culture itself. One of the effects of colonialism was that until as late as the seventies, Hong Kong did not realize it could have a culture. The important mentality saw culture, like everything else, as that which came from elsewhere: from Chinese tradition, more legitimately located in Mainland China and Taiwan, or from the West. As for Hong Kong, it was in a favorite phrase; “a cultural desert.” Not that there was nothing going on in cinema, architecture and writing, it was just not recognized to be culture as such.

——Ackbar Abbas
Who really occupies the central spaces of cities? And whose culture is imposed as public culture?

—Sharon Zukin

How do cities use culture today? Building on the experience of New York as a ‘culture capital’ Sharon Zukin shows how three notions of culture - as ethnicity, aesthetic, and marketing tool - are reshaping urban places and conflicts over revitalization. She rejects the idea that cities have either a singular urban culture or many different subcultures to argue that cultures are constantly negotiated in the city’s central spaces - the streets, parks, shops, museums, and restaurants - which are the great public spaces of modernity.
Ethnographic-Historical Point of View——After 1960s

Hong Kong's urban development was "demolition and construction", demolishing old communities and geographical environment that hinder economic development, constructing commercial complex buildings cooperated with international city image. Under the premise of the economic benefits, Hong Kong’s historical buildings and old communities with characteristics culture became less and less. **Disappearance of the old style community in the city, discontinuity of history and culture made Hong Kong people lose collective memories and sense of belonging.**

Cultural homogenization

Capitalization and globalization seems to be a powerful force that cannot resist. Many anti-globalization sounds commented that globalization was equivalent to Westernization, killing local character and leading to cultural homogenization. It would **ignore the local, traditional communities and culture.** Urban designing adopted the same logic—cost-oriented. Urban landscape then became stereotyped by establishing ambitious commercial landscape.
After 1960s, a generation who was born after war was raised up and began to grow in Hong Kong. They considered Hong Kong as their home. **Local consciousness and the "Hong Kong" cultural identity began to emerge.** In addition, there were a series of events leading to people to find and reconstruct their own cultural identity.

Lee Tung Street

--- First time that art combined with history.
--- Revealing hidden memories of the community.
--- Bring new meaning to streets.
--- Who on earth are we?
--- What on earth is our tradition?
General Research Question

What kind of change was presented by 'urban space meaning' combined with cultural protection in Hong Kong?

—Post-colonial Hong Kong’s urban space and cultural protection under globalization.
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  - Form Investigation with Context
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  - Section Design
  - Facade Design
  - Detail Design on Facade
  - Space Design (perspective inside & outside)
  - Landscape Design (Roof Park)

- Structure Design
  - Constructing Process
  - Specific Construction Ties
  - Joints Among Construction Parts
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  - Layer Detail of Green Roof

- Climate Design
  - Ventilation
  - Heating & Cooling
  - Air Conditioning
General Hong Kong Context — Timeline

1842 Convention of Nanking
1949 Establishment of PRC
1966 Hong Kong Riots
1966 Hong Kong Riots 1970 Cultural Revolution in China
1969 Tiananmen Square Establishment of MTR pro-democracy protests
1978 Chinese Economic Reform
1984 One Country Two Systems
1990 basic law proclaimed
1997 Kowloon Wall City demolished Handover
2003 SARS Outbreak

1862 Treaty of Nanking
1898 HK Intl’ Airport Opened
1979 Establishment of MTR
1989 Tiananmen Square pro-democracy protests
1993 Kowloon Wall City demolished
2003 SARS Outbreak

1842 Convention of Nanking
1941-1945 Japanese Occupation
1953 Shek Kip Mei Fire
1967 First TVB over-the-air TV broadcast
1978 Chinese Economic Reform
1984 One Country Two Systems
1990 basic law proclaimed
1997 Kowloon Wall City demolished
2003 SARS Outbreak
Area Selection and Analysis

General Wan Chai Context——Timeline

1842-1902
Costline of Wan Chai

1922-1931
Costline of Wan Chai

1965-1972
Costline of Wan Chai

1994-1997
Costline of Wan Chai

Spring Garden Lane

1862
Pak Tai Temple

1902
Island Tram line started

1912
Old Wan Chai Post Office

1916
Ferry Pier established

1919
Dunmei School established

1920
Blue House

1934
Southorn Playground

1937
Old Wan Chai Market

1949
Ruttonjee Hospital

1920-1930
Costline of Wan Chai

1930-1940
Costline of Wan Chai

1940-1950
Costline of Wan Chai

1950-1960
Costline of Wan Chai

1965-1972
Costline of Wan Chai

1972-1980
Costline of Wan Chai

1980-now
Wan Chai

1. Hung Shing Temple
2. Queen's Road E
3. Johnston Road
4. Hennessy Road
5. Lockhart Road
6. Gloucester Road
7. HKCEC
8. Convention Avenue
9. Wan Chai Ferry Pier
10. HKCEC Phase 2

1842-1902
Wan Chai

1922-1931
Wan Chai

1965-1972
Wan Chai

1994-1997
Wan Chai
Community Aspiration of Wan Chai——from cultural and ethnographic-historical points of view

Area Selection and Analysis

Hong Kong——Wan Chai

Characters

- Convenience (ethnographic-historical)
- Antiquity (ethnographic-historical)
- Multi-functional (cultural)
- Diversity (cultural)

Made by Hong Kong University to Wan Chai citizens
Specific Research Question——from cultural and ethnographic-historical points of view

Ethnographic-historical:
Based on the demographics data of Wan Chai before, some basic characters can be made as follows:

— Low education
— Mostly balanced income and rent
— Population aging

Many graded historical buildings (special-functional/residential) located in Wan Chai area.

— Old Temple (1862)
— Old Post office (1912)
— Old Wan Chai Market (1937)
— Old Tong Lau (1940s-1960s)

Some characters did not seem like the ones happened in city center and most prosperous area in Hong Kong, is it a kind of resources wasting? How to balance these characters with its location?

Cultural:
Facing to the truth that cultural identity was gradually disappearing here in this area, how to address cultural identity with the existing situation? What kind of cultural replacement can be made here? Street activity? Transportation mode? High density community?

Street activity: Tai Yuen Street——disorder and dirty
To avoid the same fate as Lee Tung Street, how to enhance space quality as well as keep tradition?

Transportation Mode: Johnston Road——traffic jams, lack of sidewalk, sharing space of busline and pedestrian
How to solve these problems by keeping the basic Hong Kong style?

High Density Community: Wan Chai Road——lack of public space/green/health facilities, sound pollution, air pollution
How to avoid cultural identity losing in community?

Cultural → Ethnographic-historical

1. How to enhance space quality of communities in Wan Chai?
2. How to make interference without breaking community characters on history (Tong Lau) and culture (street market)?
3. What kind of protection can we make to keep culture on wedding card and avoid culture disappearing?
Site Selection and Analysis

Site Selection

- Landmarks selected by citizens
  - Southorn Playground
  - Tai Yuen Street
  - Hopewell Centre
  - Old Wan Chai Post Office
Building Typology and Open Space

Open space
- Green
- Upper-level Green
- Field (under construction)

Building
- Highrise
- Buildings lower than 10 floors
Site Selection and Analysis

Building Age in Wan Chai
- 70% > 30 years
- 88% > 20 years

- Post 1990s
- 1980s and 1990s
- 1960s and 1970s

Residential Building
All Private/No public housing in Wan Chai

Office Building
Site Selection and Analysis

Neighborhood Circulation

MTR Routes Services

- MTR Line
- MTR Station
- MTR Station Exit

Tram Routes Services

- Tram Line
- Tram Stop

Bus/Mini-bus Routes Services

- Bus Line
- Bus Stop

Neighborhood Circulation Paths

- Regional Road
- Through Street
- Minor Street
- Off Street Path
Site Selection and Analysis

Neighborhood Fabric

Block Configuration

Existing Roads

Existing Green/ Paved Spaces

Potential Public Spaces
Site Selection and Analysis

Building Typology and Section

- Multi-storey Bungalow
  - Year Built: 1960s-1970s
  - Height: 7 Stories

- Tai Wo Mansion
  - Year Built: 1980s-1990s
  - Height: 23 Stories

- Sky Tower with air corridor
  - Year Built: post 1990s
  - Height: 45 Stories

+Light & Air

+Ground Floor Permeability & Public Access
Site Selection and Analysis

Building Typology and Model

- Street-friendly Podium
- L-Type Building facing to park
- Sky Tower with roof garden
Demographic Analysis in Wan Chai — from cultural and ethnographic-historical points of view

Nationality
- Chinese (Hong Kong permanent residence)
- Chinese (Hong Kong temporary residence)
- British
- Japanese
- Filipino
- Thai
- Indonesian
- Indian
- Nepalese
- Pakistani, Bangladeshi and Sri Lankan
- Australian
- American
- Canadian
- Other nationality

Monthly Domestic Household Income (HK$)
- < $2,000
- $2,000 - $3,999
- $4,000 - $5,999
- $6,000 - $7,999
- $8,000 - $9,999
- $10,000 - $14,999
- $15,000 - $19,999
- $20,000 - $24,999
- $25,000 - $39,999
- $40,000+
- Not applicable
- no paid family workers

Type of Quarters
- Private residential flats
- Villas/Bungalows/Modern village houses
- Simple stone structures/Traditional village houses
- Staff quarters
- Non-domestic quarters
- Public temporary quarters
- Private temporary structures

Monthly Domestic Household Rent (HK$)
- $1 - $999
- $1,000 - $1,499
- $1,500 - $1,999
- $2,000 - $3,999
- $4,000 - $5,999
- $6,000 - $7,999
- $8,000 - $9,999
- $10,000 - $14,999
- $15,000 - $19,999
- Not applicable
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  Form Investigation with Context
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  Constructing Process
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- Climate Design
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  Air Conditioning
Different character in Wanchai Area

- Primarily Gallery/Venue Space
  - Rent +50%
- Tourists' Attracting Area with High Culture
  - Hong Kong Arts Centre / Hong Kong Exhibition Centre
- Extreme High Rise/Density Community
  - with Ground Floor Shops
- Mixed High/Low Rise Community
  - with Ground Floor Shops
- Low Rise Community
  - with Ground Floor Shops
Specific Street Life in Chosen Site

Primarily Gallery/Venue Space
-Rent+50%
What means **low culture** in Hong Kong?

Hong Kong citizens’ daily life

CONVENIENCE

The most important character

Adults

Olders

Weekday

Children

Weekends

Low culture in Hong Kong

Primarily Gallery/Venue Space

-Rent+50%
Low culture in Hong Kong

- Adults
- Weekday
- Weekends
Low culture in Hong Kong
Low culture in Hong Kong

Olders    Everyday
Concept and Aims

Low culture in Hong Kong

Small green area with limited accessibility

Little comfortable resting-place for elders

Small green area with messy condition

Olders

Everyday
What is missing here?  
What needs to be improved?  
CONVENIENCE  
How to better relationship with Street Market?

Programatic Analysis

- Primarily Gallery/Venue Space
- Rent +50%
Wedding Card workshop in Tong Lau at Leedong Street had been demolished. People who were major in this traditional cultural-skill were forced to scattered into other part of Hong Kong.
Flow Density at Different Time Point
Concept and Aims

Programmatic Timeline

- Dancing/Yoga lesson
- Public Library
- Wedding Card Workshop (for exhibition and sell)
- Daily Gather-place for elders
- Weekend Child-care
- Interior Sports Center
- Fitness Center

Weekday
- Adults
- Olders
- Children
- Visitors

Weekends
- Adults
- Olders
- Children
- Visitors

Street Market
Design Building
Formatic Analysis                  Why lift the building up

1. Confirm the concrete core and main volume
2. Lift the main volume up in order to combined with street market and make the ground floor floating and open
   Confirm the main entrance
3. Divide the volume into two based on the street below and put a sloping volume to let people directly walk onto the roof
4. Confirm the upper main entrance and make the upper volume concave in order to make more eye contacts among different levels
5. Lift the upper volume up in order to make open roof space as much as possible
6. The final shape of the building shaped with open roof floating space and many eye contacts
Elevator/Toilet/Stair Cases
Dancing/Yoga Rooms
Gather space for elders
Public Library
Auditorium
Fitness Centre
Child-Care
Wedding Card Workshop
Wedding Card Exhibition

Programmatic Analysis — 3-Dimension Show
Formatic/Programmatic Analysis ——— Feng Shui

Site with north water and south hill

Ground Floor / Second Floor with Floating Air

Main entrance to the south

Landscape on the roof in order to effect the micro-climate
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- **Climate Design**
  Ventilation
  Heating & Cooling
  Air Conditioning
Will not stop views through site from hill on the south

Take good use of the existing elevated walk-way to site

Refer to the below road leading to underground car-parking
Floor Plan Design — First Floor & Mezzanine
Floor Plan Design — Second Floor & Third Floor
Fourth Floor

Floor Plan Design — Fourth Floor
Section Design – Section A-a and Section B-b Perspective
Facade Design——East Facade
Facade Design —— South Facade
Detail Sun Shading Open Louvers  1:20

On West and East Facade
Detail Sun Shading Closed Louvers 1:20
On West and East Facade
Facade Design — Detail Design
Space Design —— Interior Perspectives to show how to use the building
Space Design — Interior Perspectives to show how to use the building
Space Design — Interior Perspectives to show how to use the building
Space Design — Interior Perspectives to show how to use the building
Yoga & Dancing Room

Citizens living around

Weekends

Weekdays

Space Design — Interior Perspectives to show how to use the building
Space design — Bird view

From arounding Highrise

From small hill on the south
Landscape design       Roof Park
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  - Detail Design on Facade
  - Space Design (perspective inside & outside)
  - Landscape Design (Roof Park)

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  - Constructing Process
  - Specific Construction Ties
  - Joints Among Construction Parts
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1. Constructing Concrete Core and Concrete Wall
2. Constructing Temporary Supporting Columns, V-shape Columns and Floor Slab
3. Constructing Structure Columns
4. Constructing H-shaped Cellular Steel Beams
5. Constructing Roof Slab
5. Constructing, Tightening Ties and Remove Temporary Columns
Ties: Connection between Concrete cores/walls and columns/beams to make the whole building stand up. The north part of the building keeps ground floor open to arrange open market.

How forces go down to the ground through different construction parts

Connections among Concrete wall / H-shaped steel beam / Ties

Structure Design —— Specific Construction of Ties
Structure Design — Construction Joints Among Parts

Concrete Slab and Steel Beam

Steel Main Beam and Secondary Beam

Concrete Wall and Steel Beam
Section 1:10

Modular Planting System
Waterproof Membrane
Insulation Board
Vapor Barrier

Prestressed struss to avoid bend

Steel brackets welded to angles and bolted on truss
Two angles welded back to back to base plate
Base plate bolted to column
Column

Structure Design — Detail Library Roof Window
Green Floor Construction

- Vegetation Grow
- Nutrition
- Fleece Backing
- TPO Root-resistance Waterproof Membrane
- Insulation Board
- Vapor Barrier

Vegetation Grow
Nutrition
Fleece Backing
TPO Root-resistance Waterproof Membrane
Insulation Board
Vapor Barrier

Detail Layer Section 1:20 & 1:5

On West and East Facade

- Perforated Exterior Shade Panel
- Anodized Aluminum Louvers
- Exterior Structural Glazing With Steel Back-up Behind
- Fire Separation Laminated Glass
- Aluminium Plate
- Sensor Controlled Hydraulic piston
- Steel Grating Catwalk
- Operable Window
- Steel Bracket

1 Modular Planting System
2 Drain
3 Aluminium Coping
4 Waterproofing Membrane

Section 1:5

1 Insulating Glazing Unit
2 Metal Panel Shadow Box
3 Painted Aluminium Soffit Panels
4 Facade Automation Control Box To Monitor Interior/Exterior Environment Sensor
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Climate Design

Passive Ducts Allowing Air to Leave Building

Mechanical Extract From Moist Area

Mechanical Ventilating/Heating Pump Unit
Spring/Autumn
Natural Ventilation most time

Summer
Mechanical Ventilation most time

Winter
Mechanical Ventilation most time
Climate Design

Heating and Cooling Ducts Arrangement

Mechanical Ventilating/
Heating Pump Unit

To Building

From Building

To Building

Drain Off Water

Draw Water

Climate Design——Heating and Cooling Ducts Arrangement
Climate Design — Heating and Cooling in Seasons

Summer

Winter
Detail Air Conditioner

Section 1:20

Detail Air Supplying Duct

Ducted Supply Air

External Louvers

Insulated Surface

Operable Window

Return Air Plenum

Chilled Ceiling

Views Possible Through Shading

Low-E Coated Soffit For Reflective Cooling

Climate Design
Thanks