Craig Trompetter
Global Housing_P5 Presentation_12/07/2019

Part 1: Problem Statement & Research Question (4min)

Part 2: Key Precedents (4min)

Part 3: Planning Strategy & Feasibility Diagram (5min)

Part 4: Design: Urban Arrangement (4min)

Part 5: Design: Cooperative (6min)

Part 6: Design: Building Technology (6min)

Part 7: Conclusion (1min)
Part 1:
Problem Statement & Research Question
Housing for Community: Re-imagining co-housing in the age of Neo-liberalism
Framing the Problem:
Neo-liberalism and the Commodification of housing
Neo-liberalism

“Instead of citizens, it produces consumers. Instead of communities, it produces shopping malls. The net result is an atomized society of disengaged individuals who feel demoralized and socially powerless.”

- Noam Chomsky, Profit Over People: Neoliberalism and Global Order [1999]
“together, these interlocking processes of deregulation, financialization, and globalization have meant that housing functions as commodity to a greater extent than ever before”

- David Madden & Peter Marcuse, In Defense of Housing: The Politics of Crisis [2016]
In New Zealand, the predominant housing type is detached housing. Commodification is facilitated by the ‘Certificate of Title’ system, the government privatising its state housing stock, and increasing uniformity through franchise housing schemes.

Photo: New Auckland settlement for northern outskirts, ODT [2017]
In Mumbai, the predominant housing type is apartment buildings. Commodification is facilitated through uniformity of apartment units within all target markets - LIG, MIG, HIG, etc.

Photo: MHADA housing scheme, Virar [2018]
Problem Statement:
Nalasopara - housing for the individual versus housing for the community
Nalasopara, 2002

Existing single story Baithi Chawls.

Google Earth [2002]
Sections of Baithi Chawls replaced with 5 storey chawls.

Google Earth [2009]
Nalasopara, 2018

More sections of Baithi chawls replaced with 5 storey chawls.
Construction of higher end apartment towers.

Google Earth [2018]
Baithi Chawls

Insufficient living standards. Sufficient daylight, personalised houses, expandable, existing community based on common facilities and hardships.
Handshake Chawls

5 story chawl apartment buildings. Characterised by unit apartments, tightly packed together, poorly maintained services, no community facilities.
Walled Apartment

Characterised by unit apartments, high standard of construction and maintenance, walls and fences separate individual buildings.
Baithi Chawl: Shared space

Baithi Chawl: Common facilities
Interface: Walled Apartment

Interface: Chawl Apartment

Problem Statement - Research Question - Key Precedents - Planning Strategy - Urban - Cooperative - Building Technology - Conclusion
Continued migration and city development is likely to fuel accelerating densification in the Vasai-Virar sub district. Left without intervention, this pattern of urban densification is likely to get worse.
Research Question [part 1]:
Within the context of the Hyper-commodification of housing in Mumbai: how can a new model of affordable co-housing act as a framework to preserve, strengthen, and develop community, while meeting density requirements and living standards?
Research Question [part 2]:
How can dwelling design decommodify housing to better match how people live rather than how people invest?
Part 2: Key Precedents
Slum Rehabilitation Association Scheme
Babasaheb Ambedkar Nagar

- SRA was launched in 1996 and was intended to rehouse eligible slum dwellers free of cost in new buildings.
- The builder pays only 25% of ready reckoner rates, gets consent of 70% of slum dwellers and develops the plot to house the original tenants. In return the builder receives additional construction rights to build luxury apartments.
Slum Rehabilitation Association Scheme
Nalasopara (Project site)

- The scheme is successful in coordinating affordable rehabilitation housing with open market housing.
- The scheme is a failure in that the existing residents are treated as dispensable. Just another obstacle to profit. The existing residents interests and positive city development need to be prioritised.
Design: BDD Chawls Redevelopment
PK Das & Associates

- Redefining the concept of equity in housing
- Freedom of Choice from various options
- A planned relationship between rehabilitation and open market housing
- Allotment of land to better represent the city inhabitants.
Design: BDD Chawls Redevelopment
PK Das & Associates

- Focus on quality of living conditions. Open space, light, ventilation and access to amenities are available for all
- Does not represent the different needs of inhabitants/owners of affordable housing vs. open market housing.
FUCVAM Model
Cooperative Housing
Uruguay - Latin America

Basic Principals
1. Solidarity
2. Democratic participation
3. Self-management
4. Mutual aid
5. Collective ownership
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F.A.R.1.0. Air Rights Principle

New York

The owners of plots can trade floor area with the owners of adjacent parcels of land, turning the ‘Floor Area Ratio’, “FAI” (or FSI) into “Air Rights”. This effectively commodifies the space above a plot which can then be sold.

Reference: opennewyork.city/zoning.html
Jean Nouvel’s tower 53W53 purchases air rights from the adjacent Museum of Modern Art and Saint Thomas Church for $85M collectively. The money was used to renovate the Museum and repair the church.

Reference: opennewyork.city/zoning.html
Part 3:
Planning Strategy
Commodify space:
Axonometric progression

1. Existing
2. Collaborate with residents
3. 7 storey height limit
4. Sell air rights
5. Set up temporary housing near site
6. Construct part 1 of cooperative
7. Construct part 2 of cooperative
   Private construction firm:
   Construct Market housing tower
8. Repeat
9. Incremental Masterplan
10. Individual Project Design
Commoditize space: Axonometric progression

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Finance Diagram: Flowchart

1. Capital and Government
2. Design, One Composition
3. Construction, Market Apartments & Cooperative
4. Return on investment
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Finance Diagram: Flowchart

1. Capital and Government
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"The role of the Architect is to coordinate interests and enable the empowerment of the poor, in an effort to create a whole which is greater than the sum of its parts."
Part 4: Urban Design
Site Analysis: Amenity Patterns

1. Virar Road: Main Commercial Street.
2. Clusters of amenities on side streets.
3. Project site
Amenity Patterns

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Amenity Patterns

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Proposed Urban Arrangement

1. Existing Commercial and Temple retained
2. Proposed Commercial Plinth and new plaza adjacent street
3. Dedicated residential blocks separate from commercial
4. Planned relationship between market housing and cooperative
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Part 5: Cooperative Housing Design
Co-housing

Building design

1. Broken form courtyard building
2. Mixed use building
3. Resident circulation
4. Dwelling design, FSI & dwellings per hectare
5. Project floor plans
Co-housing
Building design

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<table>
<thead>
<tr>
<th>Size</th>
<th>Count</th>
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<tbody>
<tr>
<td>Unit A</td>
<td>37m²</td>
</tr>
<tr>
<td>Unit B</td>
<td>40m²</td>
</tr>
<tr>
<td>Unit C</td>
<td>25m²</td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Commercial Units</th>
<th>9</th>
</tr>
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<tbody>
<tr>
<td>FSI = Total floor area (2490m²) / Plot size (685m²) =</td>
<td>3.64</td>
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<tr>
<td>Dwellings per hectare = 10,000 / (685m² / 41) =</td>
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Second Floor Level
1:100
Co-housing
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Fourth Floor Level
1:100
Co-housing

Building design

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3. Resident circulation
4. Dwelling design, FSI & dwellings per hectare
5. Project floor plans
Co-housing
Building design

Sectional Perspective: Ingredients for design.

1. Collective ownership
2. Integrated communal facilities
3. Democratic Self-management
4. Security
Part 6:
Building Technology Design
Climate Design
Mumbai Specific

1. Solar diagram
2. Shading devices
3. Flood protection
4. Sheltered Courtyard
5. Cross-ventilation
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Construction

Detail Design

1. Simple familiar construction technique
2. Vertical Load Elements
3. Lateral Load Elements
4. Part Plan: Apartment
5. Façade system
6. Details: Basement
7. Details: Wall openings
8. Details: Roof and Gallery
9. Details: Parapet walls
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