INTEGRATING INFORMALITY
A case for an informal settlement in Mumbai

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The issue is simply not about inadequate housing or infrastructure, but one of exclusion - which is a process we must reverse. In order to do that, we must begin to recognize informal settlements not as isolated islands of poverty - but as valid parts of the city that need to be integrated within their larger contexts.
RESEARCH QUESTION

What is the nature of informal settlements in India and abroad, and what role could design play in improving socio-spatial integration?

THEORETICAL RESEARCH

1. Understanding the phenomenon of informal urbanization globally (city case studies, theory)

2. Analyzing various approaches to informal urbanization globally & locally (case studies, theory, analysis and mapping)

EMPIRICAL & ANALYTICAL RESEARCH

1. Spatial analysis (photographs, mapping, typology studies)

2. Stakeholder analysis (interviews, meetings)
THEORETICAL RESEARCH
WORLD-WIDE APPROACHES TO INFORMAL URBANIZATION (1950-2010)
THEORETICAL RESEARCH
CITY CASE STUDIES

Mumbai
India
Total Pop: 16.0 m
Slum Pop: 10.0m (55%)
Density: 27,384 ppl/km²

Rio de Janeiro
Brazil
Total Pop: 6.3 m
Slum Pop: 1.4
(22%)
Density: 4,781 ppl/km²

Caracas
Venezuela
Total Pop: 6.0 m
Slum Pop: 3.0m (50%)
Density: 13,856 ppl/km²

Santiago de Chile
Chile
Total Pop: 5.5 m
Slum Pop:0.12m (2%)
Density: 8,464 ppl/km²
SPATIAL ANALYSIS
STAGES OF INCREMENTAL DEVELOPMENT

‘G’ STOREY
Kuccha House

‘G’ STOREY
Semi-Pucca House

‘G’ STOREY
Semi-Pucca House

‘G+1’ STOREY
Semi-Pucca House

‘G+1’ STOREY
Pucca House
SPATIAL ANALYSIS
HOUSING TYPOLOGIES

'G+1' STOREY
Residential Unit

'G+1' STOREY
Residential + Commercial Unit

'G+1' STOREY
Residential + Small Scale Industrial Unit

'G+2' STOREY
Small Scale Industrial Unit
SPATIAL ANALYSIS
MULTI-SCALAR MAPPING

'XL Scale: Ward 'A
'L' Scale: Back Bay
'M' Scale: Overall Site
'S' Scale: Area of Intervention
SPATIAL ANALYSIS
LAND USE

- Residential
- Informal Settlements (live/work units)
- Informal Settlements (residential units)
- Commercial
- Educational Amenities
- Medical Amenities
- Open Space
- Social Amenities
- Government Offices
- Navy Nagar (Military)
- Port
- Mangroves
SPATIAL ANALYSIS
FORMAL/INFORMAL

Informal Settlements
Formal City
SPATIAL ANALYSIS
ACCESSIBILITY

Roads/Streets
SPATIAL ANALYSIS
AMENITIES

Educational Amenities
Medical Amenities
Open Space
SPATIAL ANALYSIS
OPEN SPACES

- Public Open Space
- Informal Settlements
- Urban Fabric
- Private Open Space
PROJECT AIMS

SPATIAL INTEGRATION
To recognize informal settlements not as isolated islands of poverty, but as valid parts of the city that have a right to access the same levels of social and physical infrastructure as the rest of the city.

ECONOMIC INTEGRATION
To recognize informal settlements not only as places of sub-standard housing, but as communities full of commerce, manufacturing and employment, that must be enhanced to make them even more substantial contributors to the city’s economy.

POLITICAL INTEGRATION
To enable residents of such communities to exercise their ‘Right to the City’ that empowers them to have a say in the development of their own communities.

SOCIAL INTEGRATION
Rather than impose ‘social engineering’ strategies, social integration could be largely thought of as an outcome of the above three processes.
DESIGN STRATEGIES

LINES

BLOCKS

NODES
DESIGN STRATEGIES

- Nodes
- Blocks
- Lines
- Existing
LINES
IMPROVING VISUAL & PHYSICAL ACCESSIBILITY
"Infrastructure as a generator of urban form"

Paul Rudolph

LINES
EXISTING INFRASTRUCTURE

Vehicular Roads (6-12m)
Primary Streets in Slum (2-3.0m)
Secondary Streets in Slum (1-2m)
Tertiary Streets in Slum (0.5-1m)

Private Open Space
Public Open Space
**LINES**

**EXTENDING EXISTING INFRASTRUCTURE**

- Vehicular Roads (6-12m)
- Primary Streets in Slum (2-3.0m)
- Secondary Streets in Slum (1-2m)
- Tertiary Streets in Slum (0.5-1m)
- Proposed Pedestrian Promenade
- Proposed Roads in Slum (6-9m)
- Private Open Space
- Public Open Space
Primary Streets in Slum (2-3.0m)
Secondary Streets in Slum (1-2m)
Tertiary Streets in Slum (0.5-1m)
Vehicular Roads (6-12m)
Private Open Space
Public Open Space
Proposed Pedestrian Promenade
Proposed Roads in Slum (6-9m)
“There is much more to housing than just building houses. Urban living involves more than just the use of a small room of say, 10 sqm. The room, the cell, is only one element in a whole system of spaces that people need.”

Charles Correa

EXISTING SITUATION
BLOCKS
DESIGN DEVELOPMENT

Existing Urban Fabric
BLOCKS
ELEVATION
BLOCKS
ELEVATION DETAILS
BLOCKS
CLUSTER PLANS

Diagram

Ground Floor Plan
BLOCKS
CLUSTER PLANS

Diagram

Second Floor Plan

- Circulation
- Shared Spaces
- Commercial Units
- Living Units
- Public Space
- Public/Semi-Public Space
- Semi-Private Space
- Private Space
BLOCKS
PLANS
NODES

IMPROVING AND ADDING SOCIAL INFRASTRUCTURE
“The Rajiv Awas Yojana (RAY), a path breaking scheme for the slum dwellers and urban poor envisages a ‘Slum-free India’ through encouraging States/Union Territories to tackle the problem of slums in a holistic manner.

It calls for a multi-pronged approach focusing on:

1. Bringing existing slums within the formal system and enabling them to avail of the same level of basic amenities as the rest of the town.

2. Redressing the failures of the formal system that lie behind the creation of slums.

3. Tackling the shortages of urban land and housing that keep shelter out of reach of the urban poor and force them to resort to extra-legal solutions in a bid to retain their sources of livelihood and employment.”

NODES
TYPOLOGIES OF AMENITIES

Vehicular Roads/Pedestrian Promenade (6-12m)
Primary Streets in Slum (2-3m)
Secondary Streets in Slum (1-2m)
Tertiary Streets in Slum (0.5-1m)
NODES
PHASE 1

Mediator
Public Water Taps
Informal Market (Day)
Public Space (Evening)

Provider
Water Tower
Clothes Drying Area (Day)
Public Space (Evening)
Washing Area
Community Water Taps

Collector
Society Office
Creche
Kindergarten (Day)
Community Centre (Evening)

Facilitator
Multi-Purpose Room
Computer Room
Library
Children Study Centre
Health Clinic
It is clearly evident that the current policy of slum rehabilitation is incapable of sufficiently integrating the vast informal settlements of Mumbai with the rest of the city. Any design for such communities, I believe, should take into account all the parameters involved, and not just one. Thus, the task of housing our vast urban poor is not solely a question of stacking the maximum number of ‘units’ one on top of the other - but a process that has to take into consideration at least two more parameters: infrastructure and amenities.
TRANSFERABLE & TRANSFORMABLE