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Favela Cloud
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Experiments on the potentials
of the favela
to generate new spatial
and social possibilities

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Johan Kure, Kemo Usto & Thiru Manickam
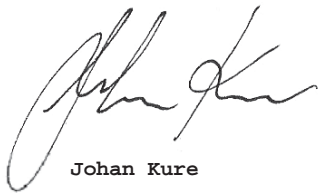-

ill. 01

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Supervisors: **Victor Andrade**
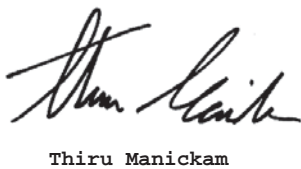   **Dario Parigi**

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Introduction

If the major cities of the world are to house a growing population in the future, architects will need to lead the way with novel solutions for urban growth. The majority of the world's population now live in cities instead of rural areas and the pace at which the metropolises grow and thus the demand for cheap labour makes it impossible for governments to control the growth to full extents. 1 billion people live in slum areas in large cities all over the world and in Rio de Janeiro the favelas are home to one fifth of the city's more than 6 million inhabitants. (UNFPA, 2011)

Informal settlements have been a major part of the urban growth in Rio de Janeiro for years now and the favelas are at the moment undergoing an important change. The discussion no longer focuses on the total removal of the favelas as the easiest way to deal with social and political problems. (Jacques, 2011) Instead the favelas are being recognized as part of the diverse city and thus having the right to urbanization, calling for a discussion on cultural and aesthetical issues as well as new visionary proposals for development of informal settlements.

The favelas of Rio de Janeiro, exhibits a diverse urban pattern contrasting the formal city. Being increasingly attractive to a broader audience they have the potential of becoming a role model for a diverse urban life and new way of dense living. If we want to change the way we are living in the city we cannot stand back and continue our old pattern of building with the modernistic block as the main building brick. We must look for potentials in the complex fabric of emergent settlements and try to rethink, rearticulate and connect the logics of these neighbourhoods in a novel approach that relates to the its specific context.

"Architecture must be projective, ie, it must point to the emergence of new social arrangements and to the construction of new institutional forms. In order to accompllish this, the building must have a point, ie, project a transformation of a prevailing political context." (Kipnis, 1993)

"The world's slums are overcrowded, unhealthy
- and increasingly seen as resourceful communi-
ties that can offer lessons to modern cities."
(Tuhus-Dubrow, 2009)

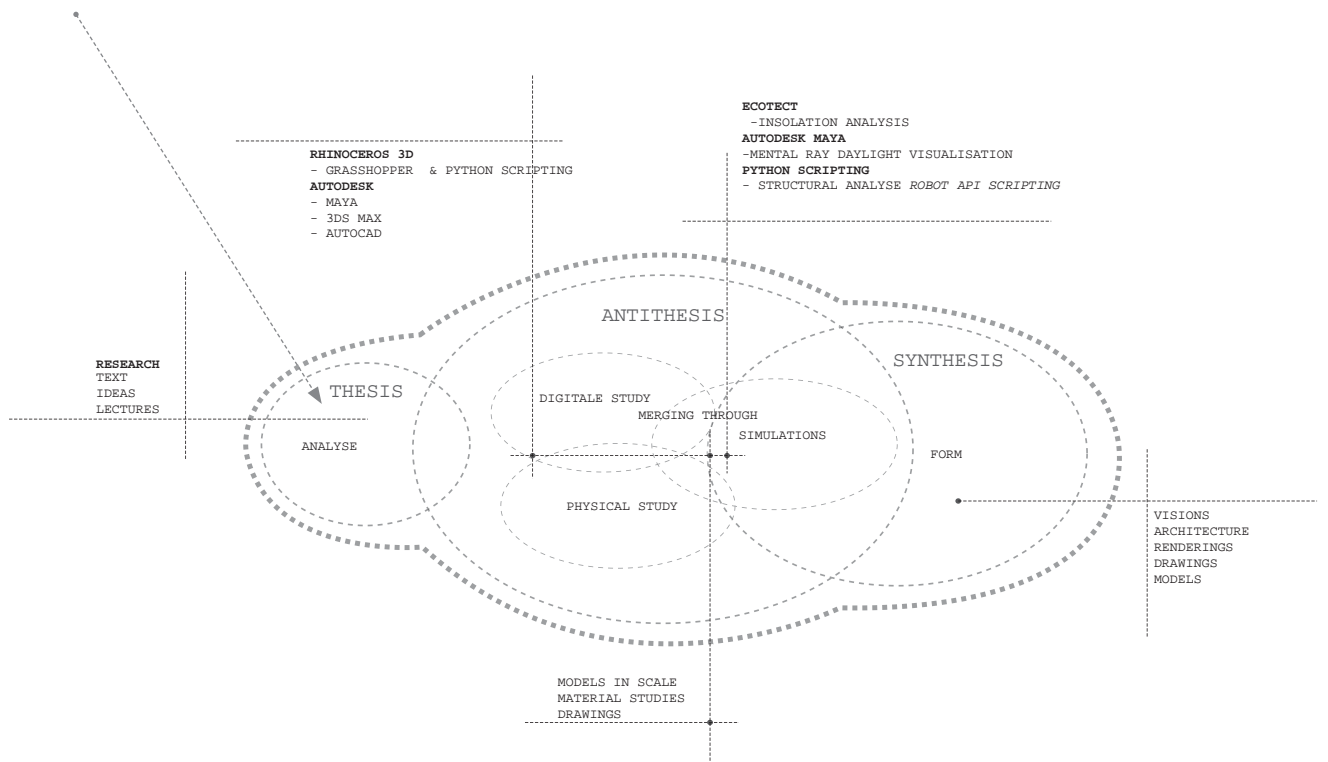ill. 02
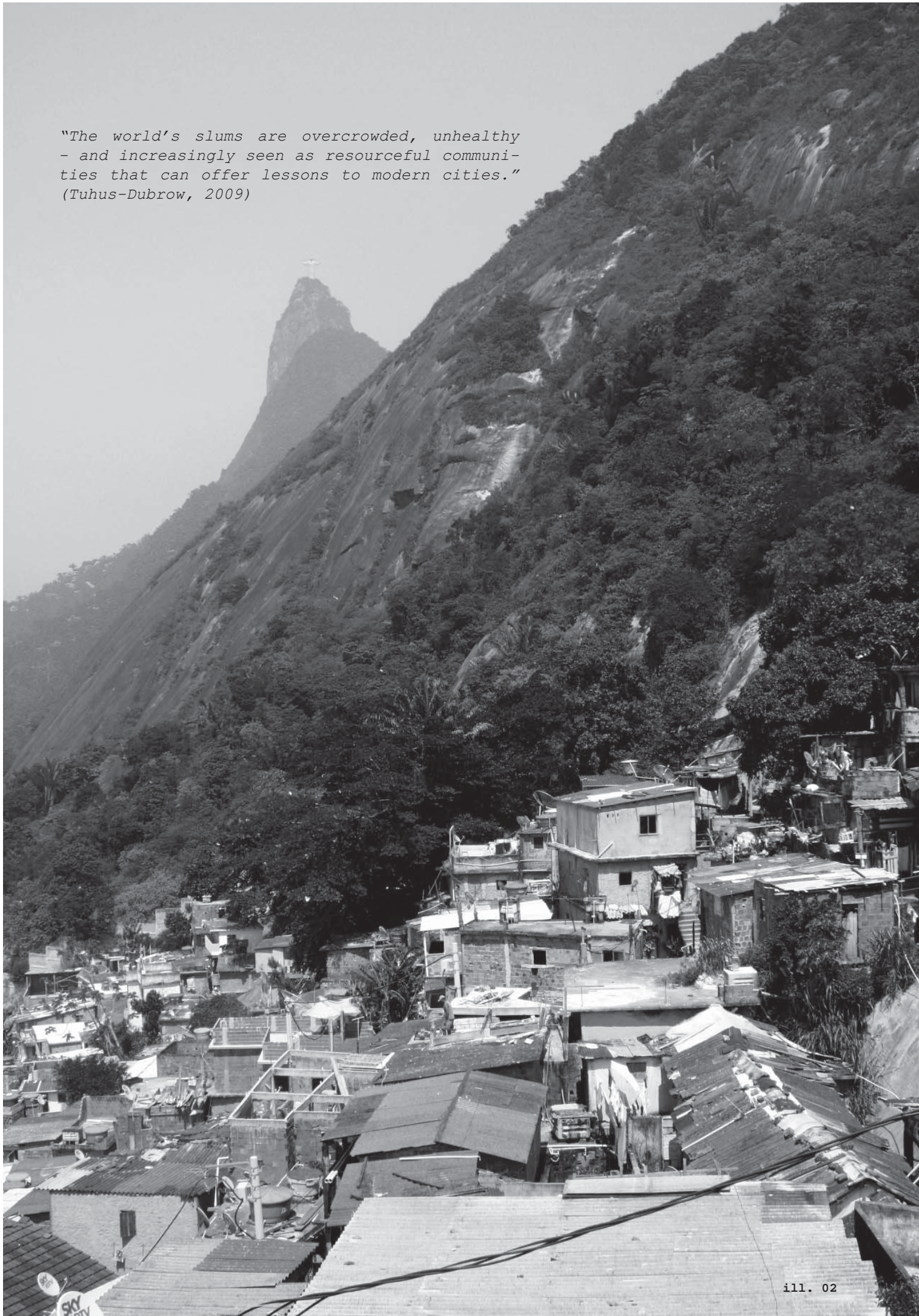
Experiencing Rio
–
Research objective

Favela Cloud is a project that takes it's offset in the study of favela Santa Marta in the South Zone of Rio de Janeiro. Proposing a novel approach for a future architecture in the favela, which takes inspiration in the qualities and complexities experienced there. It is an architectural approach that strives to create more than just a building; a living symbiosis and an icon, an expandable logic and a catalyst for the future development in the area.

The project will be an investigation into how computational tools can be applied when designing in a complex city structure like the informal settlements. Can the use of advanced digital tools create a design that improves the living conditions and building qualities in the favela and expand the future design repertoire of informed design techniques in the area, as inspiration for the self-builders there.

To gain an understanding of the context, research and analysis are carried out in Rio de Janeiro during a three-month stay. Living in close proximity to favela Santa Marta makes it possible to go there often and to get a broad understanding of the place.

Travelling to Rio de Janeiro

RHINOCEROS 3D
- GRASSHOPPER & PYTHON SCRIPTING
AUTODESK
- MAYA
- 3DS MAX
- AUTOCAD

ECOTECT
-INSOLATION ANALYSIS
AUTODESK MAYA
-MENTAL RAY DAYLIGHT VISUALISATION
PYTHON SCRIPTING
- STRUCTURAL ANALYSE ROBOT API SCRIPTING

RESEARCH
TEXT
IDEAS
LECTURES

ANTITHESIS

SYNTHESIS

THESIS

DIGITALE STUDY

MERGING THROUGH

SIMULATIONS

ANALYSE

FORM

PHYSICAL STUDY

VISIONS
ARCHITECTURE
RENDERINGS
DRAWINGS
MODELS

MODELS IN SCALE
MATERIAL STUDIES
DRAWINGS

ill. 03 Methodology

How can we understand the underlying principles of the favela and apply these in a future vision for the development of the informal city?
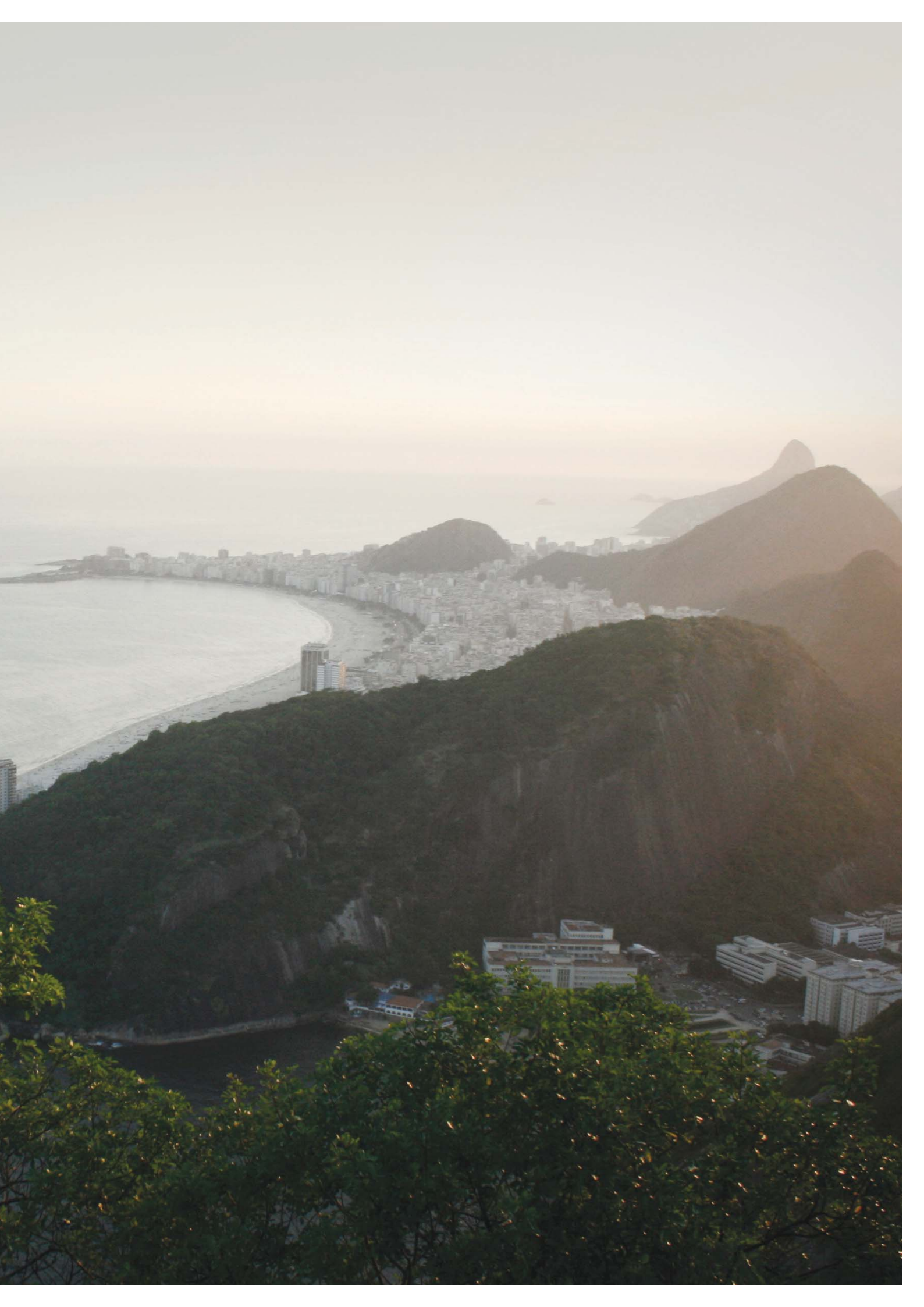
Rio De Janeiro
–
Cidade Maravilhosa

Rio de Janeiro is investing massively in the infrastructure of the city at the moment. World Cup in 2014 and the Olympic Games in 2016 are approaching and the city needs to improve significantly to facilitate these events since development of infrastructure and visionary building projects have been lacking since the 60's.

Rio de Janeiro have been a main port city for decades, acting as the link for import and export between Brazil and the rest of the world as well as being the capital of Brazil both in the Portuguese colonial times and in later independent years until 1960 when Brasilia were made the new capital. The degeneration that Rio de Janeiro faced after 1960 when a major part of the financial market disappeared from the city is still visible in the built environment and infrastructure of the city.

Rio De Janeiro have had a bad reputation throughout the 20th century, being a city with very high crime rates due to an extensive segregation of social classes and large informal areas dominated by drug trade. These informal areas, known as favelas, are spread throughout the formal city.

Now while the city have found oil in the bay and expects an increased income from tourists visiting the city in relation to sporting events over the next years, a new era for Rio might be coming up. There are already ongoing investments in the planning of the city to facilitate these events. The next step is to include the development of the favelas in the plans.
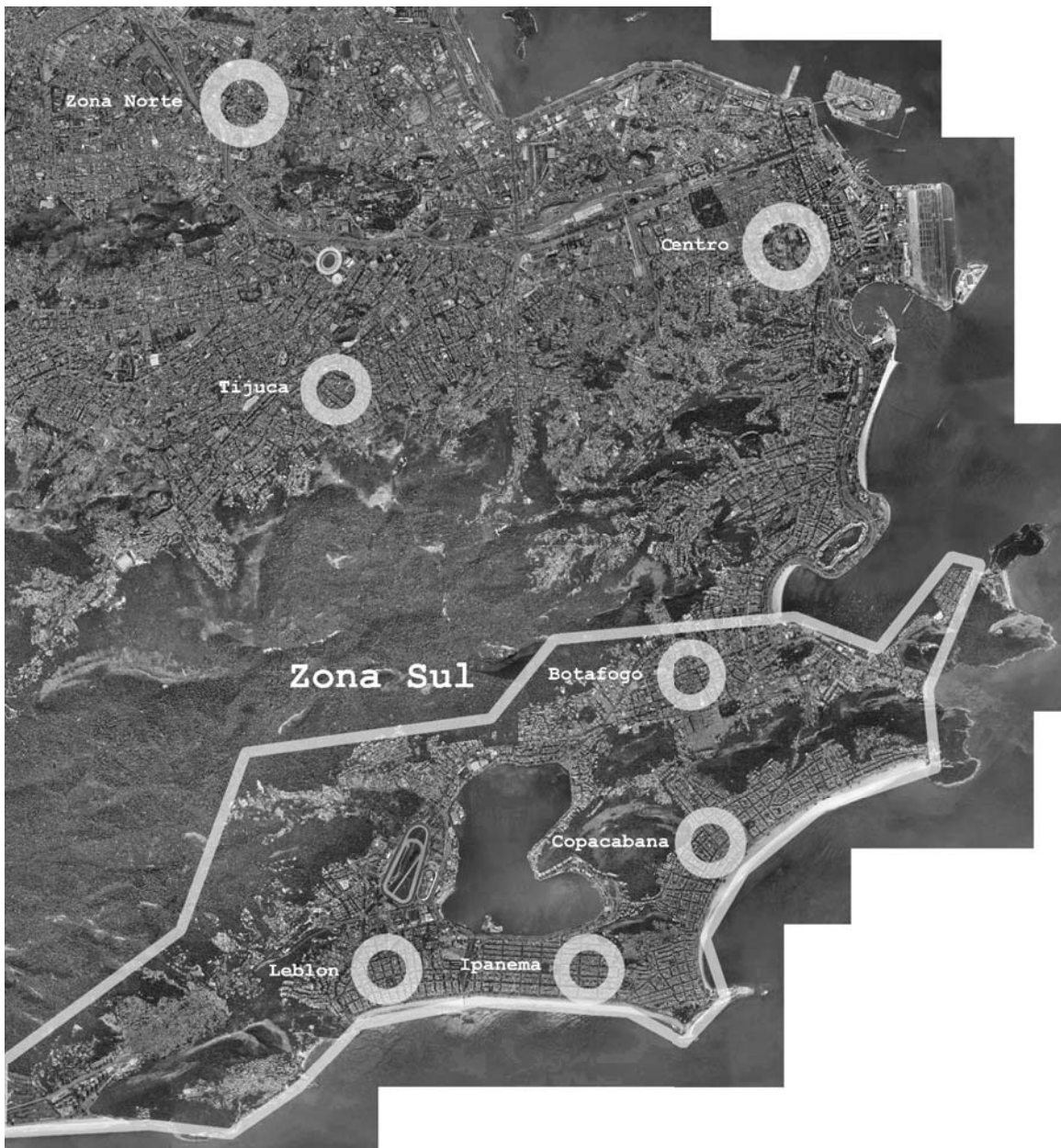
ill. 05 Overview of Rio South Zone and neighbourhoods.

ill. 06

favela, n.

[fa'vɛlɐ]

In Brazil, a shack, shanty; a slum:
usu. in pl. favelas, a collection
of improvised huts, a shanty town.
(Oxford English Dictionary, 2011)

"In the midst of all this beauty and elegance, you discover the favelas..." (Mikes, 1961)

"The favela is a wretched, ramshackle, filthy hut run up out of sticks, rotting planks, dirty rags and cardboard, as a rule in less than twenty-four hours..." (Mikes, 1961)

"We cannot admire Rio's skyline for the squalid favelas nestling between her sugar-loaf hills." (Mander, 1969)

ill. 07
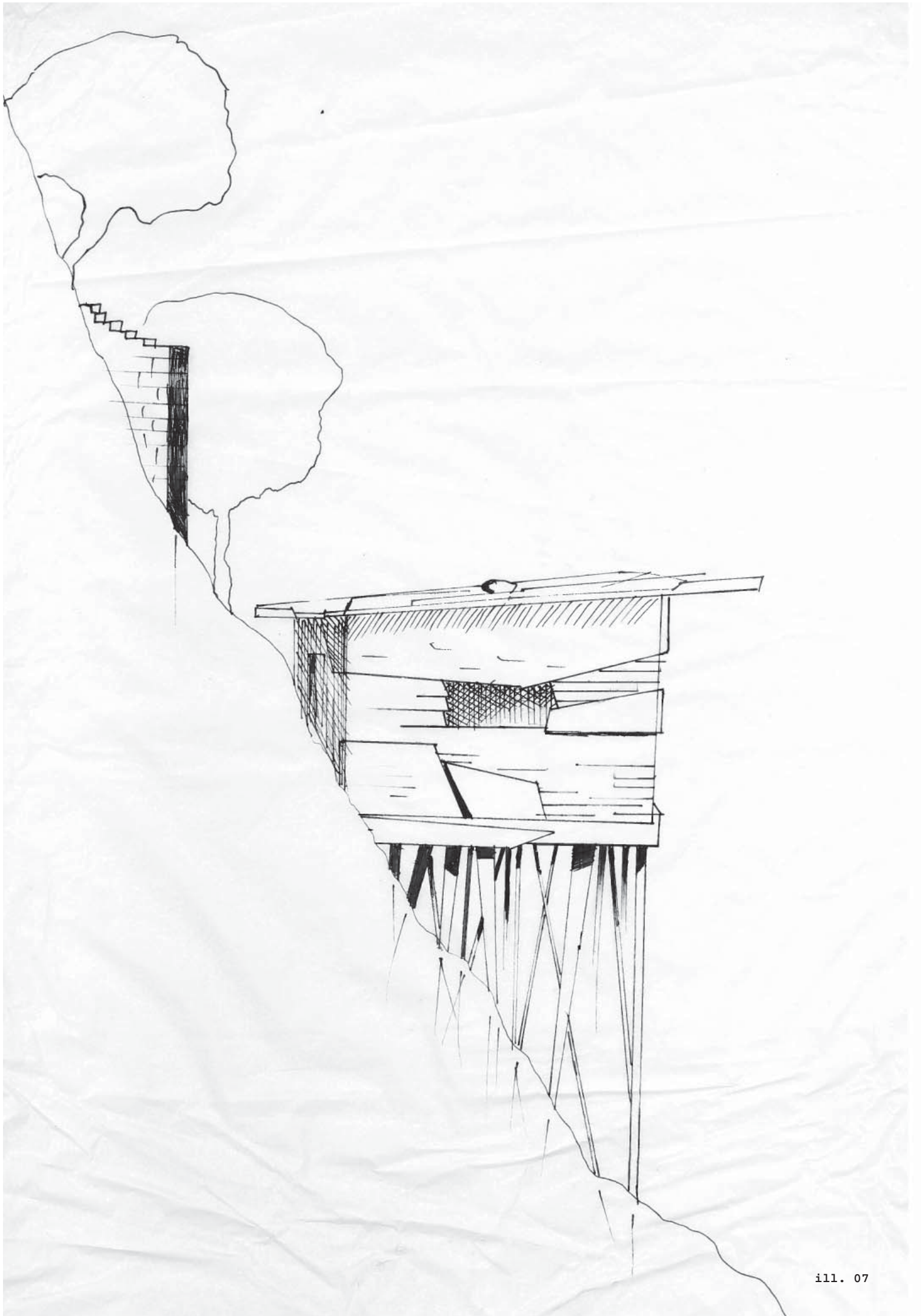
Segregated space
–
Emergence of the favelas

"The present epoch will perhaps be above all the epoch of space. We are in the epoch of simultaneity: we are in the epoch of juxtaposition, the epoch of the near and far, of the side-by-side, of the dispersed." (Foucault, 1967)

The favela can be seen as a heterotopia in the foucauldian sense. A space detached from the norm of the ordinary city. Contrary to the utopias, that have no real space, the heterotopia features an actual physical space, a space occupied by the others, those who deviate from the norm. (Foucault, 1967)

The favela is detached from the formal city, and function as a city of its own. It is seen as a poor and illegal settlement, rather tolerated than accepted as part of the city. The favela is the place for the "others".
The way of building and inhabiting in the favela reflects this. The need for proximity to the work places in the city and the unwill- ingness of the ordinary city to implement the lower class segment into the city have spread these settlements around the steep hills adjacent to the ordinary city.

The term favela was first used to describe a spontaneous settlement in the late 19th century, when government soldiers returning from the Canudos Campaign, a civil war in northern Brazil, settled down at the hill called Morro de Castelo in Rio de Janeiro. They were left with no place to live and thus erected their houses on the hill and nicknamed the settlement Favela. The name referring to the Favela Hill of Canudos, a hill named after a skin-irritating tree. (Revista de História, 2007)
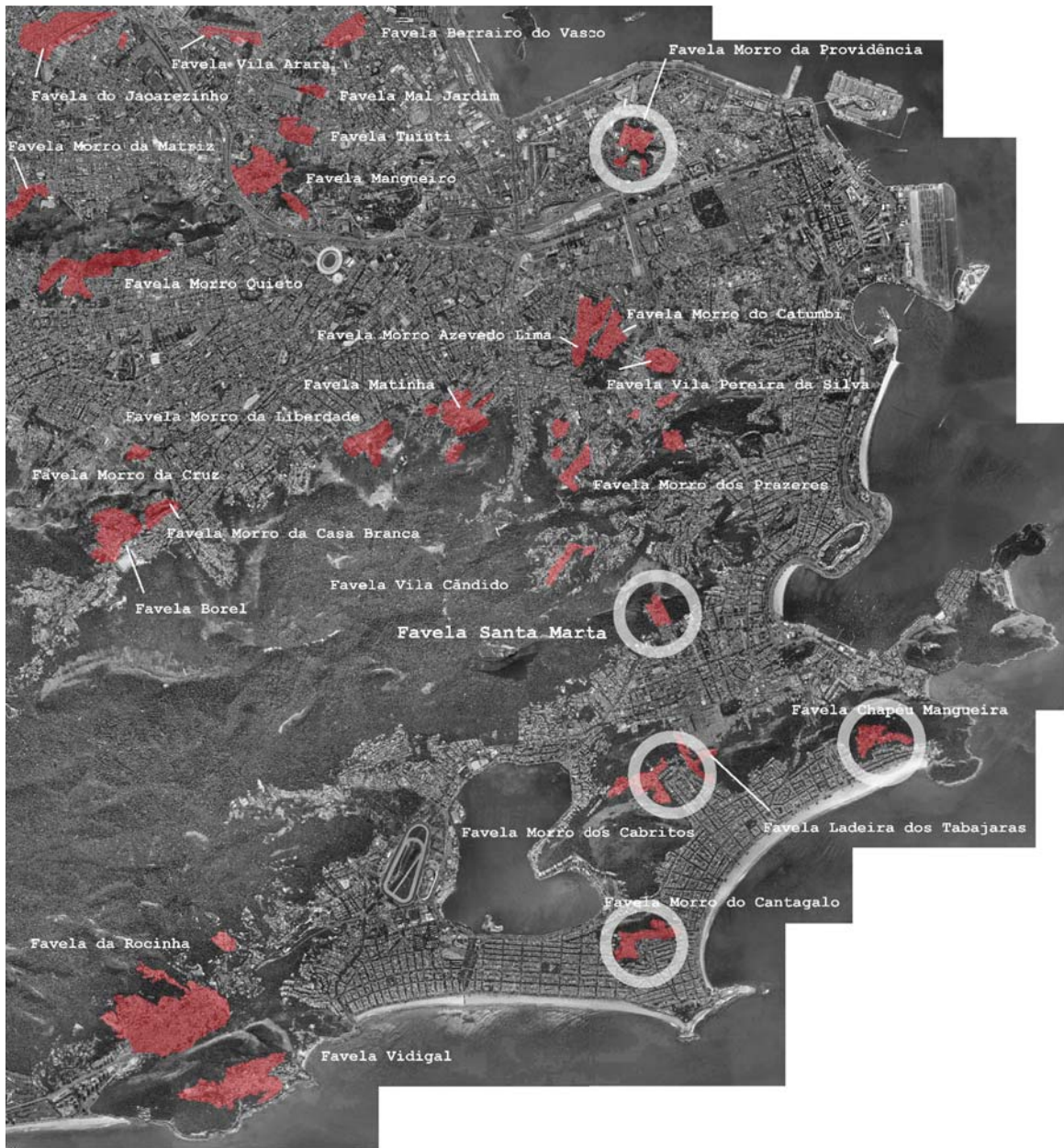
Over the years starting in the late 19th century a lot of these favela settlements emerged around the city, inhabited primarily by former African slaves who were being freed, but left with no op- tions for work or integration with the formal city.

The main growth of the favelas happened from 1940-70 driven by the movement from rural areas to cities. Many people seeking opportunities in the cities during these years couldn't find or couldn't afford to live in the formal city and the solution was to find a home in the favelas. Thus the favela as a city structure has been constantly growing and changing, adapting to the needs of the inhabitants, out of control of the government and city planning restrictions.

As a result the favelas are experienced as small communities, enclaves in the city, connected to the formal city in terms of workforce and drug trade. The favela is segregated in terms of social interaction with the rest of the city. The contrasts of rich and poor neighbourhoods living side by side, being physically close but socially segregated.
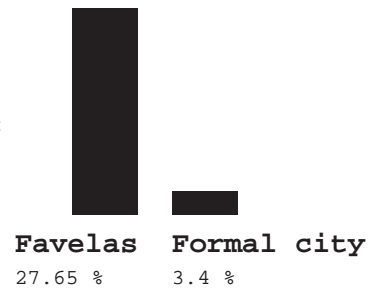
To understand the favelas of Rio de Janeiro's South Zone and the close proximity to the formal city one needs to understand the geography of Rio de Janeiro.
The Favelas lie on the hills next to wealthier neighbourhoods and has amazing views to the city and the sea. 22 % of the inhabitants in Rio de Janeiro live in 763 favelas throughout the city, according to a census made by IBGE in 2010. Around Centro and Zona Sul the formal city is spread out in the valleys between hills covered in rainforest and in some places favela settlements. The favelas are a visual and are an ever present part of the views in the city and thus cannot be ignored in terms of the visions for the city.

Favela Berrairo do Vasco
Favela Morro da Providência
Favela Vila Arara
Favela do Jaoarezinho
Favela Mal Jardim
Favela Tuiuti
Favela Morro da Matriz
Favela Mangueiro
Favela Morro Quieto
Favela Morro do Catumbi
Favela Morro Azevedo Lima
Favela Matinha
Favela Vila Pereira da Silva
Favela Morro da Liberdade
Favela Morro da Cruz
Favela Morro dos Prazeres
Favela Morro da Casa Branca
Favela Vila Cândido
Favela Borel
Favela Santa Marta
Favela Chapéu Mangueira
Favela Ladeira dos Tabajaras
Favela Morro dos Cabritos
Favela Morro do Cantagalo
Favela da Rocinha
Favela Vidigal

ill. 08 Favela spread marked with
a red overlay. UPP units marked
with a white circle.

Growth the last 10 years:

Favelas **Formal city**
27.65 %   3.4 %

200 n

● Unplaned organic layout
● Fluid distinction between public and private spaces
● Horizontal village
● Lack of infrastructure and accessebility

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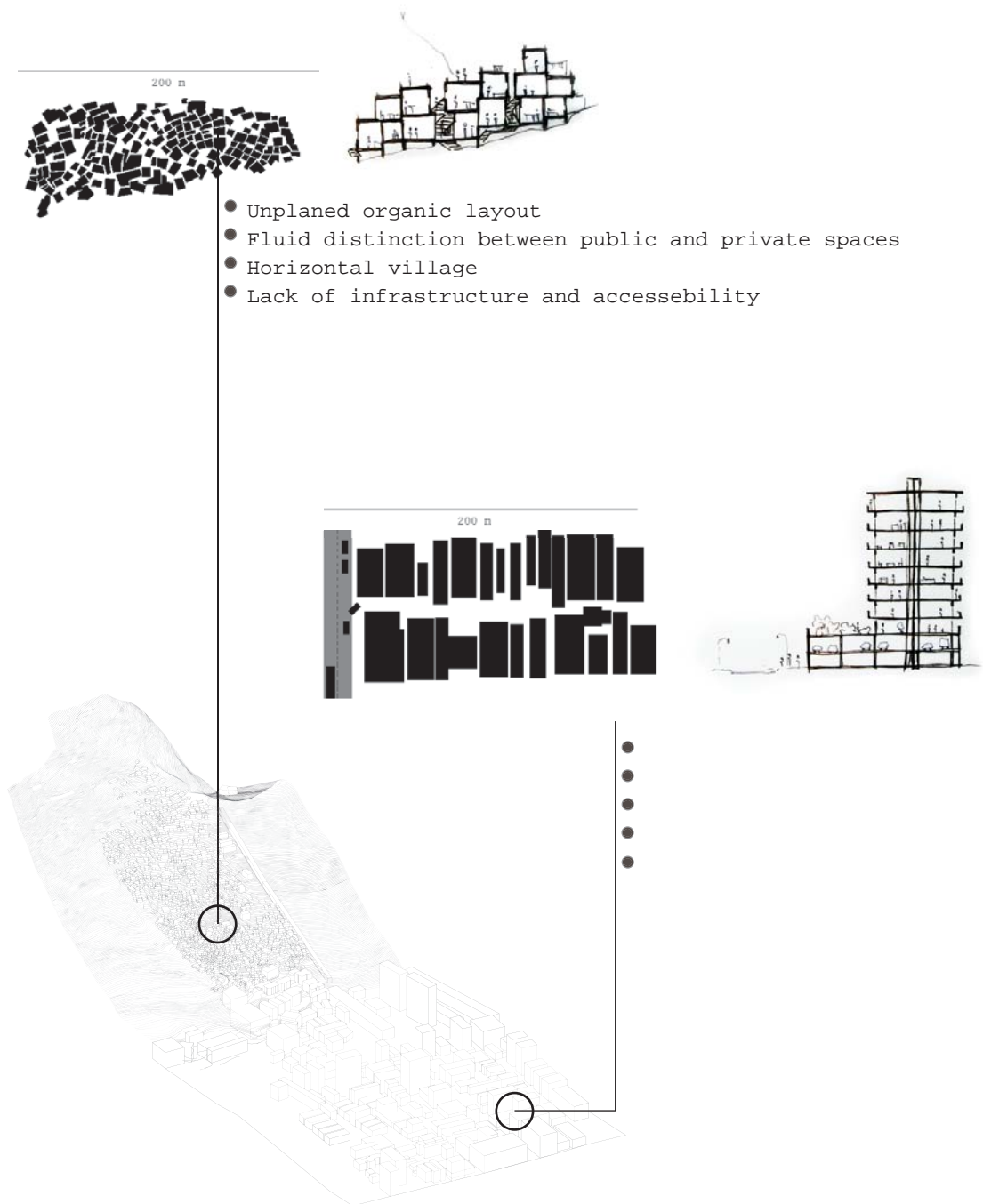
ill. 09 Comparison of city typology and charactaristics.
Favela Santa Marta and Botafogo.

City typologies
–
Formal and informal neighbourhoods

The formal neighbourhoods of Rio de Janeiro are characterized as planned, organized and build according to a rigid master plan. The informal favela differentiates in almost every sense when comparing volume, density and scale.

The urban fabric of the favela has a complexity which is not present in the modern city.
It is a complex organization which revolves around paths and connections, a high density building mass which is scattered as dots in a seamlessly unplanned, uncontrolled but still coherent and organized.
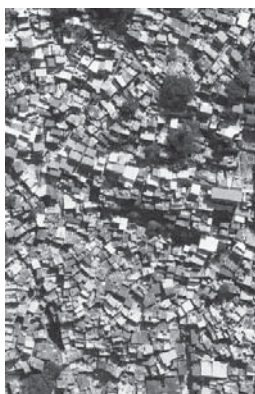

Grid layout
Gated communities
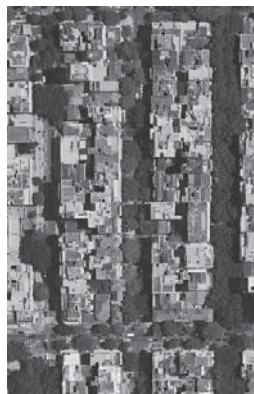Clear division public / private
Vertical village
Good infrastructure and accessability

Favela Santa Marta   Detached houses,   Ipanema, Rio   Botafogo, Rio
                      Denmark

ill. 10 Comparison of neighbourhoods

Analyzing favela organization
–
Emergent systems

When studying the relationship between paths volumes in the favela, and reflecting on the emergent qualities of these relationships. We quickly realized that the dwelling organization in favela in many ways resembled self organization patterns seen in nature.
Voronoi in particular is interesting in the understanding of the favela. The voronoi is a mathematical algorithm often used to map out and predict various phenomena from economies to rainforest growth. It gave us as an understanding of that the logics of the favela could be imitated through mathematically defined models.

ill. 11 Top view of a part of the favela. This is used for our initial study of understanding the organization or how we can imitate some of its organization qualities.
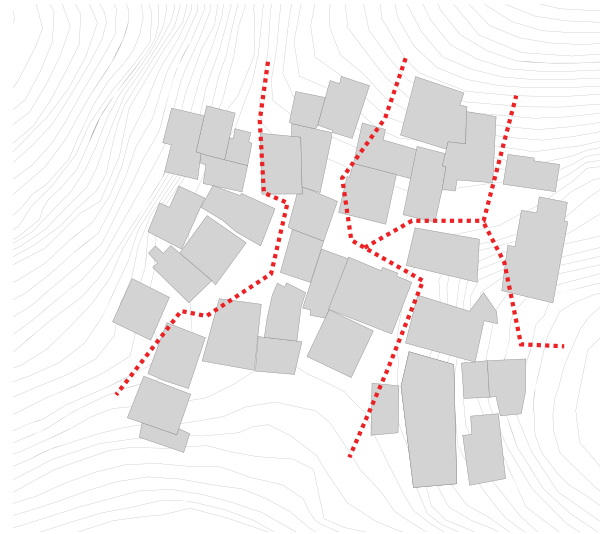
ill. 12 We quickly see that the dwellings are clustered around what could be called primary access, which is the controlling parameter for the dwellings orientations and build-up.
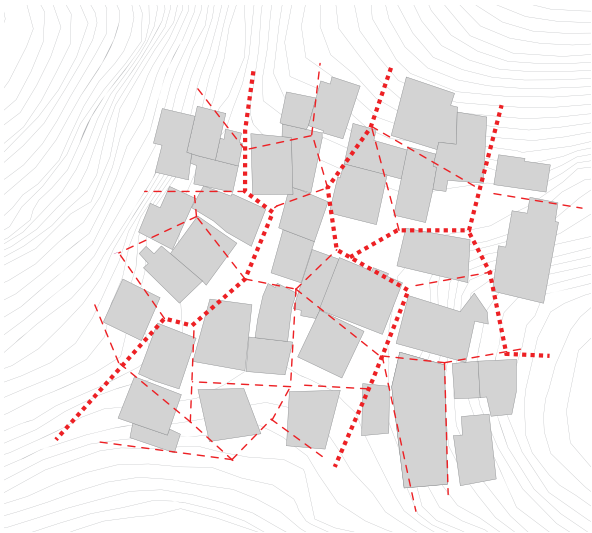
ill. 13 There are also secondary connections which are located in-between the favelas and the primary accesses. Some of them work as shortcut, some just end blind due to reconfiguration of the dwellings position and build-up.
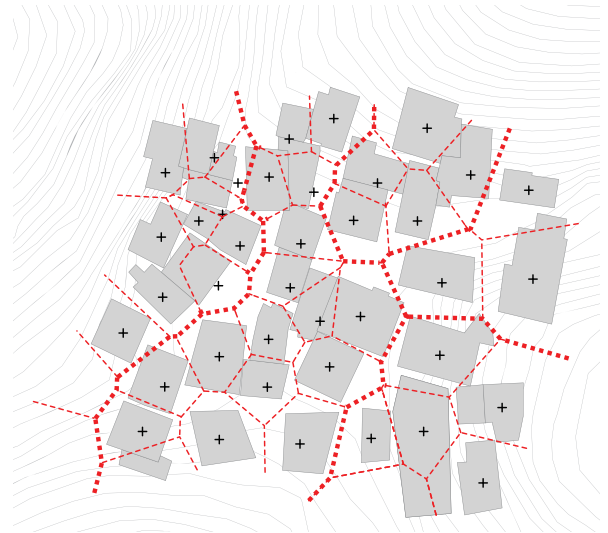
ill. 14 When applying voronoi algorithm on the dwelling locations, we can observe that the voronoi can imitate some of the complexity seen in the favela path layout.

Path and movement
–
Favela density and organisation

"The space-movement would not be connected just to the physical space itself, but primarily to the movement of the path, to the experience of walking it, and, at the same time, to the movement of the transforming space itself." (Jacques, 2011)

ill. 15 Path and entrance to a dwelling in favela Santa Marta

The UPP
–
Controling the favelas

The government has initiated a program of pacification and peace-keeping in central favelas of Rio de Janeiro. The Santa Marta favela is Favela Santa Marta was the first to be pacified in 2008 and thus serves as a model for experiments and as the face of Rio's favelas to the general public. It is located on a hillside dividing the central part of Rio from Zona Sul.

An important institution of the pacification program of the favela is the UPP (Pacification Police Units) which is the police unit that is placed the favela, ones it is pacified. Its main task is to build trust, focus on prevention and other contributing function to improve the life of within the favela. In Santa Marta the UPP building is located on the mountain as a giant monumental building volume signalling control and surveillance, and reminding people of the past. Its location and architectural appearance alienates itself from rest of the favela and gives one associations to Panopticon prison design from Bentham, which has become metaphor for surveillance, control and power.
In that way, the UPP is an institution that constantly imposes "control" over the inhabitants in the favela even when it is not in use.

A favela like Santa Marta has already evolved into a community and doesn't have the same problems as in the past. Therefore one could ask if the favela still needs the UPP in same matter as it is now. Could it become more integrated within the favela, be part of the society and instead of surveillance, aim for trust and community between the inhabitants and the government?

ill. 16 Santa Marta was the first favela to be pacified in late 2008.
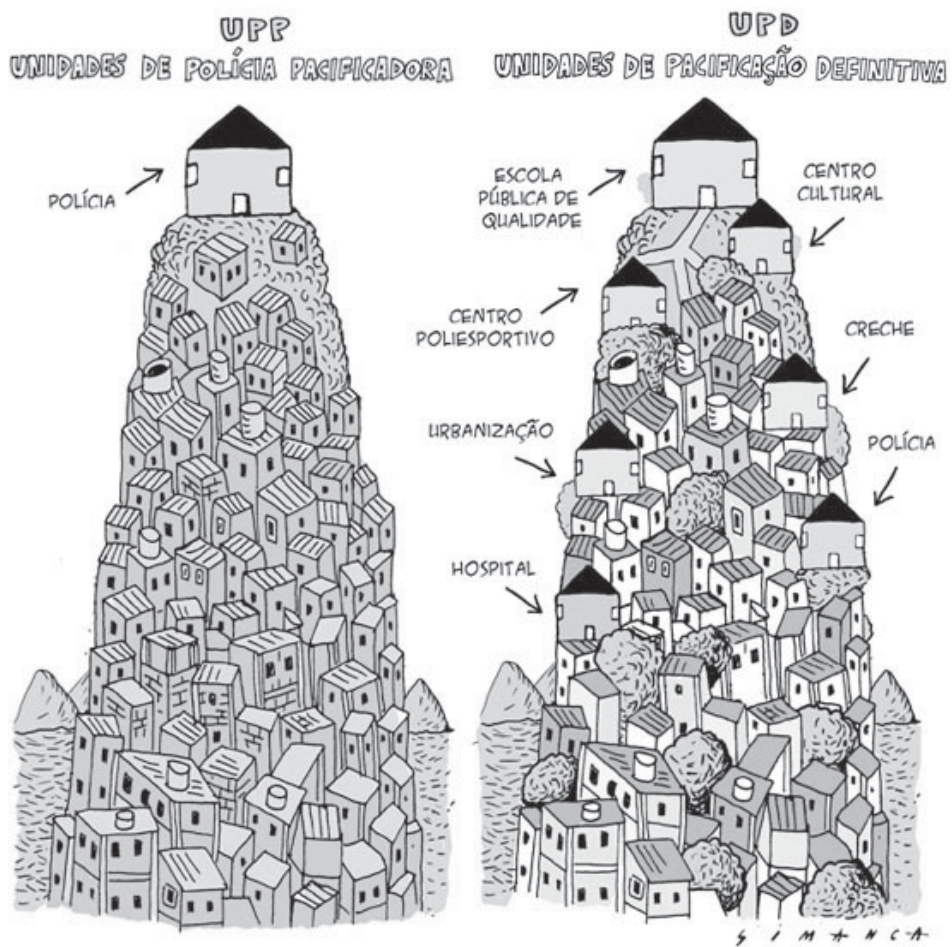
ill. 17 A pacified favel; current situation to the left and a vision for
the pacified favelas to the right.

ill. 18

**Favela Santa Marta**
–
Introduction

Favela Santa Marta

–

Extends and boundary of the favela

Favela Santa is centrally located in Rio de Janeiro, adjacent to the middle class neighbourhood of Botafogo. It is placed on the steep hill as grown as wedge into the vegetation on the hillside. The favela covers approximately 5000 m2 providing homes for around 6000 inhabitants.

ill. 19 Boundary of favela Santa Marta
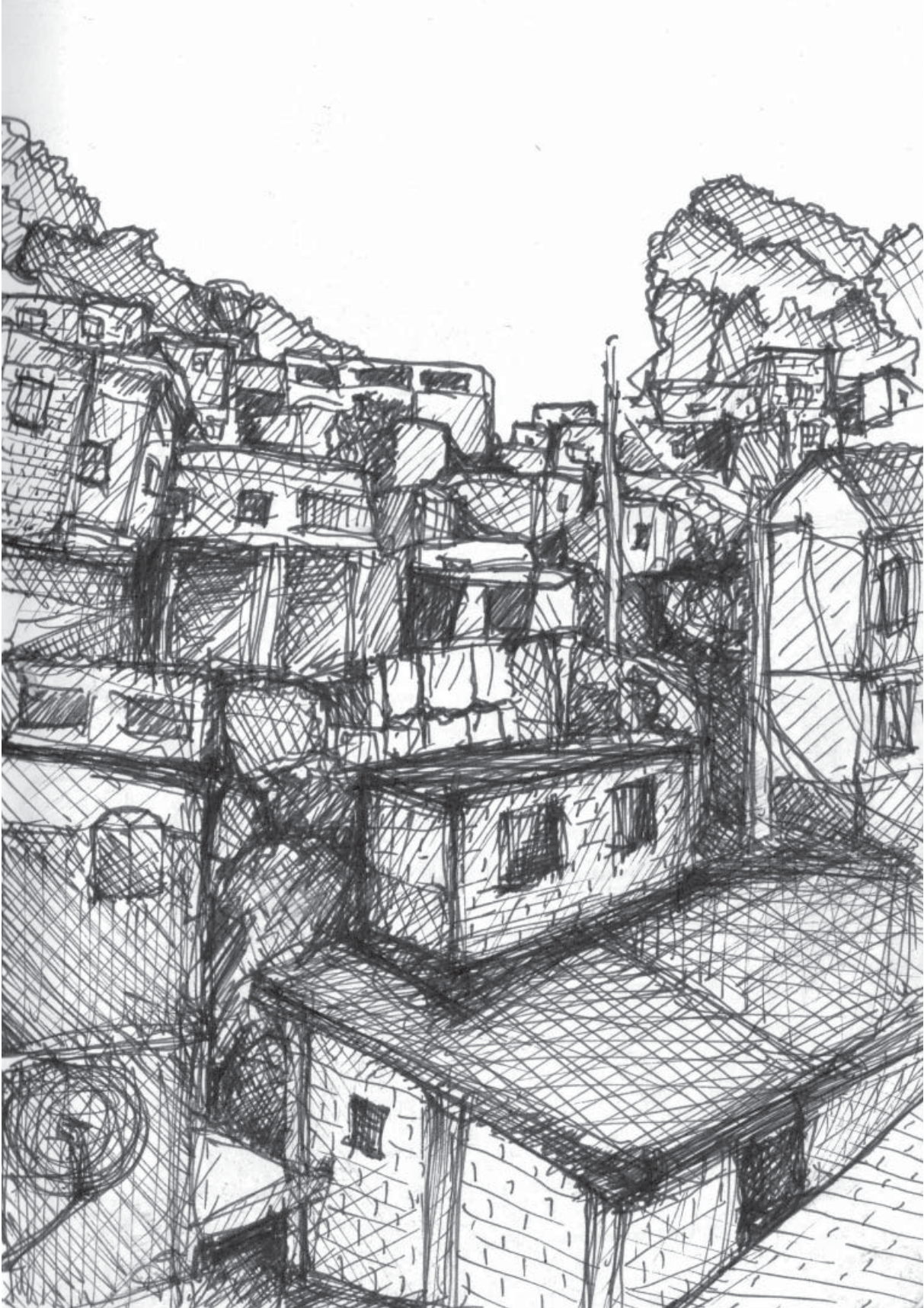
ill. 20 Sketching on site, as an active part of understanding the site.
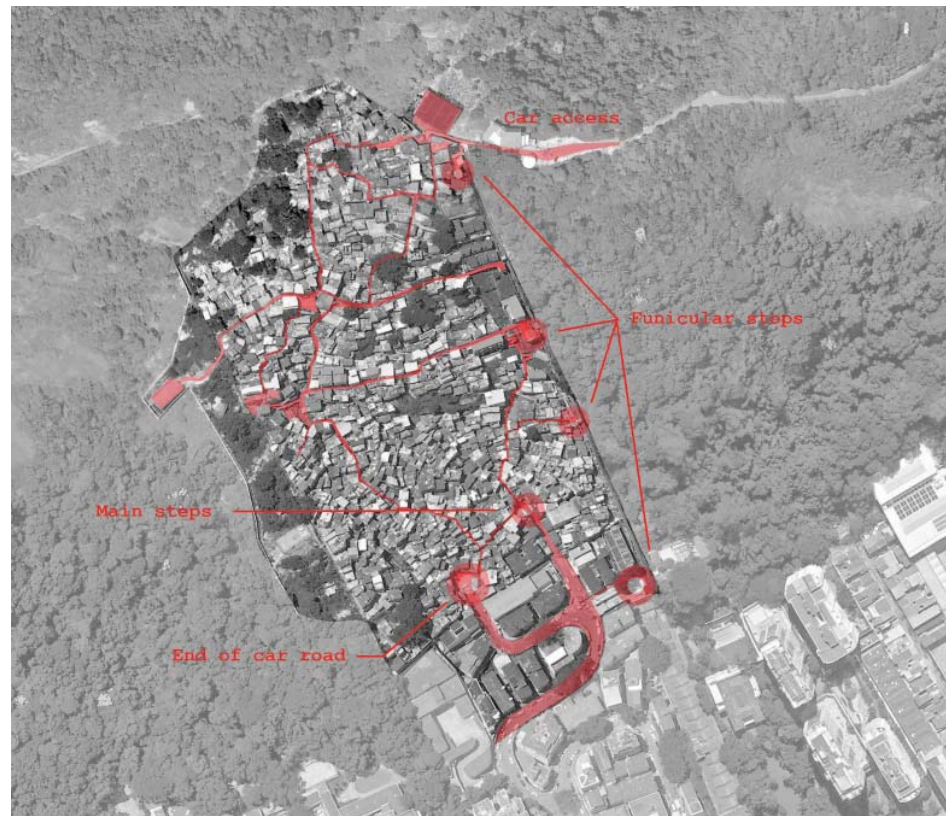
Accessing the favela
–
Paths and connections

A general problem in all the favelas located in Zona Zul is acces-
sibility. Located on steep slopes the transportation of construc-
tion materials and even everyday goods becomes tiresome.
In some of the more accessible favelas, motorbikes are used to taxi
people up and down. In Cantagala a lift has been build to transport
people from street level to the top of the favela.

In favela Santa Marta a funicular on the east side of the favela
have significantly improved access to the upper part. An upper part
which was very difficult to access without car before and therefore
has been area for the poorest inhabitants in the favela. The fu-
nicular consist of four stop platforms from where many sub-paths
lead into the favela. The bottom of the favela is there two main
plazas marking the access into the favela.

ill. 21 Mapping of main access and connections in the favela

ill. 22 Santa Marta main entrance

ill. 23 Repainting of 'Favela Painting' by Haas & Hahn

Inside the favela
–
Program and distribution of functions

Favela Santa Marta is a dense fabric of dwellings and public func-
tions intertwined. A number of these functions are more visible
than others when visiting the favela. A main attractor for tour-
ists visiting is the Michael Jackson- statue located on a platform
with a view to the south. This was the place Michael Jackson re-
corded part of the music video "They don't care about us".

Together with two football courts in the top part and two squares
in the bottom part being the most recognisable public space in the
favela. Other types of program such as churches, shops and com-
munity centre are spread around the Favela in a similar building
typology as the dwelling.

ill. 24 Existing football field and UPP buildling in the background

Choosing the site
–
## A generator for favela Santa Marta

The project site is located at the top of the favela. The program
takes its offset in the existing conditions around a football
field, which acts as the main attractor in that area at the moment.
By adding additional public functions to support the idea of the
area as a main facilitator for the top part of the favela and com-
bining this with dwellings.
The project seeks to build on the idea of intertwined program as
seen throughout the favela in general. The conditions of the top
part of the favela call for immediate action to ensure the safety
of the favela dwellers and this part is already on the government
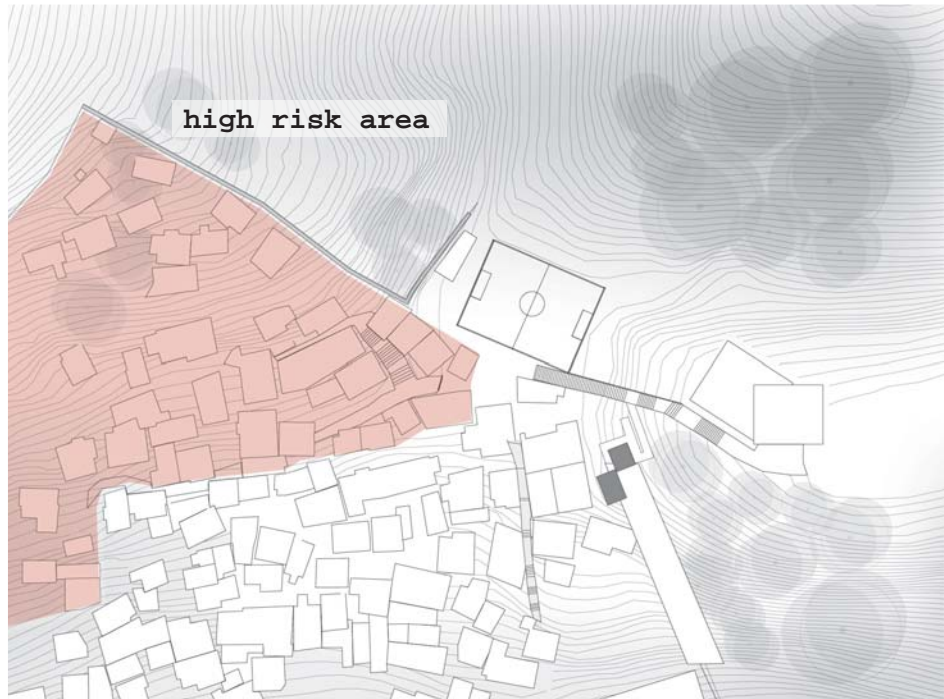list of areas that need re-housing in the favela.

By redesigning the area and proposing a new innovative way of
building in the favela, the project discusses the future growth
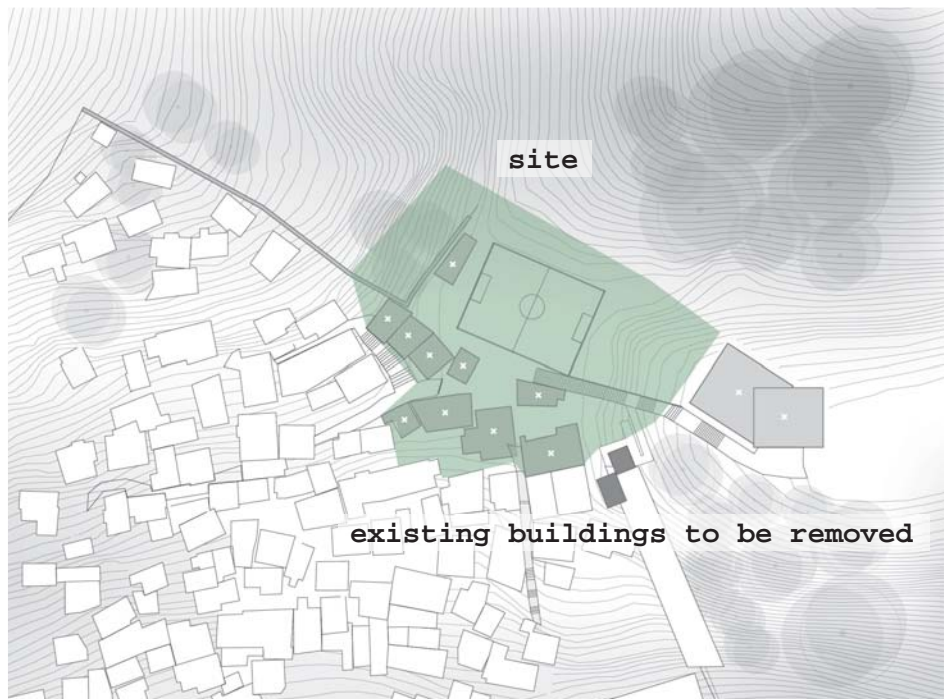of the favela, a favela which is already limited by its context.

Site
ground area: 620 m2
above sealevel: 175 m
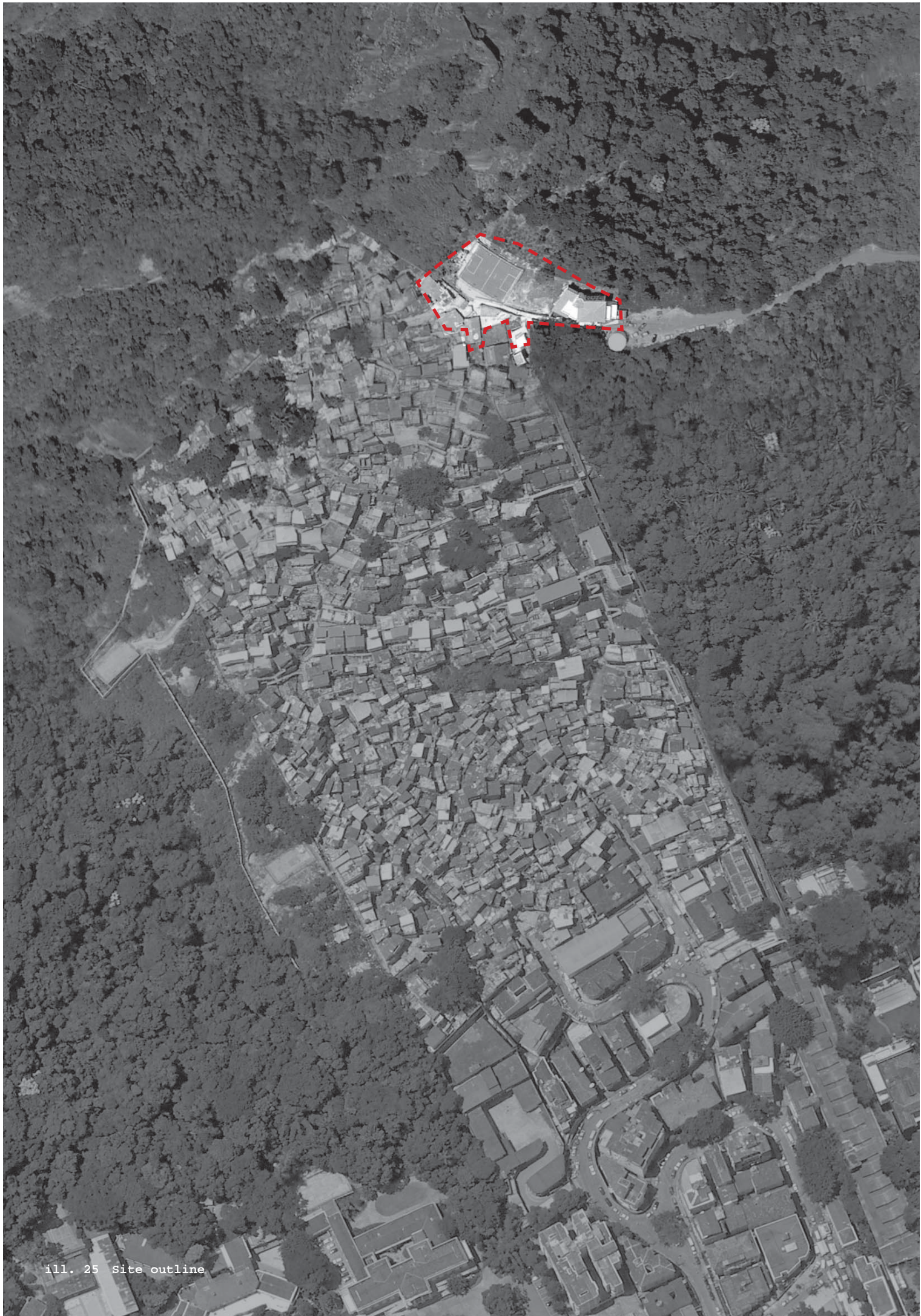
ill. 25 Site outline

ill. 26 Outline of the dwellings located in the high risk area.

ill. 27 Site outline

Proposed site
–
Conditions of the close context

The proposed site wraps around the football field and creates a transparent and open space that could function as an open public square. The football field has the potential of becoming a central program. A space that can serve as an extension of the re-creative activities performed on the square while at the same time functioning as a football court.

Further aspects of extending the building area are; including the function of the UPP and making it an integral part of the design. Establish new dwellings for the relocation of the dwellings from the risk areas. Emphasize the accesses to the site.

The existing room programme on the site such as a church, a small kiosk, dancehall and dwellings in very poor condition will all be taken into consideration when redesigning the area, but we argue that by removing the programme in their existing bodies and rethinking their role will strengthen the quality of the designed space.

The site has great ability of becoming a centre for the northern part of Santa Marta. On a longer term, this incision in the urban fabric of the favela can influence the revitalization of the top part which can make it attractive for visitors and the dwellers as well.

Approaching the site
–
Access and existing public space
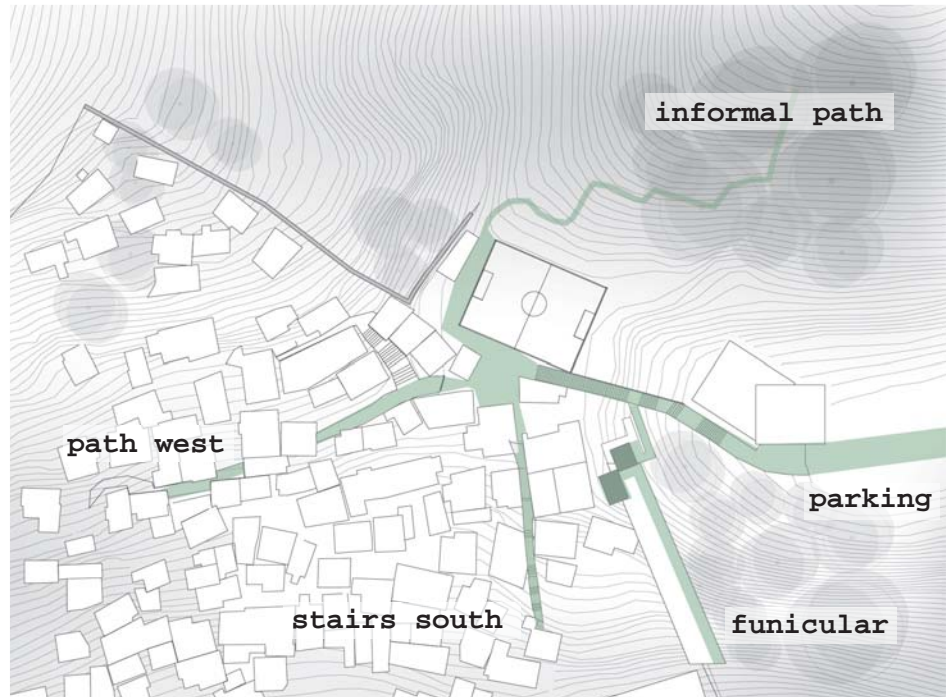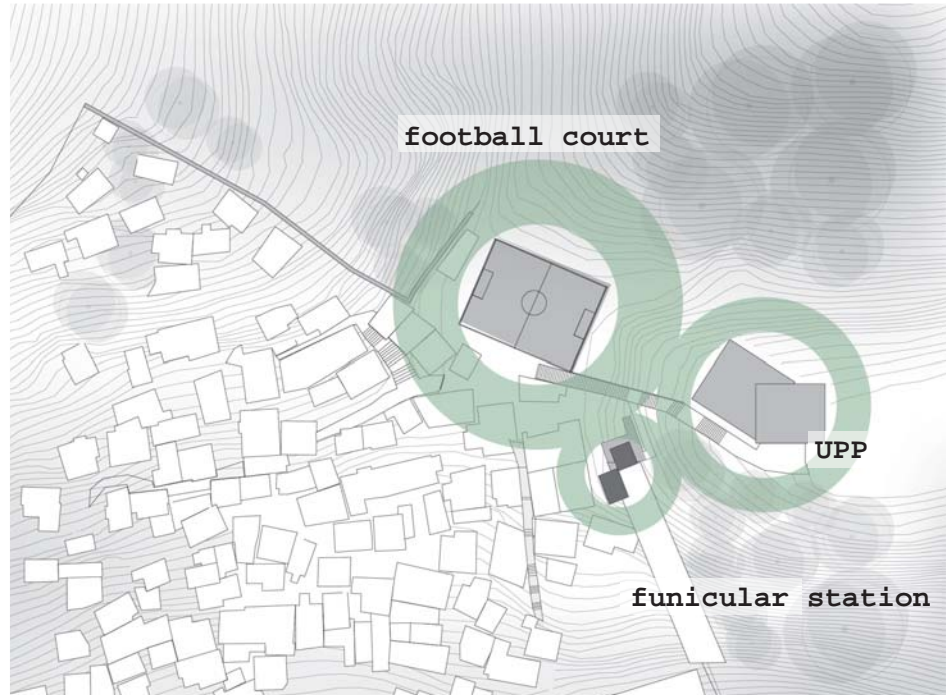

ill. 28 Access to the site

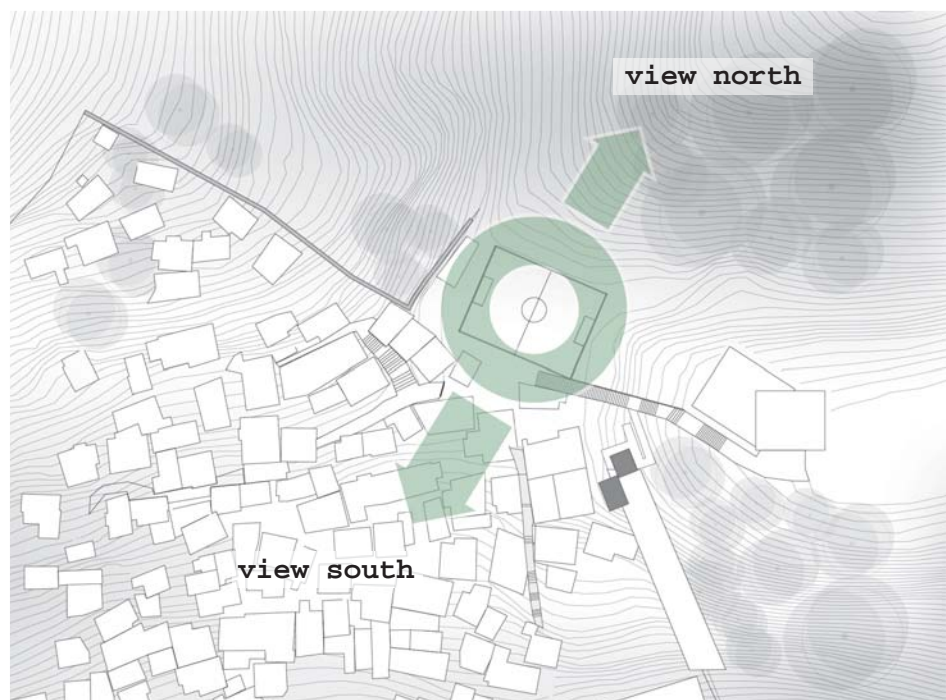**ill. 29** Mapping of open space

ill. 30 Public space seen from east, from the funicular platform

On the site

-

Main attractors and views

ill. 31 Existing functions attracting people to the area

ill. 32 View to Centro and Zona Sul.

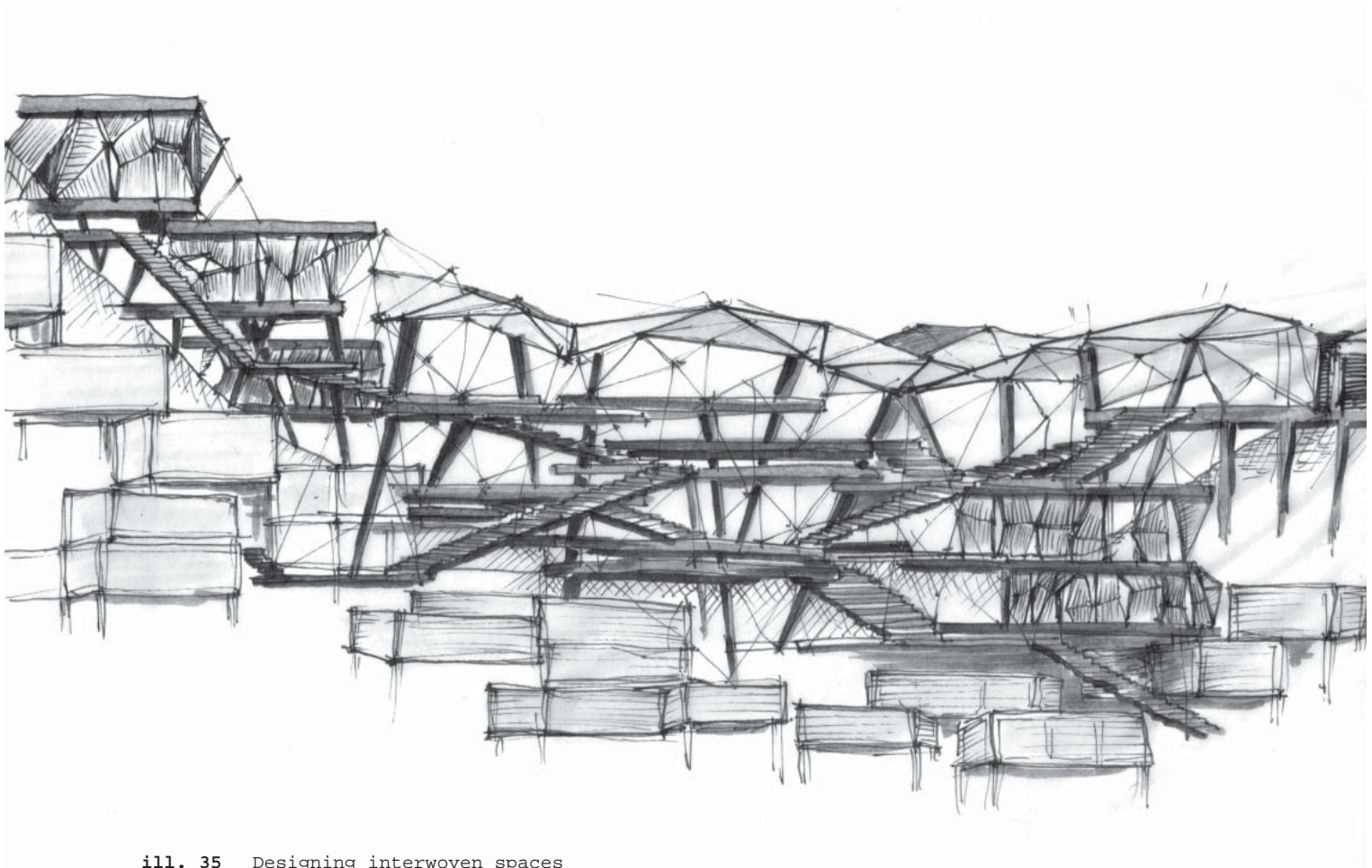**ill. 33** View North - towards Centro

ill. 34 View South - towards Zona Sul

"We do not intend do the favela again, but draw on its values, principles and strategies in the design process. We therefor need to understand the complexities and eventually draw on the characteristics that gives the favelas their qualities and uniqueness."

ill. 35 Designing interwoven spaces

Hybrid city

–

Symbiotic living

The organizational complexity of the favela might appear random
and chaotic, due to no obvious overall layout, connection or di-
rection. A pattern in a disconnected fragmented order, but when
one starts to analyze the favela, it quickly reveals that the com-
position and underlying logic is that of a complex organization.
It is a flux system controlled by several dynamic forces that allow
the favela to self-organize into these fragmented patterns seen
across scales.

It can be seen as a spontaneous settlement which is constantly be-
ing shaped by evolving contextual factors such as economy, infra-
structure & political decisions.

This makes the favela a non-static and ever-changing system, in
constant mutation and evolving according to the contemporary needs.
The function and needs are not defined nor designed from an overall
scheme or plan but is gradually build, reconfigured and upgraded
as the surrounding factor evolve. The favela could be seen as the
emergent hybrid city, which is a configuration of programs of both
public and private character intertwined in a complex organiza-
tion, giving its unique dynamics and adaptability.

Could the tendencies of the emergent settlements and the ideas of
living in a dynamic and dense city structure become a model for a
new way of living?
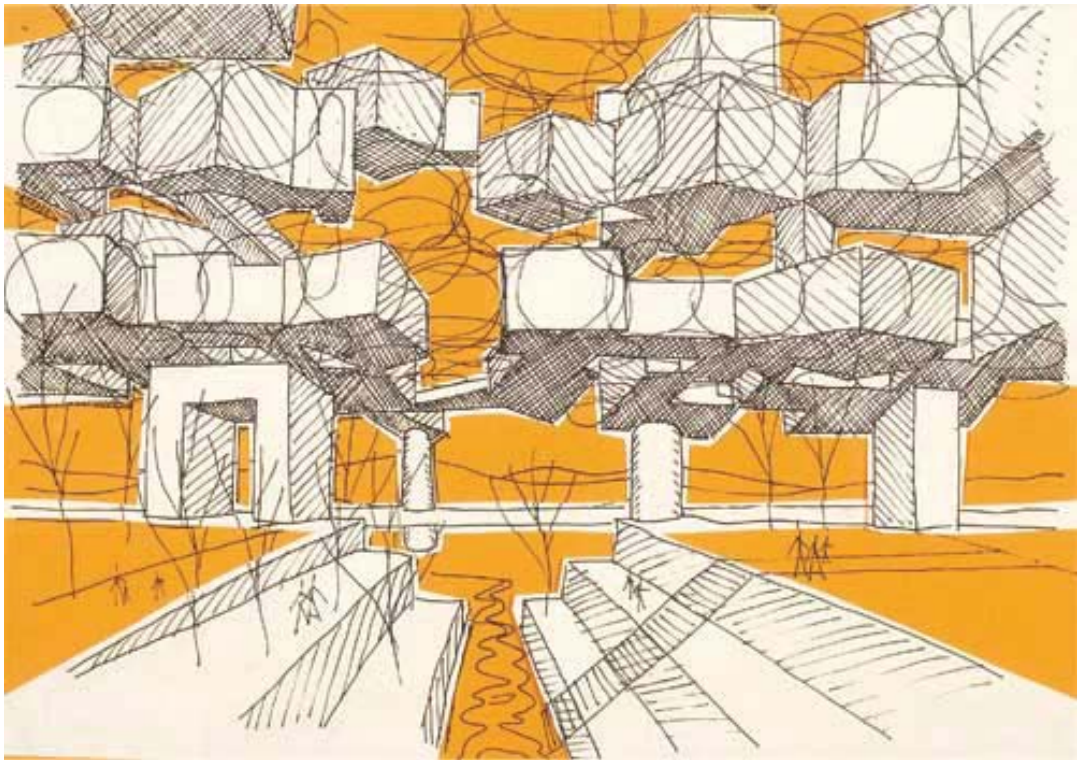
The spatial city
–
A new vision for housing

The constructions of dense neighbourhoods and mega-structure cit-
ies have been explored in different ways in architectural history.
In the 20th century going from the modernist idea of the living
machine containing units based on functional needs and equal op-
portunities for all. To the futurist visions of Yona Friedman
in the post war 20th century, who explore the city as a struc-
ture containing all the functions and infrastructure to act as a
small city itself a neighbourhood or 'quartier'. A city based on
the neighbourhood, which provides space for public functions and
dwellings, where you can explore and modify your personal home.
(Busbea, 2007)

The Spatial City
The idea of The Spatial City was to provide the city with new quar-
ters for living while at the same time incorporating all the urban
functions of the city in a single structure floating on top of the
old city. The spatial city is a system of cells providing verti-
cal and horizontal circulation inside a structural system that al-
lows for covered and even artificially heated exterior spaces, to
minimize the transition between interior and exterior programs.
Together the units are forming a patchwork allowing for personal
configuration of each cell. (Busbea, 2007)

Plug-In City
The Plug-In City is a mega structure and a vision for a future way
of living. Like in The Spatial City the focus is on the agglom-
eration of units placed in a large scale network-structure that
provides access and all necessary services to the city. The large
concrete construction links the units in the sky to the rest of the
city. The Plug-in City is designed to allow for flexible use. The
single units are planned for obsolescence providing a new way of
thinking the city and structures of the build environment. (West-
minster University, 2012)

ill. 36 Yona Friedman - Spatial city

The favela is an agglomeration of units, a large multi programmed building on an urban scale, consisting of many separate volumes. In its unified way of merging access paths, public space and dwellings in a coherent structure the favela exhibits some of the same qualities as the futurists were exploring in the 20th century. But the logic of the favela is more organic, more controlled by the flow of the landscape, a multi-sensory and attractor-based system controlled by the relation to fellow dwellers and accessibility.

If the design problems of today's growing cities are to be addressed, we need to address the specific context in relation to local environmental and tectonic conditions. Identifying key issues in the relationship between the favela buildings and the environment are necessary to further develop this relationship in a novel integrated way, dependent on digital technologies and simulation tools available to us as designers, to exploit the emergent characteristics of the favela in a new way of building.

Recent developments in design evaluation and fabrication methods have made it possible to work with more complex relationships between building and environment.
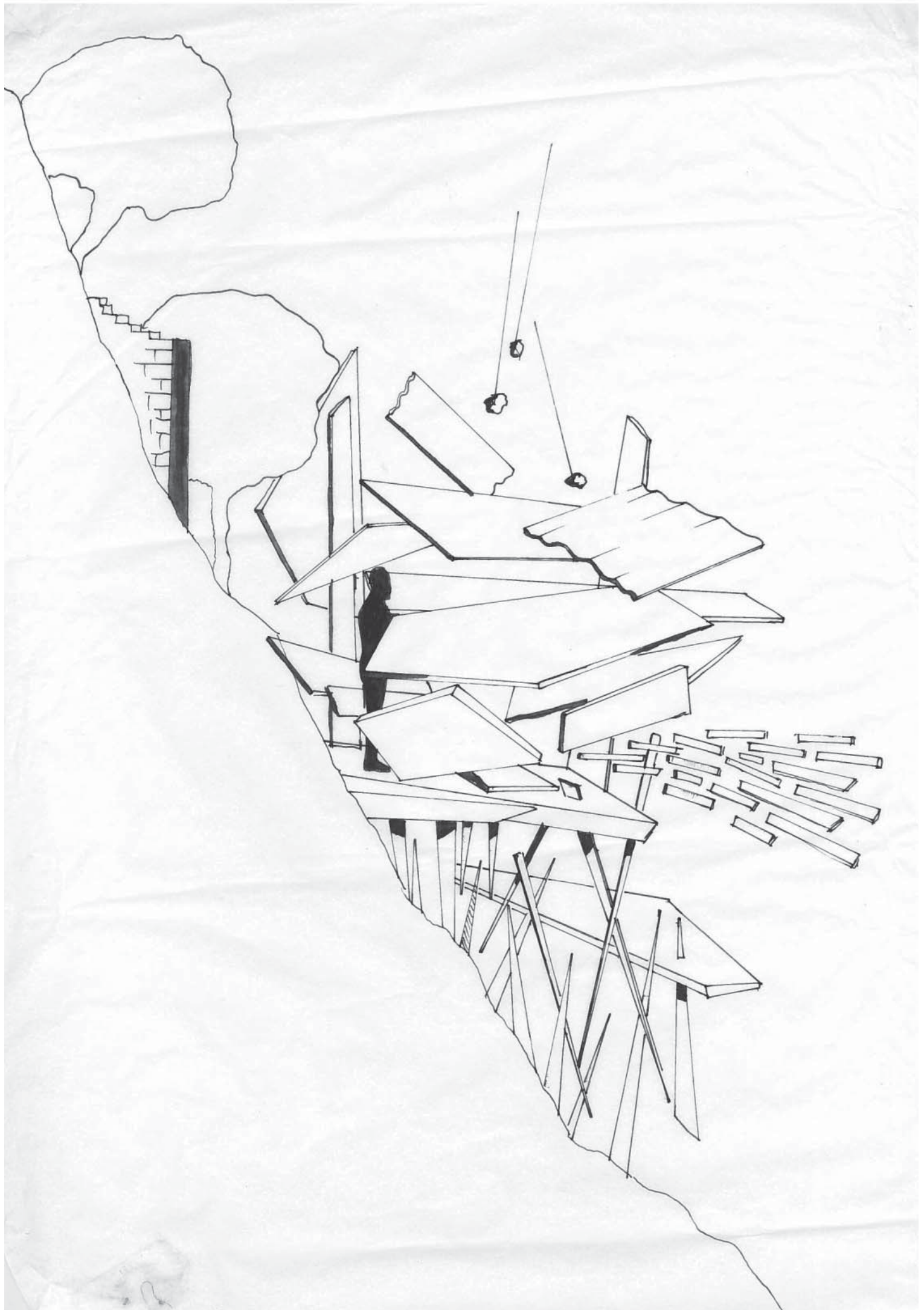Following the modernist fascination of the machine age this new approach are going back to traditions inherited from knowledge lying in the local vernacular architecture of the specific context.
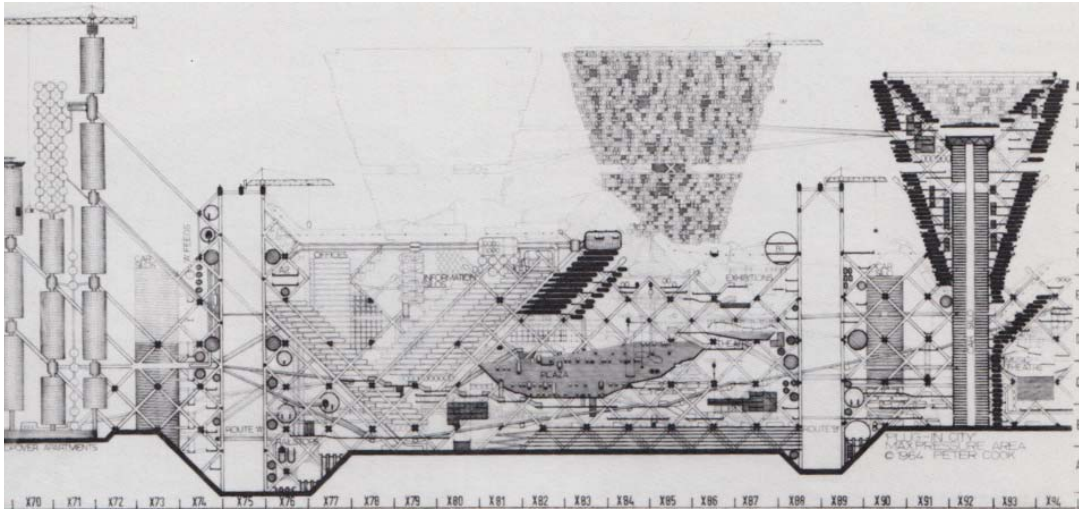
ill. 37 Peter Cook - Plugin city
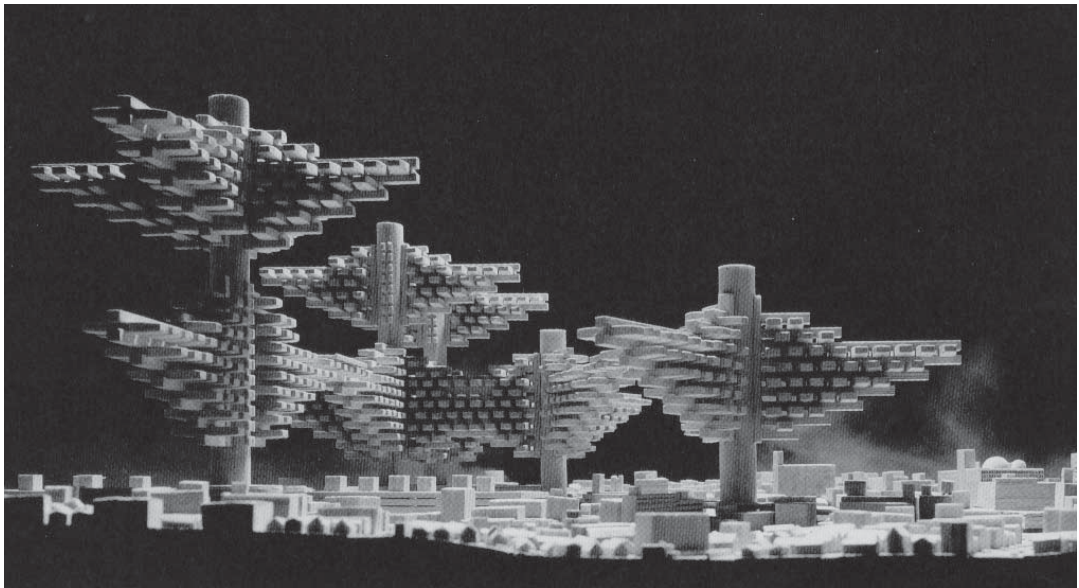
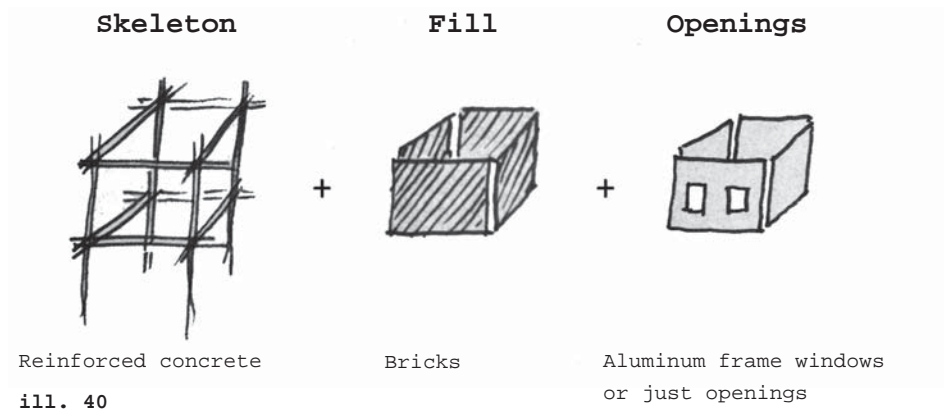**ill. 38**   Japan metabolism - City in the air

Environmental design
–
Constructing the favela dwelling

"Bewildered, the form-maker stands alone. He has to make clearly conceived forms without the possibility of trial and error over time. He has to be encouraged now to think his task through from the beginning, and to 'create' the form he is concerned with, for what once took many generations of gradual development is now attempted by a single individual... The intuitive resolution of contemporary design problems simply lies beyond a single individual's integrative grasp."

(Alexander, 1964)

Skeleton **Fill** **Openings**

+ +

Reinforced concrete Bricks Aluminum frame windows
or just openings

ill. 40

Building in the favela
–
New vernacular charactaristics

The architecture of Rio de Janeiro is heavily influenced by the European building traditions. The massive and rigid building tradition established after the European expansion to South America is in contrast to the light and articulated vernacular architecture of the tropical region. The main difference between these types of architecture issues that the European building tradition isolates the individual from the environment, while the vernacular integrates the individual into the environment. (Gomez et al., 2005)

"One is inert the other is organic. In other words, one is analogous to the cave; the other is analogous to the tree." (Gomez et al., 2005)

On the other hand the buildings of the favela hold some of the characteristics of the vernacular way of building and thus Rapoport (1988) argues that it might be labelled a new vernacular.

The self-builders in the favelas have developed a way of building which could be labelled a new vernacular architecture. Similarities are the use of available materials and the way knowledge is passed on in the community making constructions that are based on the same principles, materials and construction methods. This creates an open-ended, multi sensory and adaptable architecture that can host multiple programmatic functions in the same structure. (Rapoport, 1988)

The constructions on which the favela dwellers rely are based on the need for a platform, a horizontal surface to construct a dwelling upon. The dwellers have to deal with the sloping surface of the hillside when first inhabiting the area and the old wooden houses are still left in some areas of the favela even though most of the buildings have changed to concrete and brick constructions.
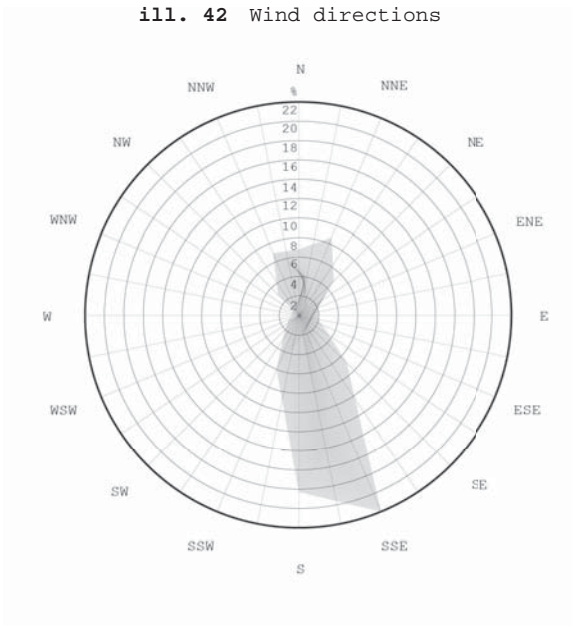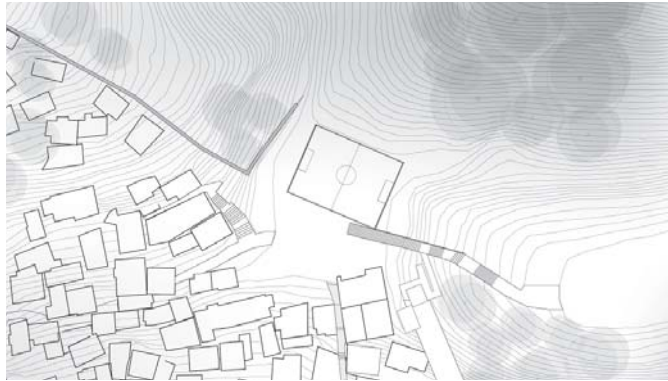
Environment
–
The tropical climate

Rio de Janeiro is located in a tropical wet and dry climate and is characterized by constant high temperatures and a pronounced dry season. Specific to Rio de Janeiro is the location at the Atlantic coastline and thus the winds coming from the sea has an impact on the weather throughout the season. The temperature varies from around 30 °C average in the summer period to 18 °C in the wintertime.

When designing in a warm humid climate it calls for other environmental strategies than what we are used to in northern Europe. Instead of the air tight envelope with a high amount of insulation as used in the northern hemisphere, the envelope in a tropical context has to be light density to avoiding heavy heat accumulation and at the same time provide as much ventilation as possible.

Shading is another important parameter to consider since the most effective way of creating nice and comfortable environments in this context is to have the space as shaded and open at the same time. 20 °C combined with wind and a high humidity means that the actual perception of the temperature drops and that dwellings have to have the possibility of closing of the spaces to create a comfortable living environment.
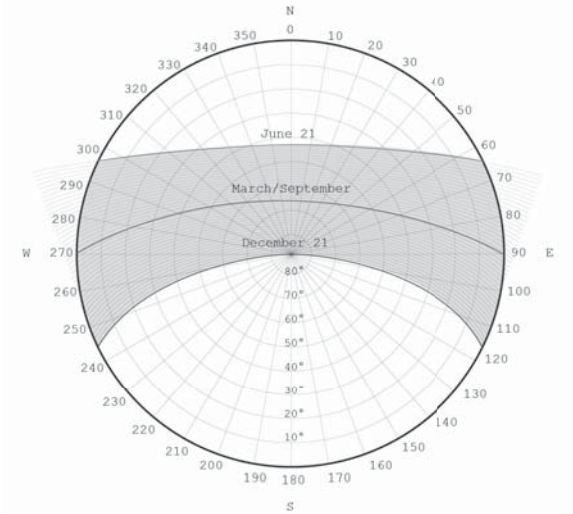
ill. 42 Wind directions

ill. 43 Summer

ill. 44 Site

ill. 45 Winter

ill. 46 Sun path

Environmental tectonics
–
The Cobogó

The environmental strategies of favela buildings are almost not present at all. Older buildings, made of wood, show initiatives in the right direction, overhang and light walls, but then at the same time they have poorly ventilated roof made out of sheet metal. Where the newest constructions are made in concrete and brick constructions, the canopies are gone and the buildings start resembling buildings from the formal city.

In the Brazilian context, one special brick type, is still widely used, namely the Cobogó. The function of the Cobogó in the architectural scale is to provide structure, shading and ventilation in a modular system, to achieve pleasant indoor spaces.

The term Cobogó is derived from the surnames of the engineers Amadeu Oliveira Coimbra, Ernest August Boeckmann e Antônio de Góis who first introduced the hollow structural element in Brazilian modernist architecture. The patent and name date back to 1929 and one of the first buildings to use a complete structural facade of cobogó tiles was Caixa D'Água do Alto da Sé by architect Luis Nunes in 1934. The cobogó tiles are used as a structural element covering the whole building facade on one side. (FAU-UFPA, 2011)

The Cobogó was originally cast in concrete or ceramic, but the properties of the Cobogó can be compared to steel louvers and ornamented wooden elements from Moorish vernacular architecture. The properties of the Cobogó is besides the structural abilities to shade while allowing light to come through as well providing ventilation.

ill. 47 Cobogó brick
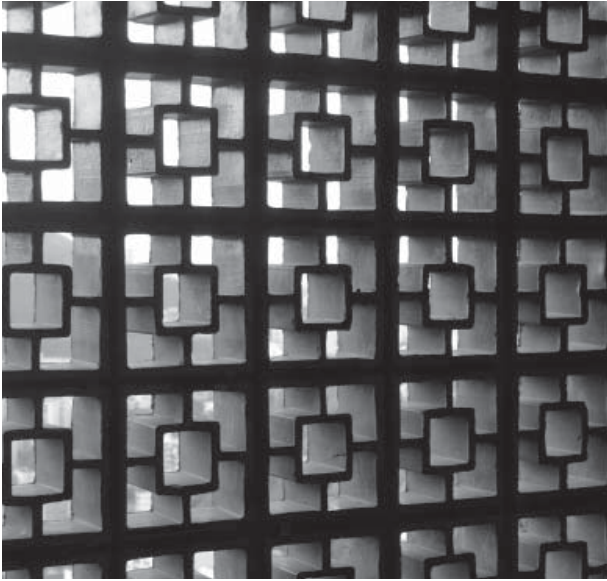
ill. 48 Caixa D'Água do Alto da Sé
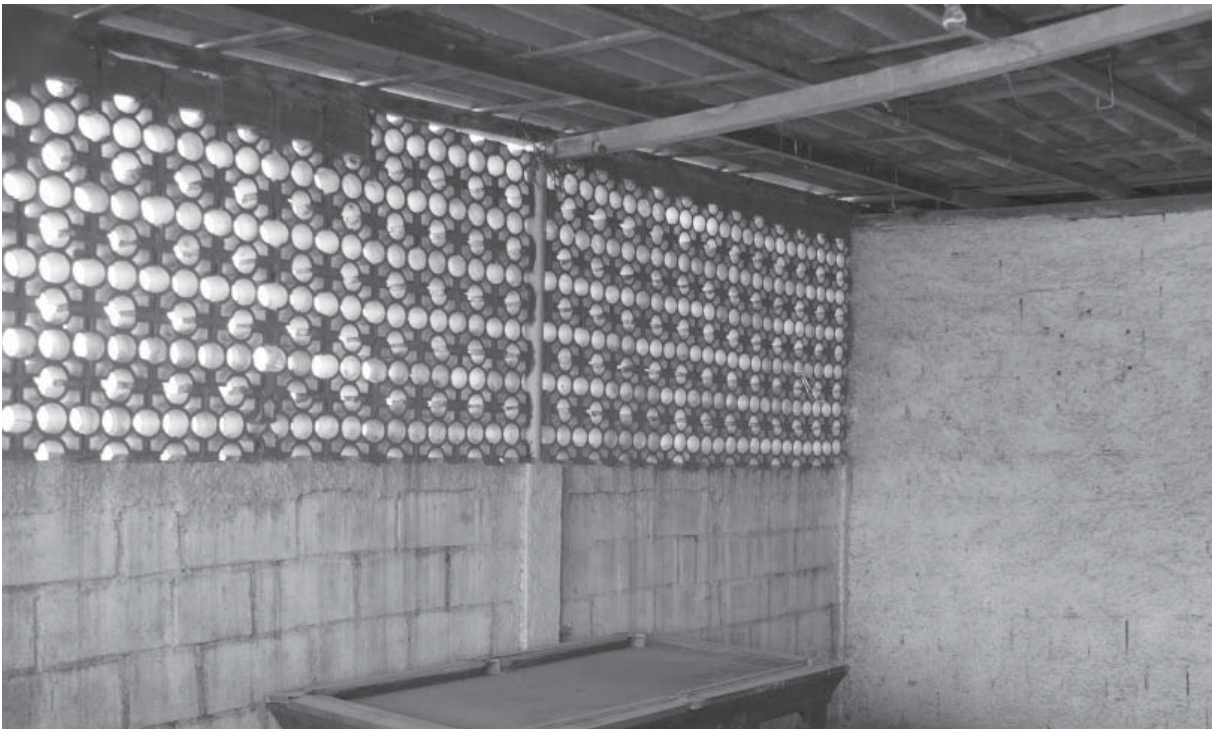
**ill. 49** Cobogó used in the favela
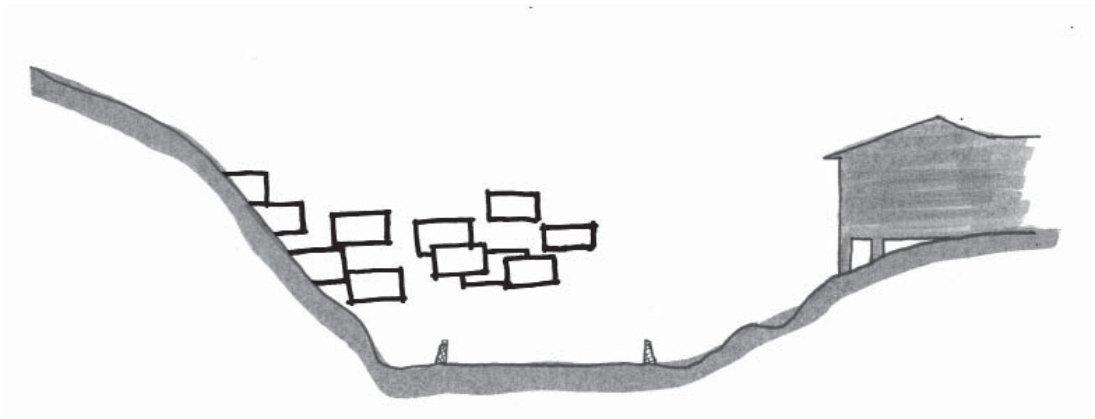
Urban Cobogó
–
An environmental skin on a larger scale

What if the Cobogó was utilized on a larger scale, serving as more than a facade element. Is it possible to develop a horizontal cobogó that act as a three-dimensional building skin, wrapping an architectural program, and at the same time uses the qualities of the skin on an urban scale to provide a pleasant shaded public space?

With offset in the risk area dwellings located next to the site our proposal is to move the dwellings from the hillside to a position above the football field. These dwelling units and a mixture of public functions abstracted from the old UPP building become the basis for a new building, an urban cobogó, Favela Cloud.
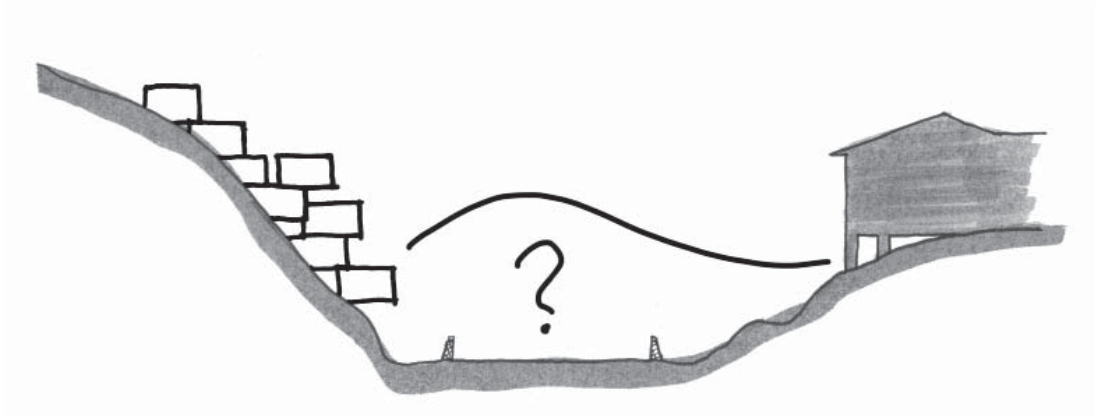
ill. 50 How can we enhance a public space that has the potential of becoming a main driver for the top of favela Santa Marta?


ill. 51 What if the favella dwellings were floating above public space and landscape, becoming an urban cobogó that shades the public space beneath?

Favela cloud

–

Objective

The analysis of favela Santa Marta concludes with the concept of a horizontal cobogó, Favela Cloud. Based on the studies of the favela, the design should incorporate following parameters:

- Development of a design system that can capture the spatial and organizational qualities of the favela.

- Aiming for a hybrid architecture that mixes public and private functions and incorporate the functions of the UPP to improve the urban life in the favela.

- Designing an environmentally performing skin which takes inspiration from the traditional cobogó brick.

- Bridging the social barrier to the formal city, in terms of architecture and social acceptance.
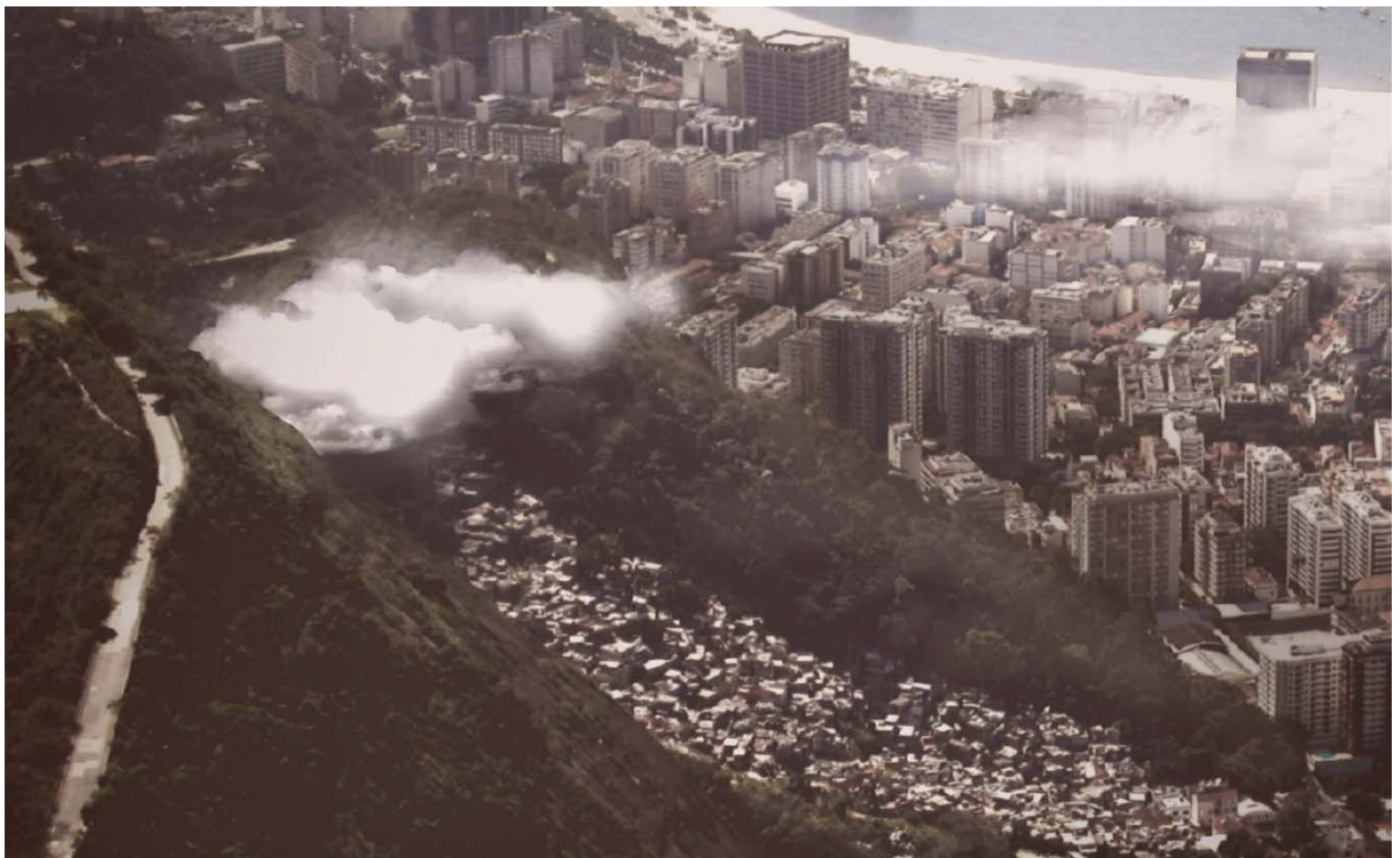
ill. 52   Cloud passing the hill top of favela Santa Marta

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Illustrations

Most of the illustrations are made by the authors.
Those created by others are referenced here.

ill. 17 - http://www.joildo.net/imagem/unidades-de-pacificacao-definitiva/
ill. 36 - http://mocadetroit.org/images/spatial_city.jpg
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