

# **IOSTORIES** OF COLLECTIVE HOUSING

# **GRAPHICAL ANALYSIS** OF INSPIRING MASTERPIECES

a+t research group

TEXTS AURORA FERNÁNDEZ PER JAVIER MOZAS

> DRAWINGS ÁLEX S. OLLERO

# **TEN STORIES AND ONE INCIDENT**

An old man sneaks uninvited into the press conference of two prestigious architects. When he sits down, his multicoloured socks peek out from the gap between his trousers and his shoes. He waits his turn and asks one of the speakers about the apparent low-cost of his buildings. The man being questioned is at that time one of the most technologically avant-garde architects on the British scene and is currently recycling himself to become the most sustainable. He answers evasively. Seemingly to him the identity of the old man has gone unnoticed. The scene takes place during an international congress -Barcelona 1996- just as architecture starts to take off as a media phenomenon. The city is invaded by thousands of passionate young architects who cause disturbances in the street in their attempts to access the debates. There is police protection at the entrance to the sessions. From the press room, one can hear the hubbub of the last day of the congress which, in an improvised attempt to solve capacity problems, is being held in a sports centre. The press conference draws to an end and one of the reporters decides to reveal the identity of that slightly scruffy quaint old man. "He belongs to an era -states the reporter in a condemnatory voice- when architects conducted their work far from the public eye and were fully aware of their social responsibility." Straightaway, the prestigious British architect who appeared not to have recognized him leaps up and calls him maestro. Members of the press surround the man. The organization, quick to take full advantage of the incident and to ensure nobody misses the show, rushes him off to take the stand. In the end, an 82 year old Ralph Erskine brings the congress to a close with a standing ovation from the audience, with a speech in favour of more participatory architecture.

That event which we experienced seventeen years ago is what underlies the origins of this book in which we want to tell ten stories with the same aim as then: to prevent these works and their architects going unnoticed by recent generations. This is neither a canonical list of buildings nor our *top ten* of collective housing. We chose them as one chooses one's friends. Faults and all, they make everything worthwhile.

AURORA FERNÁNDEZ PER, JAVIER MOZAS. APRIL, 2013.

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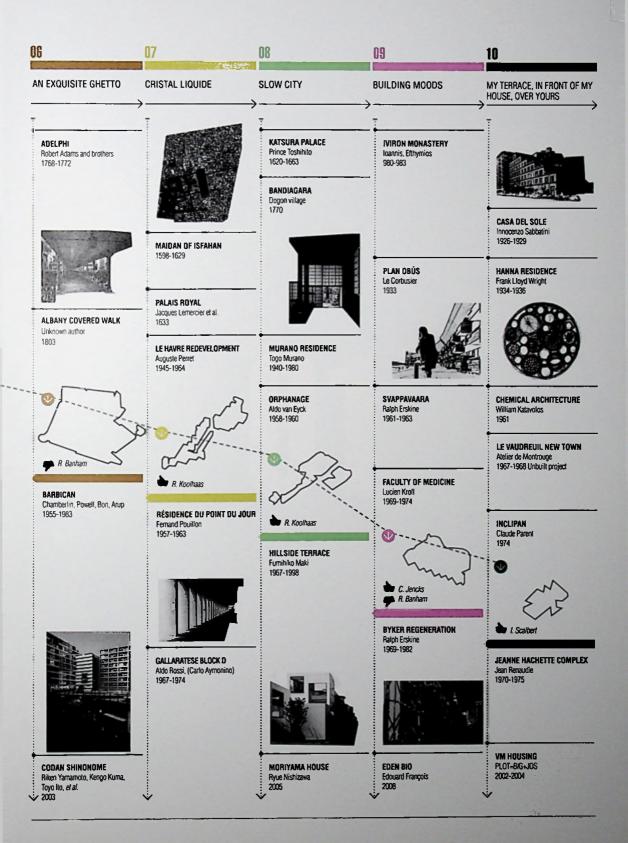
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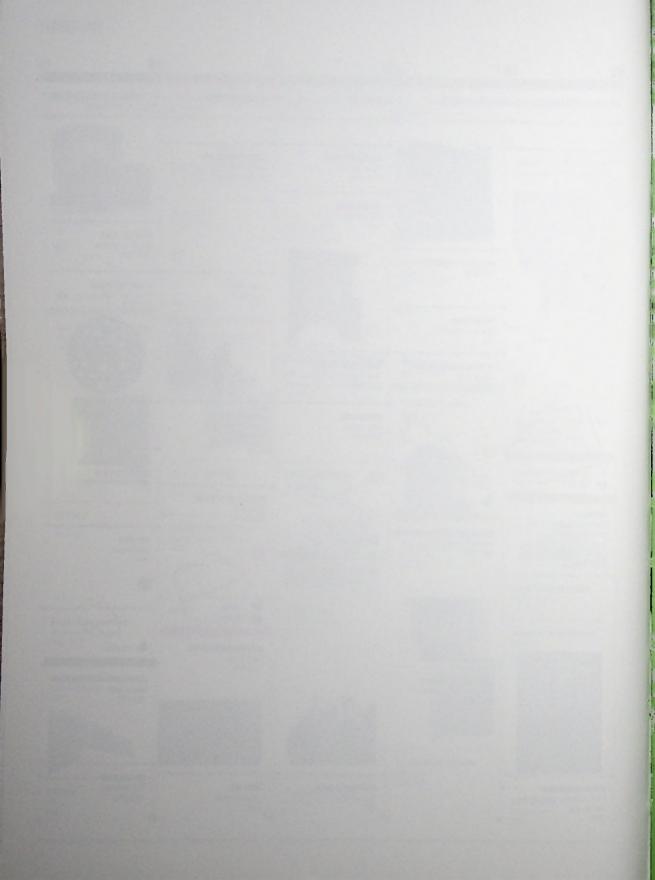
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## TIMELINE









#### JUSTUS VAN EFFEN COMPLEX Michiel Brinkman

Spangen (Rotterdam, The Netherlands) 1919-1922 51°54'57.15"N / 4°25'51.40"E

The project put forward by Michiel Brinkman for Spangen came up against two models: the traditional badly lit badly ventilated dwelling with alcove rooms, common up to that point among the working class, and the new trend towards the garden city with row houses. Brinkman arrived at a symbiosis between the terraced housing typology and the closed block with interior communal courtyard typology, between the individual and the collective.

Aiming for this new concept to take on the appropriate scale, he made the two blocks into one and pierced the perimeter creating access points for pedestrians and vehicles, this way transforming the interior into a semi-public space. He equipped the block with private and collective gardens, as well as a common service building which he located at the centre. Lastly, he incorporated different access solutions which changed according to the location of the dwelling, taking into consideration the Dutch tradition for direct entrance.

The ground floor and first floor dwellings can be accessed from the large open space in the block while second floor dwellings look onto a deck which runs the length of the whole complex and functions as an elevated street. With this solution Brinkman was to reaffirm the street as an element which linked not only the elements built into the section but also the collective living units and the residents of the housing complex. He valued the sense of community yet was unwilling to discard individualist features. He incorporated subtle degrees of graduation between the public and the private. He protected the privacy which had been relinquished in the alcove-houses yet at the same time encouraged communal living.

Brinkman's utopian vision relied on the singular political aims of the socialist councillors Hendrik Spiekman and A.W. Heijkoop and the Rotterdam Housing Department Director, August Plate, who defended this solution, against conservative criticism, as a true invention of the social-democratic era.



"You know the milkman, you are outside your house in your street." ALISON AND PETER SMITHSON, 1953."



01

1. Alison and Peter Smithson. Team 10 Primer. MIT Press, 1974. P. 78.

## **CHARACTERS**



MICHIEL BRINKMAN Architect, 1873-1925

Coming from an Beaux Arts background, he designed several industrial buildings in Rotterdam. In 1912, he started working for Kees van der Leeuw, manager of the Van Nelle company which imported tobacco, tea and coffee from the Dutch colonies. It seems that van der Leeuw, who like Brinkman was a member of the Dutch Theosophical Society, exerted his influence from the Rotterdam Housing and Planning Department in order to be awarded the commission to design the Justus van Effen housing complex. The project would be located in the new Spangen neighbourhood, close to the land owned by the company. As adherents to the Theosophy, they were both convinced that architecture could improve people's lives. This quasi-religious fervour led Brinkman to re-consider both the role of the individual in society and in turn the relationship between each dwelling unit and the city. On his death, his son, the engineer Johannes Brinkman, would take over the studio together with the architect Leendert van der Vlugt. In partnership with the architect Mart Stam, who built, between 1925 and 1931, the Van Nelle factory, an outstanding icon of industrial architecture.



J. JOHANNES PIETER OUD Architect, 1890-1963

The position of Oud as Rotterdam municipal architect from 1918 to 1933 was to lead to the housing block being adopted as the solution to city growth instead of the less urban proposals which were being considered in that post-war period as the response to the urgent housing needs. A disciple of H.P. Berlage, Oud applied the block typology which Berlage had designed for South Amsterdam to the western city extension.

In one of these blocks designed for Spangen, he also experimented with the communal courtyard. However, he applied a more regular geometric form.

Oud commissioned Theo van Doesburg to design the colour code for the window and door frames and interior walls. For Oud, the use of standardization and the powerful form of the block were a way of incorporating the monumental factor into social housing.



HENDRIK PETRUS BERLAGE Architect, 1856-1934



HENDRIK SPIEKMAN Politician, 1874-1917

A convinced socialist and a firm defender of the virtues of the city, Berlage was given the opportunity to put his vision into practice in the Plan for South Amsterdam (1914-1925). He battled against a city of privately owned houses and considered the street to be the living room for all social classes. In the long housing blocks he conceived for South Amsterdam, the height of the blocks was to fluctuate depending on the width of the road, and those with heavy traffic were combined with small streets where pedestrians were given priority. Berlage aimed to keep the traditional urban character with the constant presence of buildings and this posture led him to come up against the anti-street movement proposed by Modernism.

Berlage's South Plan found continuation in the General Expansion Plan of Cornelis van Eesteren (1934). Both established two stages in the urban planning theory in a twenty years period and in the same city, Amsterdam: "Two worlds collide: the layout of the street versus its use; image versus structure, the private spaces of the street and square carved out of the city, versus continuous space subdivided and determined by the opened masses (...) The geometrical city plan opposes the harmonious spatial order of urban elements in time."<sup>2</sup> The ideas that Berlage put into practice in the South Plan are visible in the layout of Spangen.

2 Manfred Block. De Stijl 1917-1931. Visions of Utopia. Phaidon, 1982. P. 198 The socialist councillor Spiekman repeatedly spoke up against the prevailing alcove-house typology for the Rotterdam working class and advocated public intervention in the housing market to counter-balance the speculative greed of private developers.

From his position in Rotterdam City Council he received Brinkman's proposal as a concrete realization of his ideals for social housing. Through the Housing Department Director, August Plate, Spiekman supported the innovative design for the Justus van Effen block. Nevertheless, he received heavy criticism for not adhering to the Spangen general plan for long closed blocks and for trusting too greatly in the responsibility that the future residents should have in their relationship with the community. Spiekman passed away in 1917 before the works of the Justus van Effen complex had even started.





# Chapter 1 URBAN DESIGN THE PUBLIC CITY VERSUS THE PRIVATIZED CITY

#### REFERENCES





SOUTH AMSTERDAM PLAN Amsterdam. The Netherlands H. P. Berlage

#### 1914-1925

Berlage first outlined the relationship between the perimeter block and the street in 1883 in an article in which he compares two cities: Amsterdam and Venice.3 In his plan for South Amsterdam he re-established the direct relationship between the street and the built environment which had characterized the medieval city. For this, he made use of the perimeter block and a wide range of possibilities in the street section, in order to let vehicle and pedestrian traffic, vegetation and asphalt all strike a balance. H. P. Berlage was against introducing an intermediate private space between the buildings and the street which would isolate the dwellings. His aim was to maintain the vitality of the medieval cities yet to adapt this to contemporary needs and so he decided to put forward a design based on the clear dividing line between the public and the private, that is on the in the facade wall. The street, which had not as yet been dealt its death sentence by Le Corbusier, was turned into a public outdoor space, as against the private interior courtyard of the blocks. In the street, urban life went on with all its functions. In the interior courtyard, communal gardens and vegetable plots sprung up.

3. H. P. Berlage. "Amsterdam en Venetie. Schets in verband met de tegenwoordige veranderingen van Amsterdam," *Bouwkundig Weekblad* 3, 34. 1883. P. 217-219.

SPANGEN PLAN Rotterdam. The Netherlands J. J. P. Oud

#### 1919-1920

The Spangen polder was erected while Oud was the municipal architect which is why he figures as the creator although it was actually designed from an initial idea by J. de Jongh in 1903, based on the monumental nature of housing blocks as against the picturesque nature of the garden city. It was Berlage's influence which was to mark, from the later years of the previous century, this preference for the medium-rise block, which actually pre-dated the drafting of the South Amsterdam plan.

JUSTUS VAN EFFEN COMPLEX Michiel Brinkman

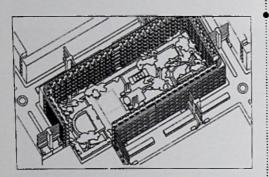


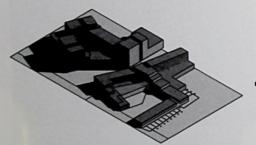
This project is a paradigm for building the Dutch city based on the relationship between each housing unit and the whole. Before in-depth analysis of the singular features of the Spangen block, it must be kept in mind that the garden city model had become popular in some European countries in the early years of that century as a response to overcrowding in the inner city. However, it was soon realized that the land occupation required by the latter model meant turning most of the public urban space into private urban space. As an alternative to this, H. P. Berlage proposed the monumental block and in this context, the Justus van Effen complex stands out as an even more advanced proposal: Brinkman widens the block and adds internal branching to the perimeter block, enabling vehicle traffic and pedestrians to pass through lengthways and crossways, hence facilitating neighbourhood transit. This way he transforms the interior courtyard into a semi-public space.

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## Chapter 2 URBAN FORM THE CITY BLOCK AS A NODE

#### REFERENCES





#### IMMEUBLE-VILLAS Le Corbusier

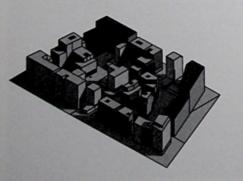
#### 1922-1925

The ambitious perimeter block designed for the Contemporary City of three million inhabitants has in common of the Brinkman project a concern to recreate, within a dense urban section, the advantages of the garden city as far as contact with nature and outdoor spaces. Disregarding the difference of scale, they both have access through a large gallery which runs the length of the interior facade, vehicle transit through the block -in the case of Spangen crossing the courtyard and in the case of Immeuble-Villas underneath the interior garden.

CIBOGA SCHOTS 1 AND 2 Groningen. The Netherlands S333

#### 1997-2002

With geometrical operations, two basic volumes have been elongated, twisted and folded to obtain a Megaform. The absence of a predominant grid enhances the opportunity to create an urban event, which can act as a node for the area.



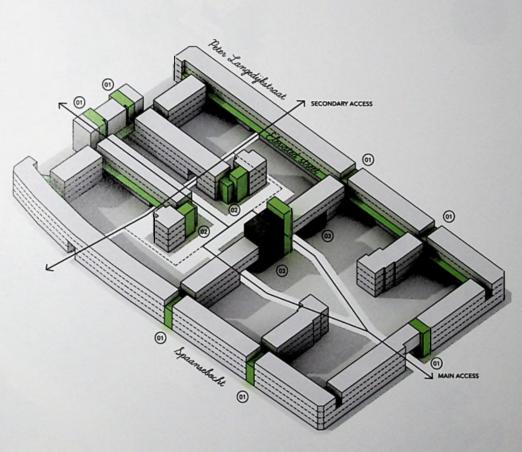
#### MACROLOT

Boulogne-Billancourt, Paris. France Chavannes/ Devilliers

#### 2003-2010

The macrolot is based on a concept from the Eighties: the Open Block. It associated two opposed principles: the freedom of the individual solid-form and the strictness of the grid. In this case, the inner space is semi-public.

#### JUSTUS VAN EFFEN COMPLEX Michiel Brinkman



01 STAIRCASE 02 LIFT AND STAIRCASE 03 COMMUNAL FACILITIES

If the Justus van Effen complex stands out mainly for the elevated street, which is covered later on, the Brinkman project offers a connection with the city which is equally innovative. He creates an urban element, built by making two blocks into one which, far from closing in on itself, enables access from all sides and acts as a hub in the urban section. Traffic flow is built into the design, something which was to re-emerge later in Le Corbusier's proposal for the Immeuble-Villas.

Chapter 2 URBAN FORM THE CITY BLOCK AS A NODE

4. Michiel Brinkman. Galerijbouw in Der Polder Spangen, 1923.

LIFT AND STAIRCASE

Case site

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"I hope I made a total in which these people could live agreeably in a dense neighbourhood. I hope they like it. It will depend upon the behaviour of these first occupants [to make it successful] and then the next generation." MICHIEL BRINKMAN,1923.4

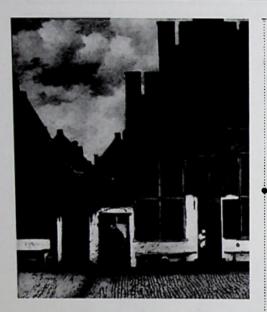


01

CENTRAL BATH AND

## Chapter 3 ENVELOPE THE FRONT DOOR

#### REFERENCES



#### STREET IN DELFT Jan Vermeer

#### c. 1657-1658

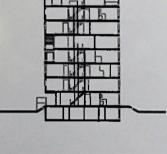
One single metre is enough to establish the separation between the home and the world: the stepped pavement, the bench and the facade are the decisive elements. Opposite page, an image of the Justus van Effen elevated street.

Oil on canvas 54.3 x 44 cm. Rijksmuseum, Amsterdam.

GWL BLOCKS 2A/2B Amsterdam. The Netherlands Neutelings-Riedijk

#### 1994-1998

The Dutch tradition of having private access to each dwelling leads to situations such as that proposed in this eight-storey block which has a private entrance for each one of the dwellings. Those located between the first and fourth floors have street access and those on the fifth and above have access from different decks located on the seventh and eighth floors. The communal staircases never come into contact with the front doors of the dwellings.





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#### JUSTUS VAN EFFEN COMPLEX Michiel Brinkman



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The built complex has two faces with different degrees of permeability. The exterior block facade is uniform and quite massive. On the other hand, the interior facade overlooking the communal courtyard has three elements which eliminate monotony: the entrance halls on the ground floor, the balconies on the first floor and the continuous deck on the second floor.

One of Brinkman's objectives was to recover the traditional direct link between street and dwelling which had disappeared from the social housing blocks of the time. He aimed to prevent the entrance doors from coming into contact with the stairwell in order to avoid unwanted looks, taking into consideration that the alcove-houses, common at the time, had no walls between the entrance hall and the bedroom. In the Spangen complex, he manages to give all the dwellings direct access from the outside, either from the courtyard or from the elevated street of the second floor deck.

# Chapter 3 ENVELOPE THE FACADE AS A LIMIT

JUSTUS VAN EFFEN COMPLEX Michiel Brinkman



EXTERIOR AND INTERIOR FACADES



27

# Chapter 3 ENVELOPE AUSTERITY VERSUS FACADISM

#### REFERENCES







HET SCHIP Amsterdam. The Netherlands Michel de Klerk

#### 1917-1920

This housing complex reflects both the context in which Brinkman's work should be situated and the distance which separates him from this context. Michel de Klerk's work is one of the most significant of what was to be called the Amsterdam School and was closely linked to the expressiveness of the brickwork and a highly ornamental component.

PIRAEUS Amsterdam. The Netherlands Kollhoff-Rapp

#### 1989

In this example located on the Eastern docks, which kicked off a period of Dutch collective housing with some significant examples, Kollhoff-Rapp recreate this capacity mentioned by Berlage, that of the wall shaping the space.

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"The wall is to be displayed in its pristine bareness. Only this way can its capacity to shape space be displayed." H. P. BERLAGE, 1908.<sup>5</sup>



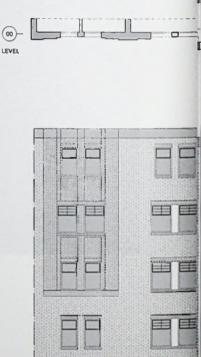
Brinkman aimed to simplify the paraphernalia of Dutch facadism and let the facade contribute, in a simple way, to the austerely monumental nature of the wall. On the exterior of the Justus van Effen complex he uses dark brick and white frames on the vertical openings. He modulates the facade with slight patterns on the frontage and leaves the concrete exposed on the large lintels of the arches.

S. H. P. Berlage. Principles and evolution of architecture. 1908.

# Chapter 3 ENVELOPE AUSTERITY VERSUS FACADISM

JUSTUS VAN EFFEN COMPLEX Michiel Brinkman





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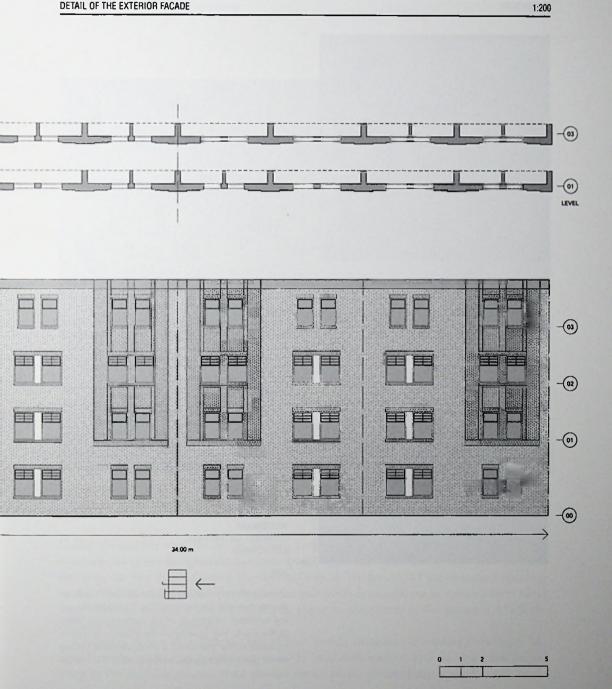
"The art of architecture lies in space creation not in facade design." H. P. BERLAGE, 1908.<sup>6</sup>



6. H. P. Berlage. Principles and evolution of architecture. 1908.

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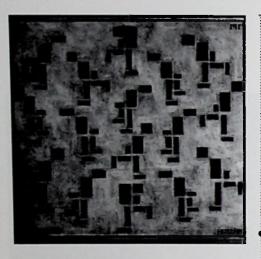
DETAIL OF THE EXTERIOR FACADE



31

# Chapter 3 ENVELOPE LANDSCAPED FACADE

#### REFERENCES



THE SKATERS Vilmos Huszár

#### 1917

De Stijl was contemporary to the development of the new Dutch urban extensions. J. J. Oud was a part of this movement and tried to apply its aesthetic theories to some of his Spangen blocks. Michiel Brinkman did not belong to this group. Nonetheless, he used some of their new rules for creating forms in his facade layouts.

Oil on canvas 74 x 81 cm Gemeenstemuseum, The Hague.



WESTERKAAP Amsterdam. The Netherlands DKV architecten

#### 2008

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The densification achieved in the Western docks in Amsterdam was implemented by linking blocks using collective courtyards which connect both sides of the dock. The severity of the exterior facade is replaced in the interior by a more pleasant setting which gives direct access to the ground floor housing units.

#### JUSTUS VAN EFFEN COMPLEX Michiel Brinkman



Unlike the exterior wall, the facade looking onto the courtyard is a fragmented canvas with a capacity to create recognizable domestic spaces. The shade from the ground floor entrance elements, the first floor balconies, the deck halfway up the facade and the unframed openings on the third floor all give each facade plane an individual dynamism yet let these sections blend seamlessly into the estate as a whole, despite the great complexity of the points at which the different layouts come together.

Obliged as he was to include the best of both worlds, Brinkman introduces picturesque features from the garden city, indeed even from the rural environment, into the courtyard, helped along by the vegetable gardens which the neighbours on the ground floors were allowed.

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# Chapter 3 ENVELOPE LANDSCAPED FACADE

JUSTUS VAN EFFEN COMPLEX Michiel Brinkman

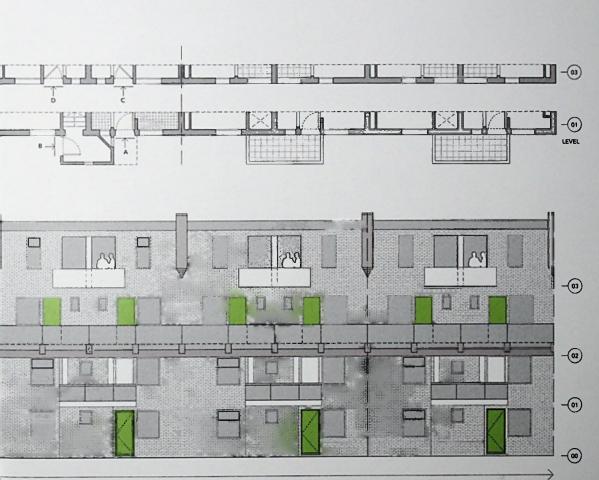


"The decoration of the wall plane is performed by windows which are naturally located only where they are necessary, and then in various sizes as appropriate." H. P. BERLAGE, 1905.<sup>7</sup>



7. H. P. Berlage. Thoughts on Style in Architecture, 1905.

DETAIL OF THE INTERIOR FACADE



34.00 m



A ACCESS TO GROUND FLOOR UNIT B ACCESS TO FIRST FLOOR UNIT C/D ACCESS FROM THE ELEVATED STREET 0 1 2 5

35

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1:200





## Chapter 4 FLOOR PLANS SEMIPRIVATE SPACES

#### JUSTUS VAN EFFEN COMPLEX Michiel Brinkman



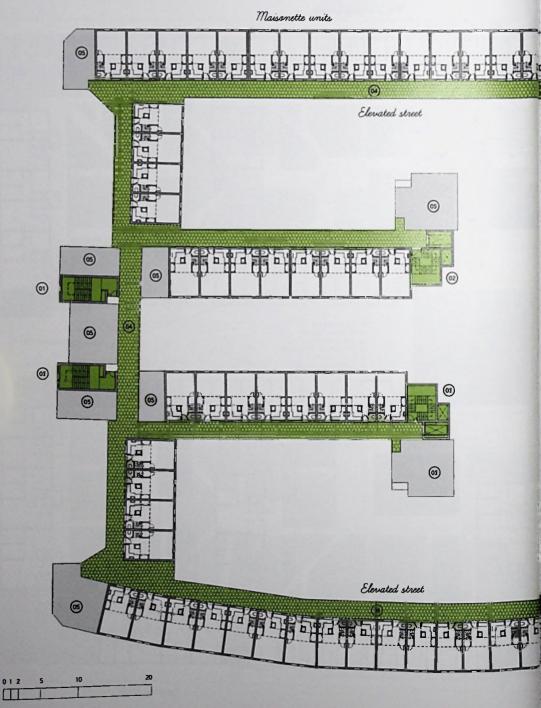
#### **GROUND FLOOR PLAN**



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## Chapter 4 FLOOR PLANS SEMIPRIVATE SPACES





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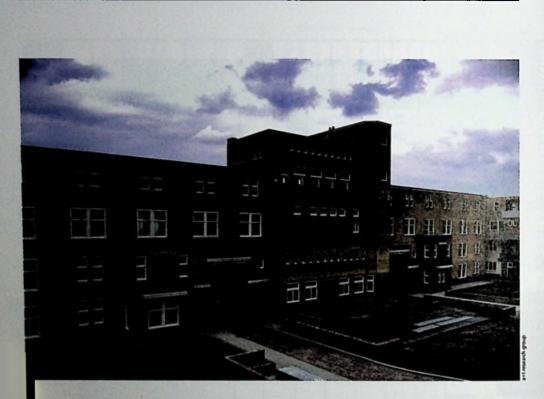
#### SECOND FLOOR PLAN



41

## Chapter 5 USES SHARED FUNCTIONS

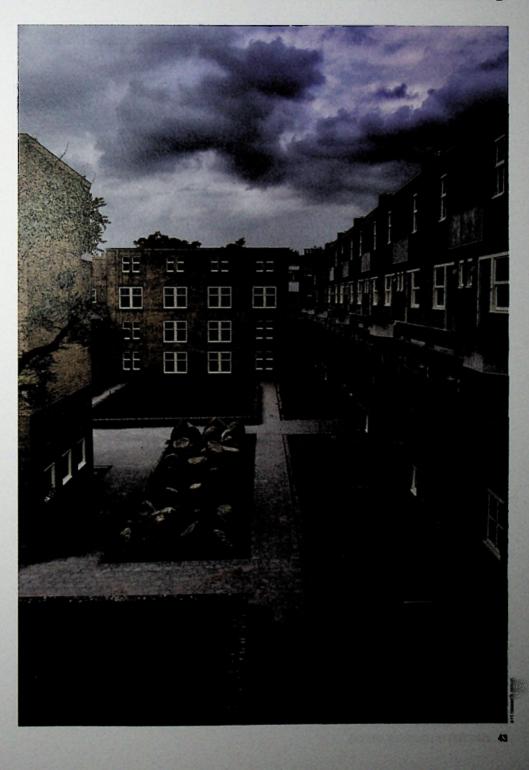
#### JUSTUS VAN EFFEN COMPLEX Michiel Brinkman



The Justus van Effen complex comprises two blocks which meet at a central unit where the shared services are located. Initially it contained 264 housing units and 17 different types. In the courtyard there is a building which is one storey higher than the rest of the complex. This houses the communal services such as the laundry and the communal baths and this is to have a highly representative character.

The residents who first moved into these blocks were chosen by the Council Housing Department according to the criteria of political preferences, family stability and liberal ideas. They were highly regarded civil servants or employees who received awareness-raising education concerning their responsibility for the upkeep of the shared spaces. Each and every resident of Spangen was to devote part of his or her free time to perform services for the collective.

The complex was restored in 2012 by Molenaar & van Winden Architecten and Hebly Theunissen Architecten reinstating the brick facing and the frames with the original sizes and features. The shared service building is to continue housing communal use rooms for residents.



## Chapter 5 USES SHARED FUNCTIONS

#### REFERENCES





UNITÉ D'HABITATION Berlin. Germany Le Corbusier

#### 1956-1957

Launderette located on the ground floor of the Berlin Unité d'Habitation from a photograph taken in 2010. This maintains the idea of sharing the most expensive resident services, first used in the Spangen complex (see picture below), later adopted by Le Corbusier in his projects for the Immeuble-Villas and by Ginzburg and Milinis for the Narkomfin building (see pp. 66-113).

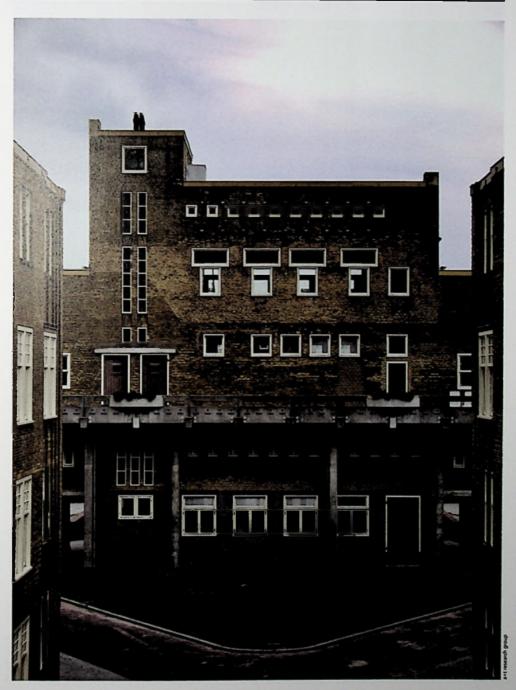
8 HOUSE Copenhagen. Denmark BIG

#### 2010

The collective spaces are concentrated, as in Spangen, at the centre of the double block, in a vertical hub which links the four arms from the bottom to the top floor. It has rooms for activities and socializing as well as a semi-covered outdoor area.

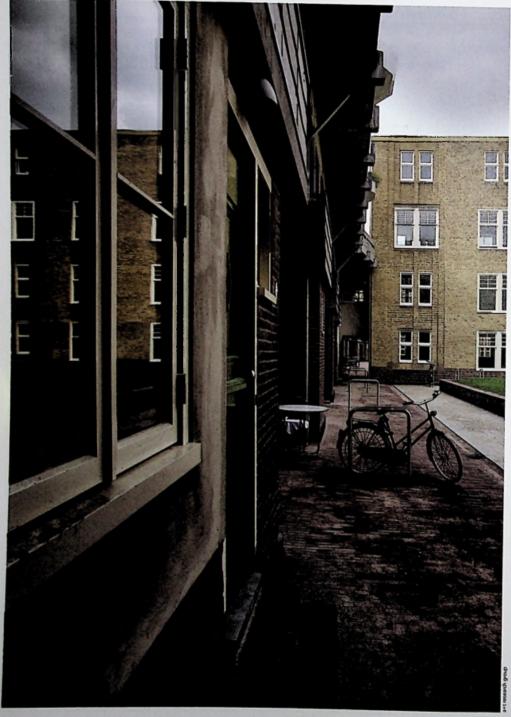
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## JUSTUS VAN EFFEN COMPLEX Michiel Brinkman



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## Chapter 6 **DWELLINGS** PRIVACY



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1:200

03 03 02 FIRST FLOOR Balcany 03 01 01 LIVING ROOM 02 KITCHEN 03 BEDROOM 03 04 WC 02 GROUND FLOOR A ACCESS TO GROUND FLOOR UNIT ACCESS TO THE FIRST FLOOR LINIT 2 5 tO 8 60 m

The Brinkman project was based on superimposing three different types of housing with three different types of access: ground floor dwellings, first floor dwellings and maisonettes on the second and third floors. While the ground and first floor dwellings have a width of two supporting walls, the maisonettes on the second and third floors only have a width of one supporting wall each. Access to the ground floor units is from the courtyard and access to the first floor units from a private staircase. Great care was taken to protect the entrance to both dwellings by using a protruding element of the facade which supports the balcony. Originally, the ground and first floor dwelling entrances had a private front garden with a privet hedge. Today, the entire interior courtyard is a communal space.

## Chapter 6 DWELLINGS DIVERSITY

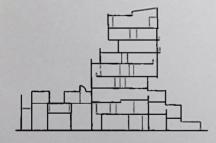
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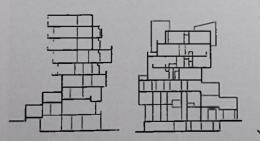


IROKO HOUSING London. United Kingdom Haworth Tompkins

#### 2002

The Coin Street housing block shares with the Brinkman project the superimposing of different housing types and the elevated street. In the London case, the three and four storey dwellings start on the ground floor and are accessed at street level, while the maisonettes look onto the elevated street which is accessed from a vertical core. The block interior is a shared playground. Setting back the two top storeys prevents them from casting their shade onto the lower flats.





GALLARATESE COMPLEX Milan. Italy Aymonino, Aymonino, Massaré

#### 1967-1974

The three blocks projected by Aymonino are interconnected by a raised street, which starts from the apartments above ground level and are characterised by a great typological diversity.

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#### JUSTUS VAN EFFEN COMPLEX Michiel Brinkman

MAISONETTE FLOOR PLANS AND SECTION 1:200

01



01 LIVING ROOM 02 KITCHEN 03 BEDROOM 04 W.C.

The maisonettes on the elevated street have exterior block access from shared staircases. In 1920, two service lifts were installed to improve access for goods delivery. Following refurbishment of the complex, the vertical access has been maintained with the same features. The need to adapt to the block perimeter and the interior spaces was to produce 17 varieties of dwellings based on the original types. In the 1984 refurbishment some housing units were enlarged to respond to market demands and the initial number of 264 units was reduced to 164. After the last renovation, which took place in 2012, the final number came to 154.

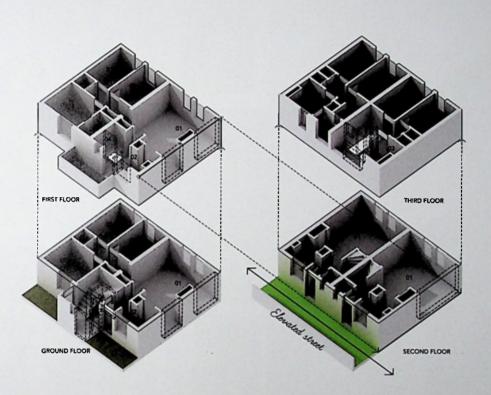
## Chapter 6 DWELLINGS SOCIAL LINK

JUSTUS VAN EFFEN COMPLEX Michiel Brinkman



In many photos of the time one can see children playing on the deck or people enjoying the peace and tranquillity of the shared interior courtyard. The deck is between 2.3 and 3.3 metres wide. The built solution is not so much a theoretical as a pragmatic solution. Brinkman in fact got his inspiration from interpreting the virtues that social education instilled in the individual. This learning process was for Brinkman the result of citizens meeting and socializing in their everyday relations, building up certain neighbourhood bonds generated by this utopian brotherhood between human kind preached by Theosophy. The main criticism made by residents of the deck was that it shaded the dwellings on the floors below.

#### **TYPE UNITS**



01 LIVING ROOM 02 KITCHEN 03 BEDROOM 04 W.C.

01

"Brinkman's Justus van Effen housing complex is transforming from a once expired experiment of modern housing to a modern monument, both physically as well as in the minds of people." CHARLOTTE VAN EMSTEDE, 2011.<sup>9</sup>

8. Charlotte van Emstede. Expired Experiment- Modern Monument. The Heritage Significance of the Justus van Effen Housing Complex as Driver for Urban Regeneration and Social Sustainability. Icomos Paris, 2011.







## Chapter 7 ACCESS THE ELEVATED STREET

#### REFERENCES



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FRANCISCO TERRACE APARTMENTS Chicago. United States Frank Lloyd Wright

#### 1895 (Partially demolished in 1974)

A young 28-year-old Wright designed this complex comprising 46 rent-controlled dwellings where he aimed to improve the living conditions of the lower classes. The complex is laid out around a semi-public courtyard which has access through large arches and in which the front doors to the ground floor dwellings are located. An open deck, with entrances at different points, runs along the top floor. He avoids covered communal spaces. Kenneth Frampton saw it as a predecessor of the elevated street proposed by Brinkman in the Spangen complex.<sup>9</sup>

The work of Frank Lloyd Wright was introduced to the Netherlands by H. P. Berlage who travelled to the United States of America in 1911 to familiarize himself with Wright's work. In 1921, the magazine Wendingen dedicated issue 4 to the work of the U.S. architect with a foreword by Berlage himself.

9. Kenneth Frampton "The evolution of housing concepts 1870-1970 " Lotus International 10, Electa, 1975.

#### PARK HILL Sheffield. United Kingdom Jack Lynn, Ivor Smith, Lewis Womersley

#### 1959-1961

Park Hill was born of the proposal of a new way of building the city, different to the functionalist model of the Unité d'Habitation. It was the first time the ideas promoted by the members of the Team 10 materialised, although the authors of the project were young architects who were not members of the team themselves. Lynn and Smith had unsuccessfully proposed the streets in the sky in several competitions such as that for Golden Lane –in which the Smithsons participated without success.

Their arrival in Sheffield, owing to the municipal architect Lewis Womersley, gave them the opportunity to try out their model on an unexpected scale.

JUSTUS VAN EFFEN COMPLEX Michiel Brinkman



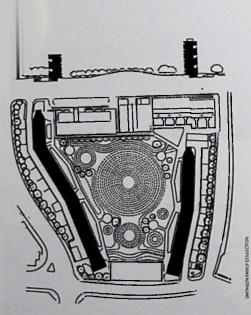
The main novelty in this housing complex is the elevated street which was to be mechanically repeated in social housing, both by the pioneers of Functionalism and later by those fighting Modern Radicalism. This was the first time the resource was to be used in Europe. Brinkman proposed the concept of the elevated street to combine the density of the monumental block and the exterior-interior relationship of row housing. His aim to transfer the freedom and spontaneity of the traditional street to the elevated street makes the deck an ambiguous element, without the radical nature which Modernism afforded it. The street in the air is a non-stop one-kilometre walk, full of twists and turns, different widths, in which a series of small events –volumes, openings looking outwards, street views, encounters with the stairwell...– continually alter the perception of the setting.

55

## Chapter 7 ACCESS THE ELEVATED STREET

#### REFERENCES

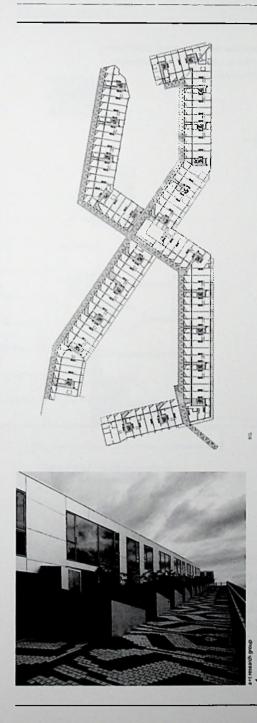




#### ROBIN HOOD GARDENS London. United Kingdom Alison and Peter Smithson

#### 1966-1972

After the Golden Lane competition, in which the Smithsons first introduced the street in the sky, the Robin Hood Gardens project presented itself as a real opportunity to construct a high-rise urban fabric capable of maintaining the relationships of the traditional British street, with its terraced housing and low density. The Spangen influence is clear as far as the access deck is concerned, yet not in the general approach to the project. For while Brinkman made an effort to maintain the close relationship with the local environment and between residents, Robin Hood Gardens project is completely self-contained and the blocks have as much distance between them as the plot permits in order to create an artificial mountain landscape. Furthermore, the decks are located on the exterior facades, with no visual relationship between them, hence diminishing the residents' instinctive surveillance of anything going on in the common spaces. From the elevated street the sensation of domesticity offered by an interior garden vanishes and is replaced by the view of an industrial setting and main roads. Building the street into the exterior facade leads to a clear line of shade which, apart from being detrimental to the dwellings daylight increase the risk of defencelessness.



#### 8 HOUSE Copenhagen, Denmark BIG

#### 2008-2010

Ξ

In the 8 House block, located in the Orestad area. the exterior street becomes an architectural route around the entire building which, unlike the previous examples, starts off at street level, climbs up to the top floor via a ramp and then comes down ending up back at street level. The route is uncovered and coincides with the Spangen project in the unbroken sight line between the elevated street and the dwellings. The relationship between the courtyard and the natural environment is maintained and the views are enhanced by a transparent parapet. As with the Justus van Effen complex, each housing type has its own access type and the exterior street is designed to give access both to the row houses on the lower floors and to the penthouse apartments. BIG also shares with Brinkman the fact of having transgressed the programmed urban plan by joining two blocks with shared service facilities in the centre.

# Chapter 7 ACCESS THE ELEVATED STREET

#### REFERENCES

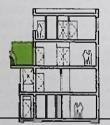
"Thus, while the deck never offers grandiose perspectives, but keeps down to a domestic scale of views along its length, the act of walking along one is a serial scenic experience punctuated by irregular spatial constrictions, that is continuously fascinating." REYNER BANHAM, 1961.<sup>10</sup>









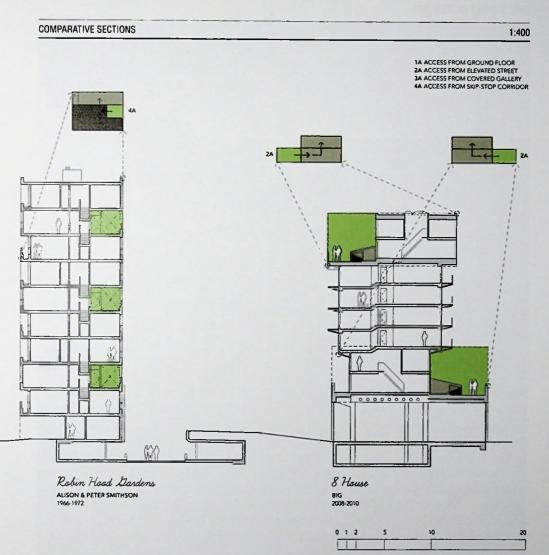


Justus van Effen Complex Michiel Brinkman 1919-1922 Narkomfin Dom-Kommuna MOISEI GIZBURG, IGNATY MILINIS 1928-1930-1932

This comparison between the four sections looks at the differences which converge in the aforementioned perception. The first difference is the position regarding the facade: in Spangen and 8 House the elevated street is an exposed element which marks a turning point in the section. The facade is set back from the elevated street. However, in Narkomfin and Robin Hood Gardens, the street is built into the facade, sheltered on three sides. It looks more like a carved out gallery in one of the sides of the volume.

10. Reyner Banham. "Park Hill Housing". Architectural Review, 1961.





The second difference is the visibility through the parapet: in Spangen the parapets have been pierced, in 8 House they have transparent glazing. Both are one metre high, while in Narkomfin it is an opaque parapet and in Robin Hood Gardens they are pre-fabricated concrete modules with built-in glass which let light pass but not sight-lines and they are 1.20 m high. The third difference concerns the route. In Narkomfin it is a straight line, while in Robin Hood Gardens this is a line with two turning points which always runs around the exterior facades of the linear blocks. In Spangen and in 8 House the routes follow a looped path which flows, mainly on the interior, but which also in some sections overlooks the street.

## EPILOGUE THE STREET IN THE AIR

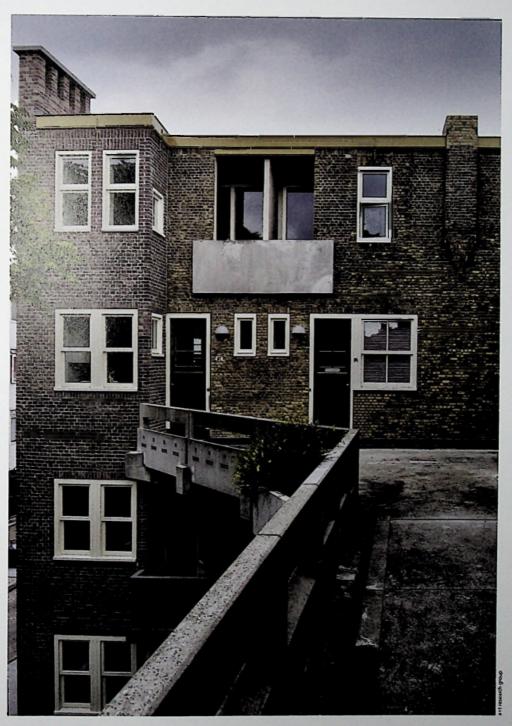
### **RESIDENTS OR BELIEVERS**

For the first occupants of this estate, the new housing units offered considerable advantages over the old-fashioned alcove-houses where there was no division between living and sleeping areas. Here all the dwellings had separate bedrooms, cross-ventilation, a proper kitchen, bathroom, heating, mains gas and refuse facilities.

However, what had been obvious advantages in the 1920s were not so much so in the 1960s and the run-down complex needed a renovation in the 1980s. This involved enlarging the dwellings and replacing some elements such as the frames and the original planters.

It was at this time that the interior of the complex was given a facelift and that the brickwork was painted white in an aim to offer a clean image. At this time that windows and doors were also boarded over to deter anti-social behaviour. It was a wasted effort and the residents continued to abandon the block in the years following the renovation.

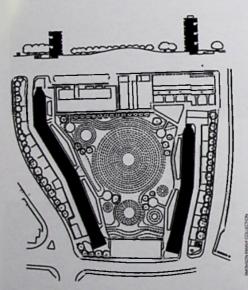
In 2002, the market research undertaken in the area put forward the option of completely renovating the building and offering the flats for rent or for sale on the property market instead of the complex remaining a council housing estate. The development strategy was double-edged: on the one hand it took into consideration the monumental values of the estate and aimed to recover these features according to the original Brinkman design, yet it also aimed for the size of the dwellings to remain unchanged and to retrofit them using the full range of modern and sustainable standards available; on the other hand, it attempted to create a sense of belonging among residents, who were termed Justus-believers in advertising campaigns, as they were citizens who held a firm belief in the benefits of collective living with communal spaces in the consolidated city.



## Chapter 7 ACCESS THE ELEVATED STREET

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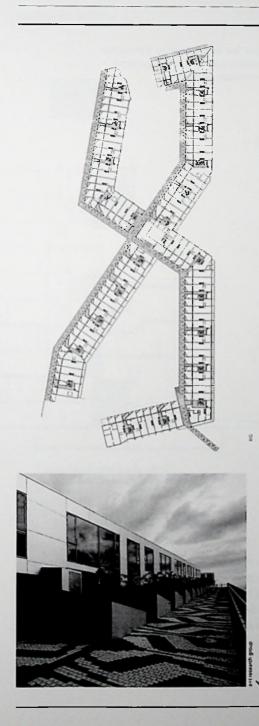




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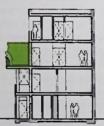
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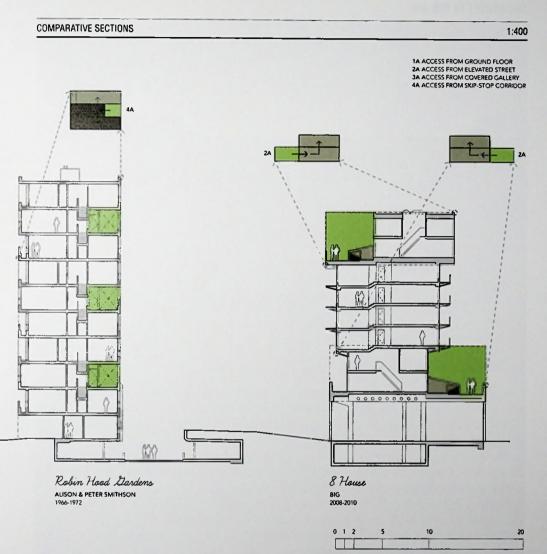
Justus van Effen Complex MICHIEL BRINKMAN 1919-1922

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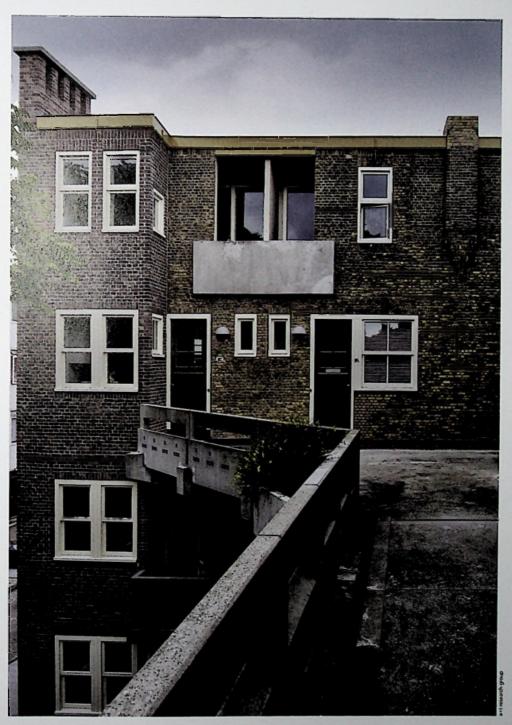
## **RESIDENTS OR BELIEVERS**

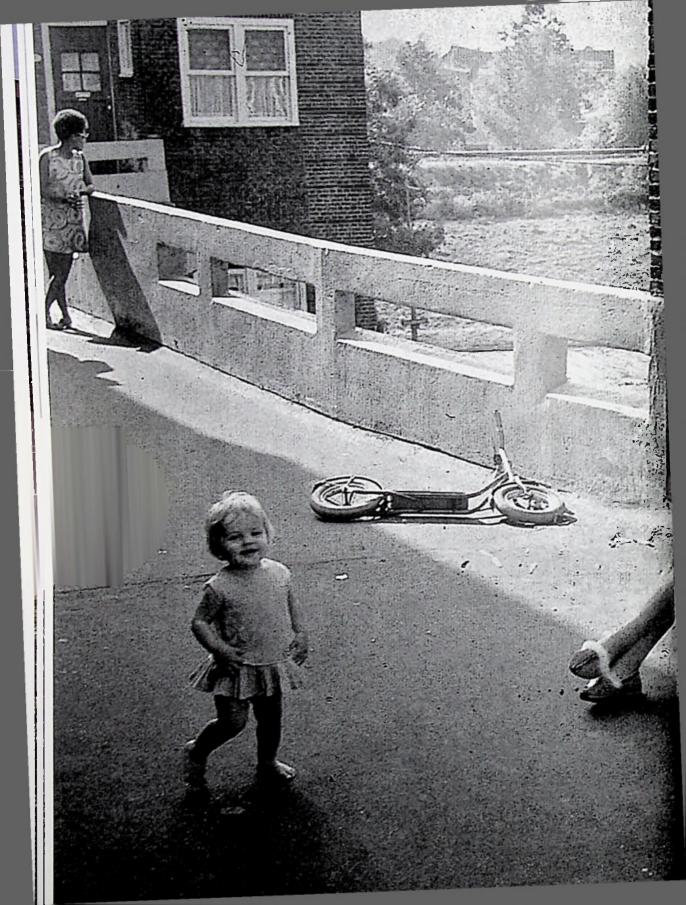
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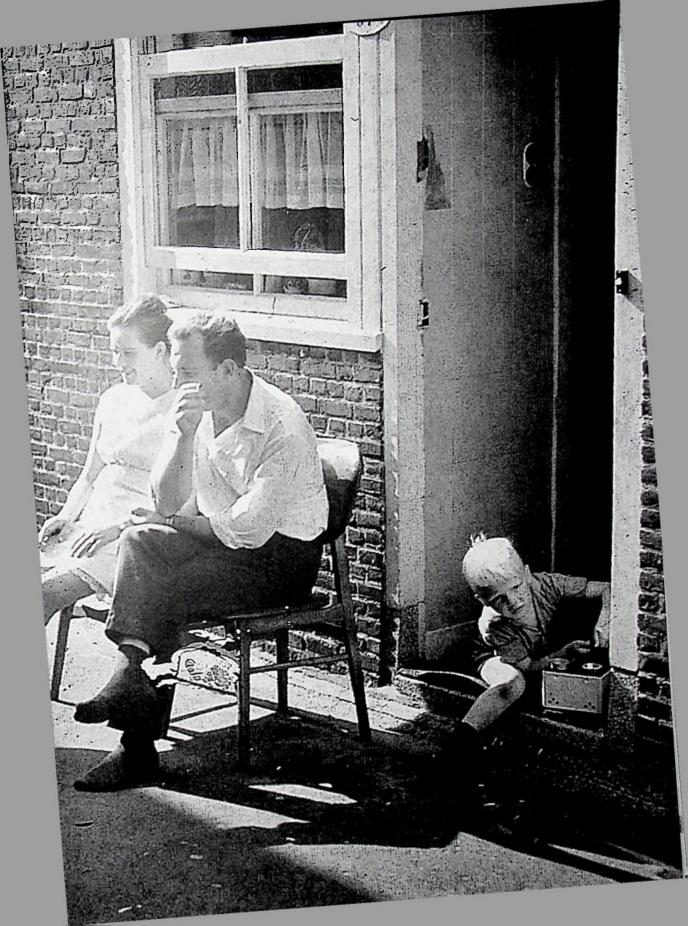
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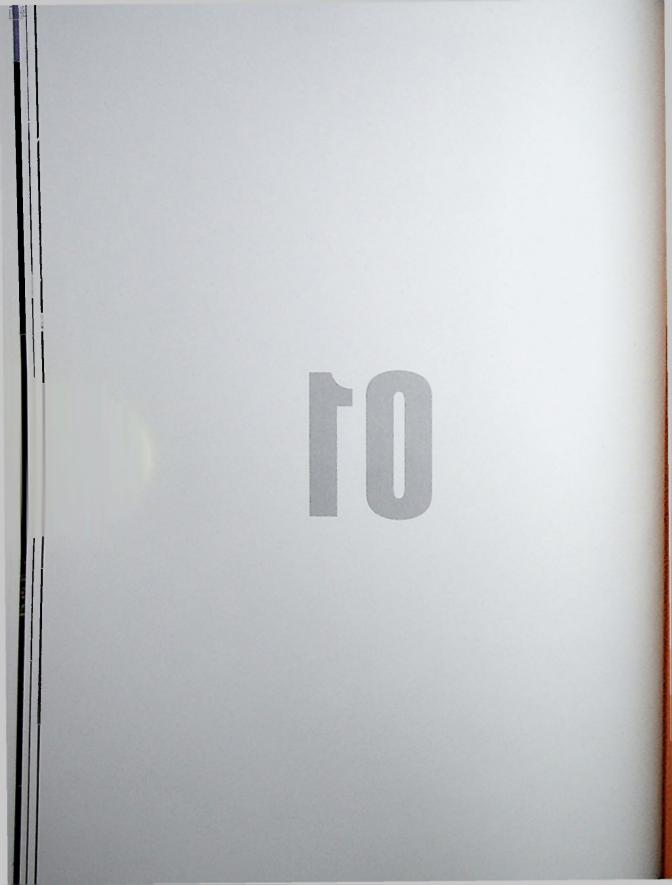
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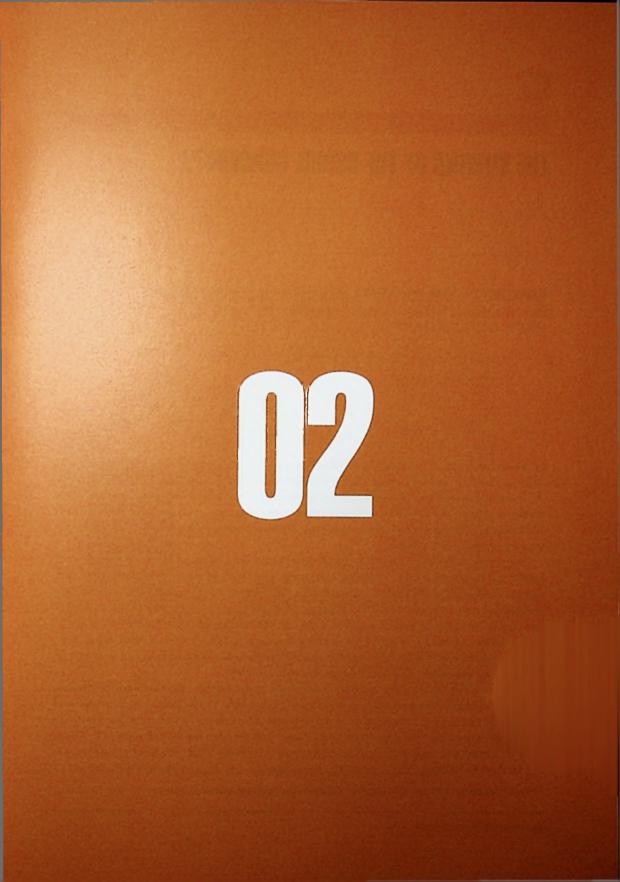
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# THE SINKING OF THE SOCIAL CONDENSER

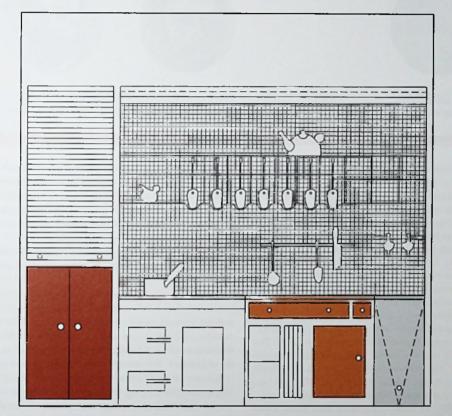
NARKOMFIN DOM-KOMMUNA Moisei Ginzburg, Ignaty Milinis Novinsky bulevar 25, korpus B. (Moscow. Russia) 1928-1930-1932 55°45'25.43"N / 37°34'52.34"E

In the early years of the new Soviet Socialist State, there were large migrations from country to cities in search of better living standards, which worsened the housing crisis brought about by the industrial revolution. This emergency situation led to the forced occupation of traditional dwellings which were shared by several families, with collective use of the services, bathrooms and kitchens. To remedy this important shortage it was necessary to adopt a subsistence economy to save on production resources.

The young State opted for a new social order based on a reformulation of the traditional family and on planning and building new housing types, with an emphasis on communal uses and on the socialization of household tasks. The Communist Party's ambitious house-building programme gave architects and urban planners the opportunity to create new solutions for this new future. In response to this problem, OSA, the Association of Contemporary Architects,<sup>1</sup> which Moisei Ginzburg belonged to, developed several housing proposals with social club, kitchen, gymnasium, library, kindergarten and roof gardens as shared services and with private cells, as basic as possible, as the only financially viable solution.

In 1928, STROIKOM, the Building Committee of the RSFSR (Russian Soviet Federative Socialist Republic), commissioned M. Ginzburg, M. Barshch, V. Vladimirov, A. Pasternak and Sum-Sik to create standardized types for the new collective housing. In a later phase, Ginzburg based his projects for the experimental dwelling types on this theoretical study. Of all the projects carried out, only six experimental blocks were actually built. The most significant was the Narkomfin building which was to become an icon for defenders of Modern architecture.

1. In this story when the term Contemporary appears in Russian acronyms it should be taken to mean Modern.



To what extent can we go on condensing the housing model and which elements should be removed when doing so? MOISEI GINZBURG, 1929.<sup>2</sup>



2. Moisei Ginzburg. "El problema de la estandarización de la vivienda en la URSS, 1929". Escritos 1923-1930. El Croquis Editorial, 2007. P. 372.

## **CHARACTERS**



MOISEI GINZBURG Architect and engineer, 1892-1946



NIKOLAI ALEXANDROVICH MILIUTIN Architect, urban planner and politician, 1889-1942

Moisei Yarkovlevich Ginzburg was born in Minsk. He studied at the Faculty of Architecture at the Accademia di Belli Arti in Milan. He travelled around Italy and became familiar with classical architecture and also the Futurism of Antonio Sant'Elia and Mario Chiattone. In 1917, he graduated from Riga Polytechnic which had been established in Moscow during the war years. Ginzburg was a founding member of the OSA, (the Association of Contemporary Architects), a group set up in 1925 which published its projects and expressed its views in the magazine SA, (Sovremennaya Arkhitektura), Contemporary Architecture.

Alexander Vesnin was president of OSA and Victor Vesnin and Moisei Ginzburg, vice-presidents. This magazine was the media used to disseminate new ideas in the post-revolutionary period. It radically changed its ideological stance after 1930, the year that Ginzburg was removed from the editorial team.

In 1928, an OSA Conference took place where the Social Condenser concept was defined. From this year on, the Association showed its clear aim to separate the collective from the individual and eagerness towards efficient design of spaces in order to overcome the traditional speculative models associated to pre-revolutionary houses. That same year, Moisei Ginzburg was successful in managing to join the CIAM Secretariat.

After 1935, Ginzburg was moved away from the centre of power and his career took him to peripheral Soviet territories such as Georgia or the Crimea and his style moved towards a neo-classical language, albeit reserved in its application to formal excess. The Finance Minister Nikolai Alexandrovich Miliutin, an urban planner who was interested in works like the Ciudad Lineal in Madrid (1892) by Arturo Soria, lived in the Narkomfin for much of his career. One of his proposals was to design linear settlements for the new Soviet industrial cities.

He believed, like Ginzburg, that communal living and working should be the cornerstone for rethinking the inherited city.

The Narkomfin building was originally designed to house Ministry of Finance employees. However, in the end it was allocated to the Nomenklatura. Miliutin occupied the penthouse apartment on the roof between the sixth and seventh floors which he had designed himself. This dwelling was initially planned as a recreational area for the community. When Miliutin moved into the building in 1930, he was no longer at the Ministry. That same year, he published the book Sotsgorod, The problem of Building Socialist Cities, in which he made proposals of "disurbanism" which broke with the traditional city and based planning on industrial production.

Miliutin, a Bolshevik and an amateur architect, was never purged and managed to survive by keeping a low profile. He was accused of being a leftist and a Trotskyist. The dwelling remained in his family until 1975.





ALEXANDER A. BOGDANOV Philosopher and scientist, 1873-1928



IGNATY MILINIS Architect, 1899-1974

He was the first to formulate the idea of integral collectivization which met a fairly warm welcome from the Soviet artistic avant-garde. He believed that society needed to evolve towards collectivization and that this would only be possible if the environment for a new superior type of individual was organized scientifically and communally.

Born Alexander Malinovsky, he changed his surname to Bogdanov. He was a doctor, economist, revolutionary politician and rival to Lenin, science fiction writer, poet and scientist. For Bogdanov, culture needed regenerating by bringing together science, industry and art.

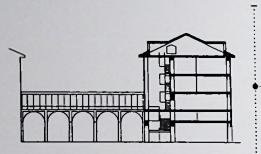
In 1917 he founded PROLETKULT, (Proletarian Cultural and Educational Organizations), aiming to lay the cultural foundations for the Socialist revolution. For Bogdanov the worker was the focal point of proletarian culture, while the artist –in this case the architect- needed to take on the function of organizing the forces in the new collectivized lifestyle. He initially studied to be an architect in Kiev between 1921 and 1924. Later he studied under Moisei Ginzburg at VKhUTEIN, the name of the State Higher Art and Technical School, VKhUTEMAS, from 1927 to 1930. There he carried out several projects in the purest Constructivist style. In the early 1930s, he also worked with Ginzburg on the Government Palace in Almaty, Kazakhstan.

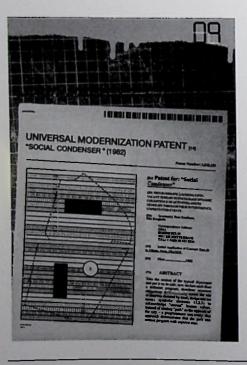




## Chapter 1 HISTORICAL CONTEXT AVANT-GARDES AND UTOPIAS

REFERENCES





PHALANSTÈRE Utopian project Charles Fourier

#### 1829

Phalanstère is a word created by Fourier from Phalan(ge) and (Mona)stère. It was a theoretical, architectural and social experiment based on a group of 1,600 people with a wide range of social classes, ages and characters. He sought an intelligent balance between individual passions to attain perfect communal cohabitation. The ideal site for it was a rural environment and he based its economy on agriculture and small craft workshops. The Phalanstère comprised a central part and two wings on each side. It contained dwellings with access from a gallery located on an upper floor and a set of spaces for socializing called Seristère. This experimental idea was rediscovered by the post-revolutionary avantgarde and used in Dom-kommuna (communal housing) projects.

UNIVERSAL MODERNIZATION PATENT Social Condenser Rem Koolhaas, Elia Zenghelis

### 1982

For Koolhaas the time that architectural ideas remain in the collective memory is about six months. For them to become longer-lasting ideas -he uses the term eternity- he set up the Patent Office. The first patent he drafted was for the Social Condenser, which is defined as "programmatic layering upon vacant terrain to encourage dynamic coexistence of activities and to generate through their interference, unprecedented events."<sup>3</sup> This concept is closely linked to the architecture implemented by the OSA group in the USSR in the 1920s.

3. OMAMO Rem Koolhaas. Content. Taschen, 2004. P. 73.

The Narkomfin was the result of certain conditions which were soon discredited. It went from glory to dishonour in a period of two years. Vladimir Lenin realized that it was impossible to build Socialism if women were not released from their domestic slavery. In the years following the Revolution, the State started to make decisions regarding private life and the family environment. Married life and social relationships came under the microscope as it was believed that the traditional family was a *petit-bourgeois* stronghold which needed changing.

The young Soviet State was buzzing with the architectural experimentation which the European Modernists lapped up and which they hurriedly aimed to bring into the CIAM, (International Congresses of Modern Architecture), albeit with a less fiery discourse.

The Constructivist Movement, as a post-revolutionary experiment, gave the go-ahead to the Social Condenser, described by Moisei Ginzburg as a building designed to transform the relations between humans into the three spheres of the new Socialist State: collective housing, the club and the factory.

This was the result of functional thinking which was the guiding light of the Constructivist methodology: "a method which clearly indicates to the architect the path to take and suggests a solution to his problem taking into consideration the constraints he faces."<sup>4</sup> It gives the architect the capacity to influence social behaviour by breaking with tradition and creating socially equal spaces.

The Social Condenser concentrates all its capacity for transformation onto the members of a closed community: the residents of communal dwellings, the members of a club and the workers at a factory. In the condenser, the collective enters into the sphere of the private and reaches as far as the bedroom door. Life in the Social Condenser is divided into two spheres: the individual sphere, in which the world of the self is recreated and the social sphere in which the self has relationships with others. The architecture of the Narkomfin is conceived with the capacity to modify social behaviour, condensing the spaces with an individual use and expanding those with collective use.

After Lenin died in 1924, the Bolshevik ideals of universal revolution were discarded. With Stalin in power, the frequent outbursts by modern architects over-stretched the patience of Soviet authorities and started to undermine their confidence in the renovating power of modern architecture. The powers that be began to look away towards other issues, among which the stability of the nuclear family, attacks on religion, the fight against alcoholism and reinforcing education as an ideological instrument became increasingly important.

4. Moisei Ginzburg. Sovremennaya Arkhitektura 2, 1926, in Bonfanti, Bonicalzi, Rossi, Scolari, Vitale. Architettura Razionale. Franco Angeli Editore. Milan, 1975. P. 49.

## Chapter 1

## HISTORICAL CONTEXT AVANT-GARDES AND UTOPIAS

REFERENCES

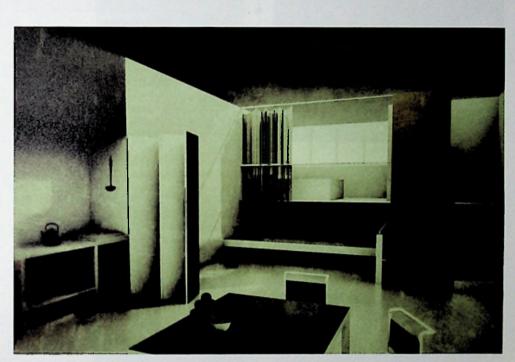


pastruction of a red corner at Sumskoy Stockaded Fort in Moscow.

Red was a sacred colour for pre-Soviet Russia, just as it was for the post-Revolution Soviet Union. Each dwelling had its own little shelf where icons and sacred figures were placed, a symbolic corner -krasni ugol or red corner. The ban on religious manifestations and symbols -it was argued that different people each kissing the same icons again and again could lead to them catching contagious diseases- meant removing this symbolic world with its references to the Orthodox Church. In its place, it was encouraged to have the Ugolok Diadi Lenina, or Uncle Lenin's Little Corner, with Marxist publications and texts and images glorifying the Soviet Union.<sup>5</sup>

5. Victor Buchli, An Archaeology of Socialism. Berg, 2000, P. 47-51.

74 / 10STORIES OF COLLECTIVE HOUSING



Interior of a Type F Unit, with the furniture layout according to research for STROIKOM on standardization and typology.

The Soviet State's intrusion into the more prosaic side of people's private lives manifested itself in handbooks calling for the abolition of individual kitchens, the removal of curtains and ceilings, the use of metal beds and for the rest of the furniture to be made from unvarnished wood.

## Chapter 1 HISTORICAL CONTEXT AVANT-GARDES AND UTOPIAS

#### REFERENCES





#### VKHUTEMAS Moscow, Soviet Union

#### 1920-1930

This Higher Art and Technical Studies School, which coincided temporally for ten years with the BAU-HAUS (1919-1933), was a larger centre albeit not as well known. During this period there were frequent exchanges between the two schools as shown by the fact that the use of the colour for the interiors of the teaching units of the VKhUTEMAS was supervised by a teacher from the BAUHAUS. The first Modernist architecture exhibition, with the most important European architects of the time on show, was held on VKhUTEMAS premises in 1927. In this photo from 1924, we can see Moisei Ginzburg and one of the Vesnin brothers with VKhUTEMAS students. Ginzburg was professor of the History and Theory of Architectural Composition in the school workshops and he also worked in the offices of the Vesnin brothers where the main projects of Soviet avant-garde architecture were drawn up.



#### VERS UNE ARCHITECTURE Le Corbusier

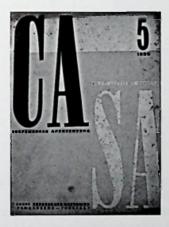
#### 1923

In the 1923 edition Le Corbusier granted architecture an ideological capacity in line with the Russian Constructivists: "The balance of society comes down to a question of building. We conclude with these justifiable remarks: Architecture or Revolution?"<sup>6</sup>

6. Nicholas Fox Weber. C'était Le Corbusier. Fayard. Paris, 2009. P. 252.









### STIL' I EPOJA Moisei Ginzburg

#### 1924

In 1924, Ginzburg published the book Style and Epoch, subtitled "Problems of Modern Architecture", which was seen as the manifesto for Soviet Constructivist architecture. It is based on Vers une architecture, which had been published by Le Corbusier a year earlier. From 1932 on, architects' associations were banned and the Union of Soviet Architects was created. Constructivism was prohibited and the i vent of a new Neo-classical period in the USSP <sup>1</sup> gan.

#### SA MAGAZINE OSA

#### 1929

Sovremennaya Arkhitektura, (Contemporary Architecture), was a bi-monthly magazine, edited by Moisei Ginzburg and the Vesnin brothers between 1926 and 1930, and published by OSA, the Association of Contemporary Architects. In issue 5, 1929 an extensive article covered the Narkomfin building floor plan types and photos of the foundations and the base of the ground floor concrete columns.

#### SOTSGOROD Nikolai A. Miliutin

### 1930

In his book Sotsgorod, The problem of Building Socialist Cities," Miliutin outlines his ideas on "disurbanism" his theories against the traditional city and the creation of a linear city based on production.

## Chapter 2 URBAN FORM THE SOVIET RESIDENTIAL MODEL

NARKOMFIN DOM-KOMMUNA Moisei Ginzburg, Ignaty Milinis

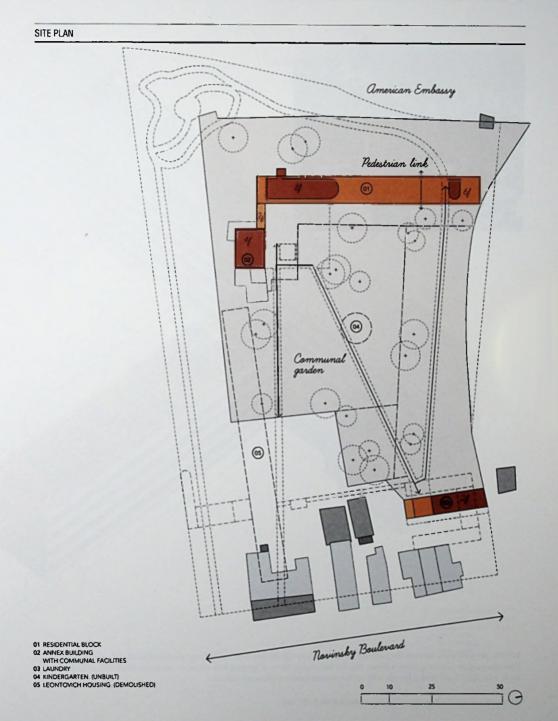
The original programme for the Narkomfin building, built to house Ministry of Finance employees, proposed five blocks, those outlined in the following page.

In the competition for new residential proposals held in 1927 by SA magazine, projects with two- or three-storey maisonettes, interior corridors and access galleries emerged for the first time. Later on this layout was to re-appear in several collective housing projects. Ginzburg develops some of these proposals with their origin in a minimal housing cell (27-30 m<sup>2</sup>), with which he composes several examples of the large Dom-kommuna residential blocks. This competition was the seed for the studies commissioned later on by STROIKOM, which was the definitive step towards the implementation of the residential models for the new society.

After 1930, the political situation became particularly dangerous for the Ministry of Finance employees and this spread to the residents of the Narkomfin building. Work was undertaken on the ground floor to insert new units and services and the communal block was extended by one storey which joined its height to that of the staircase volume. The whole complex was completed in 1932.

The second phase of the residential building (05) was not built by Ginzburg but by S. Leontovich between 1933 and 1935 following a far more classicist Stalinist aesthetic with decorative elements on the facade.





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Chapter 2 URBAN FORM THE SOVIET RESIDENTIAL MODEL



In 1936 the open space between the *pilotis* on the ground floor was filled in with conventional dwellings which did not correspond to the types designed by Ginzburg. Later, a library was also installed in the set of ground floor rooms in residential block (01), to be exact on the south end. After Stalin died, a lift was built on the western facade of the south staircase.<sup>7</sup>

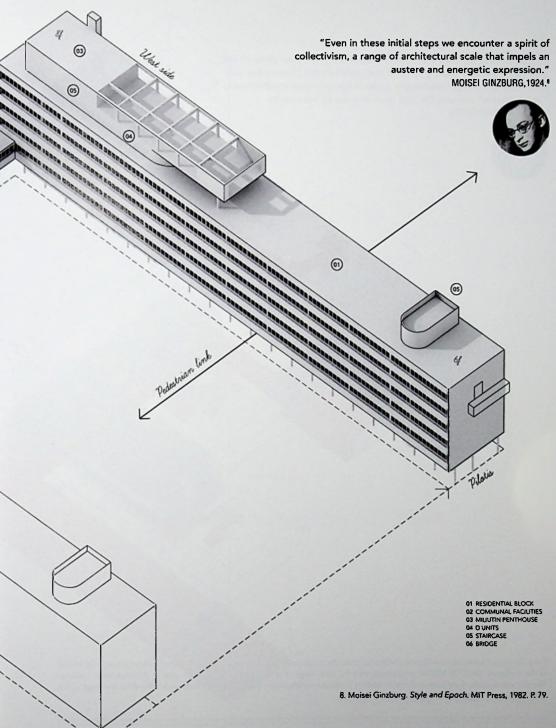
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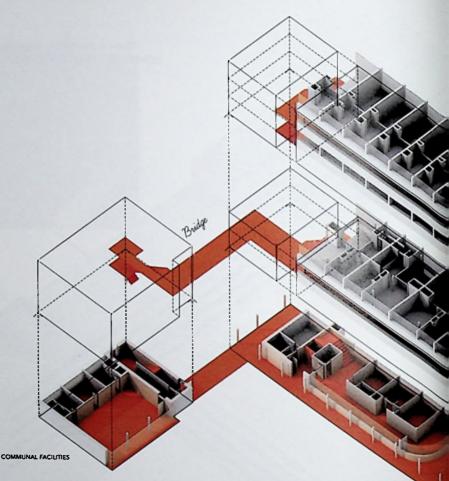
7. Victor Buchli, An Archaeology of Socialism, Berg, 2000. P 101, 168.



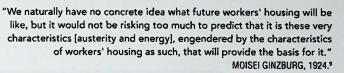


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# Chapter 3 FLOOR PLANS COLLECTIVE LIVING

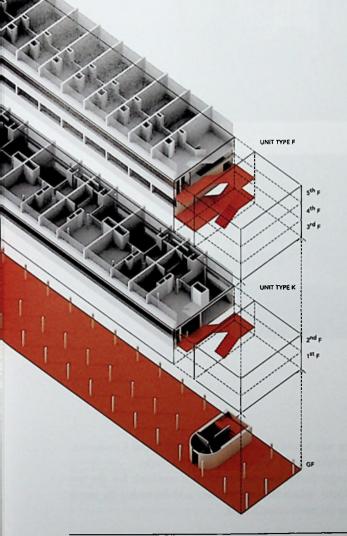


From the most traditional housing units, which included the whole programme for family living, to the cells where privacy was limited to the bedroom, the STROIKOM programme offered a wide range of types, some of which were used in the Narkomfin building. The aim was to make these units available to workers in the post-revolutionary period until the State could offer them dwellings with a fully communal lifestyle.





02



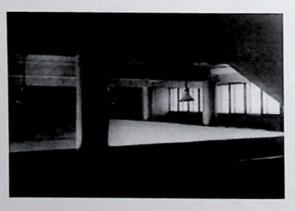
9. Moisei Ginzburg. Style and Epoch. MIT Press, 1982. P. 79.



# Chapter 3 FLOOR PLANS COLLECTIVE LIVING

NARKOMFIN DOM-KOMMUNA Moisei Ginzburg, Ignaty Milinis



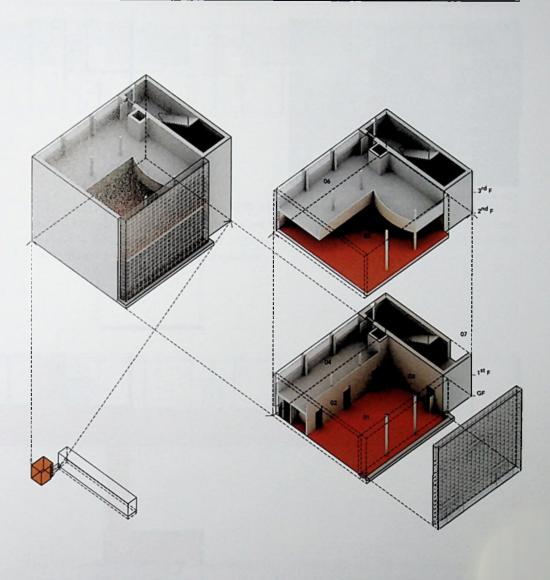


The annex block of the residential building was meant to be the heart of this Social Condenser, the place where the bulk of the private activities would now take place collectively.

Some years later, when this block no longer performed the functions it was built for, the living conditions in the residential block F Units, which lacked a kitchen and depended for many functions on this communal space, became far more complicated.

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### ANNEX BUILDING



- 01 SPORTS AREA 02 DRESSING ROOMS 03 STORAGE 04 PUBLIC BALCONY 05 DINING AREA/COMMUNAL KITCHEN 06 READING ROOM 07 CONNECTION WITH RESIDENTIAL BLOCK

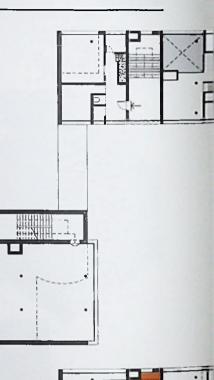
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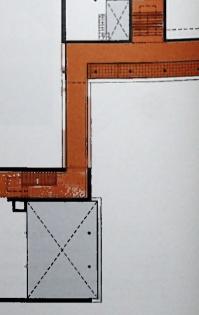
# Chapter 3 FLOOR PLANS TRANSITION UNITS

NARKOMFIN DOM-KOMMUNA Moisei Ginzburg, Ignaty Milinis



View of east facade before lift installation.



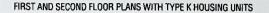


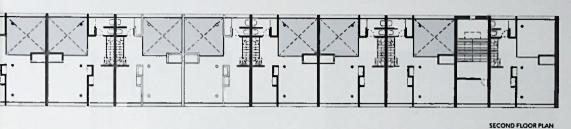
This is a maisonette with a double height living room and access from a wide gallery on the storey below. There are eight units on the first and second floors between the staircases.

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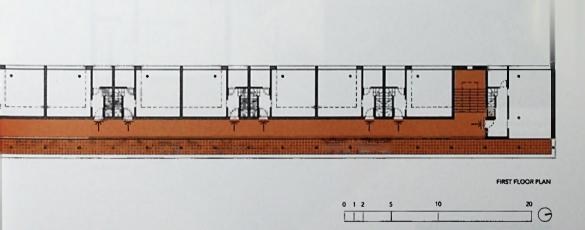


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As a result of the research carried out by STROIKOM on standardization and typology six types of dwelling emerged. Moisei Ginzburg chose three of them to compose his Narkomfin building: units D, F and K, with a variant 2F, of which six units were built adjacent to the staircases. These do not appear drawn in as part of the project solution.



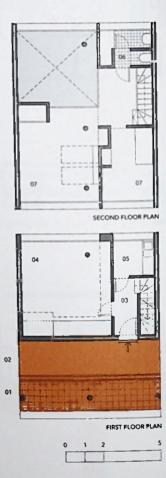
One of Ginzburg's concerns was ventilation for hygienic reasons. All the dwellings are dual aspect to facilitate cross-ventilation, with the bedrooms located on the East side and the living areas on the West side. The structure is rationalized and has an interaxial distance of 3.60 metres. The K Unit was designed for families still following the traditional model. It has an individual kitchen and enables the children to be brought up in the home. These are transition units which permit a semi-bourgeois lifestyle typical of pre-revolutionary life. This K Unit took advantage of the three-dimensional spatiality enjoyed by many of the types proposed by the OSA group.

# Chapter 3 FLOOR PLANS TRANSITION UNITS

NARKOMFIN DOM-KOMMUNA Moisei Ginzburg, Ignaty Milinis



These flats have a separate 4.5 m<sup>2</sup> kitchenette and double height living-dining room 5.0 m high from floor to ceiling. Upstairs, are two bedrooms and a bathroom.

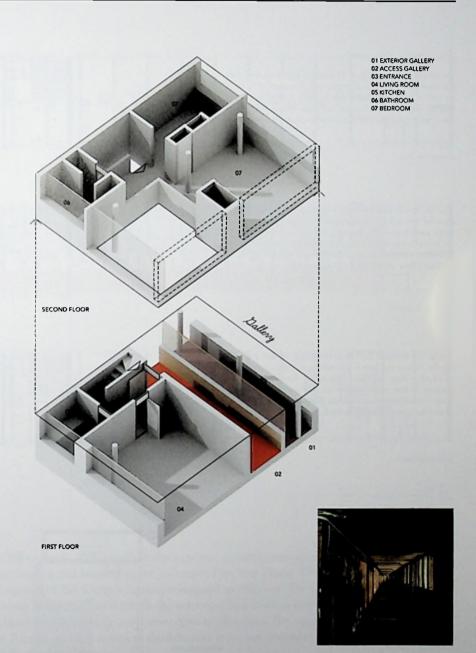


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## ....NIT

Ginzburg aimed to reconcile the financial aspects with the spatial qualities of his units. Type K, targeting large or multi-generation families, was five metres high in the living areas and light was provided from a large window which took up most of the facade. To increase the spatial quality he used a combination of warm colours on ceilings and cold colours on walls which counterbalanced the mostly vertical design of the unit in favour of horizontal dimension.





The first floor gallery had two corridors: an open one looking onto the garden and another glazed which provided access to the K Units.

02

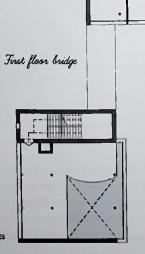
## Chapter 3 FLOOR PLANS FULLY COLLECTIVIZED UNITS

### NARKOMFIN DOM-KOMMUNA Moisei Ginzburg, Ignaty Milinis

The narrow 3.75 m width of the dwelling means the unit does not allow for divisions into smaller cells. However, these units are 3.60 m high in the living area but only 2.30 m high in the sleeping area. All the cell spaces have sight lines between them and a moving element provides greater intimacy for rest times.

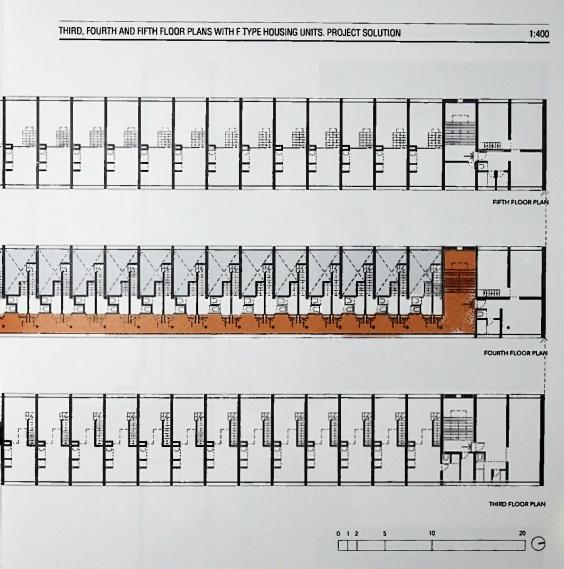
With the double height floor plan for the upper storeys, there is space left over to build in the simple load skip-stop gallery. from which access is provided, into the section. The thirty-two units of the project solution (16+16), designed for communal living, are located on the third, fourth and fifth floors with the gallery on the fourth floor. In the end, only 24 units of this type were built.

Instead of a kitchen it has a niche for heating up food and making tea. It does not have a full bathroom, only a toilet and a washbasin. These are fully collectivized dwellings. They are designed for four people and contain only the basic living functions. The remaining functions take place outside this unit in the communal spaces of the annex block.



ANNEX BUILDING.





## **F UNIT**

From 1929 onwards, with Joseph Stalin in power, research into housing was cancelled in favour of industrializing and keeping to the successive Five Year Plans. With these new guidelines the more theoretical OSA research became consigned to oblivion. The Central Committee rejected the rigorous Socialist lifestyle which the reformers had tried to impose only a few years earlier and replaced it with a middle path, more open to pluralism. The transition of the type K units to the type F units, which was seen as the definitive type, was discarded as the ideal model to move towards the Socialist lifestyle.

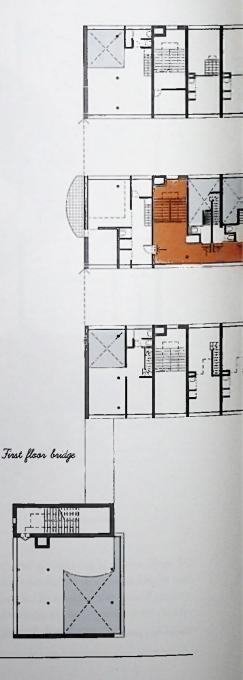
## Chapter 3 FLOOR PLANS FULLY COLLECTIVIZED UNITS

#### NARKOMFIN DOM-KOMMUNA Moisei Ginzburg, Ignaty Milinis

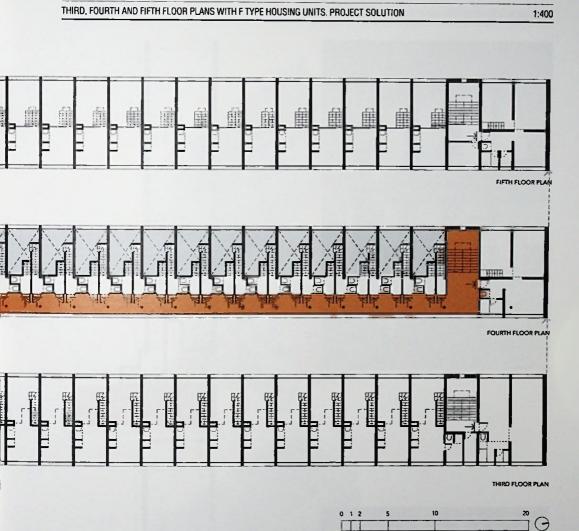
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With the double height floor plan for the upper storeys, there is space left over to build in the simple load skip-stop gallery, from which access is provided, into the section. The thirty-two units of the project solution (16+16), designed for communal living, are located on the third, fourth and fifth floors with the gallery on the fourth floor. In the end, only 24 units of this type were built.

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ANNEX BUILDING. COMMUNAL FACILITIES



## **FUNIT**

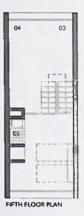
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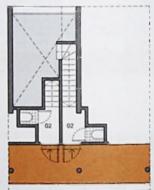
# Chapter 3 FLOOR PLANS FULLY COLLECTIVIZED UNITS

NARKOMFIN DOM-KOMMUNA Moisei Ginzburg, Ignaty Milinis





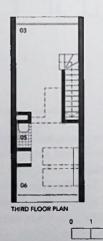
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FOURTH FLOOR PLAN



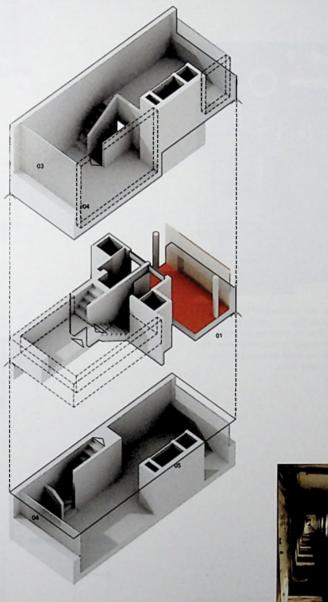
This image is of the Dom-kommuna built by Ginzburg in Gogolevsky Boulevard, dating from the same time as the Narkomfin building. Here the stairs are on the other side of the floor plan.



5

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01 ACCESS GALLERY 02 ENTRANCE+TOILET 03 LIVING ROOM 04 NICHE 05 WASHBASIN 06 BEDROOM

02

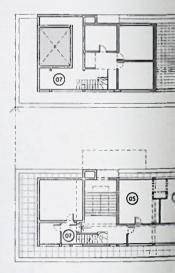
The access gallery on the fourth floor is larger than the one on the first floor. The idea was for it to be a rest area and it had double-glazing and heating.

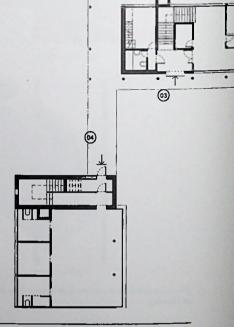
# Chapter 3 FLOOR PLANS UNITS FOR SINGLES

NARKOMFIN DOM-KOMMUNA Moisei Ginzburg, Ignaty Milinis



The model for the bedroom unit published by Miliutin in his book Sotsgorod was used for the Type D Units for single people of the Narkomfin building. These units were located on the sixth floor, next to the penthouse occupied by Miliutin for most of his career. Above, view of the kitchen, which distances itself from the space constraints imposed by the F Units.





Originally the ground floor was an open space with *pilotis* containing one single flat. However, later the whole space was used for extra dwellings to take advantage of the floor area covered by the building.

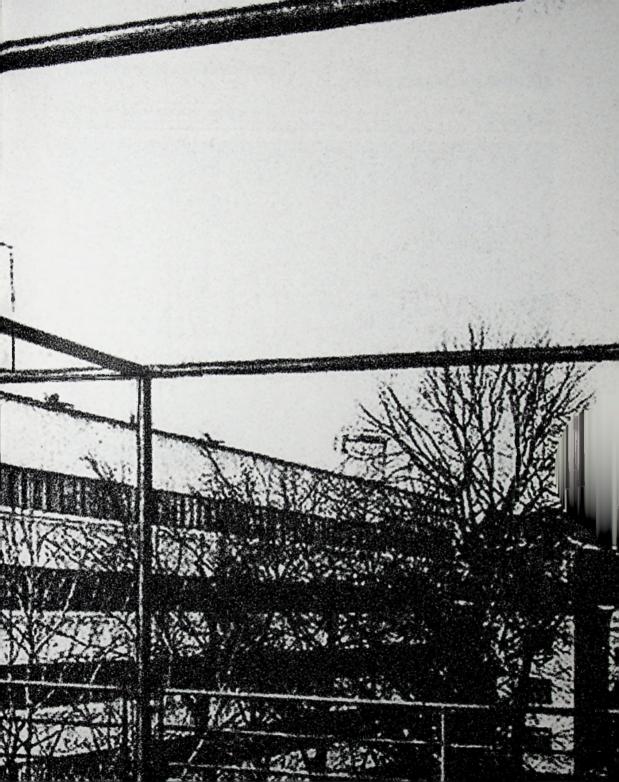
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# FLOOR PLANS, GROUND, SIXTH AND SEVENTH FLOORS 1:400 HILL . - 1 SEVENTH FLOOR PLAN (05) зi I O II 6 SIXTH FLOOR PLAN . . • • 0 . . . . • . @ GROUND FLOOR 01 FREE SPACE 02 NORTH CORE 03 SOUTH CORE 04 COMMUNAL FACILITIES -05 D UNIT 06 COMMUNAL TERRACE 07 MILIUTIN PENTHOUSE

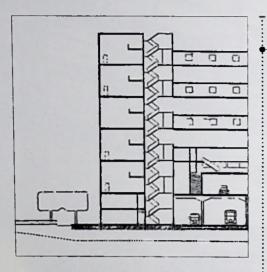
Drawing according to: Victor Buchli, An Archaeology of Socialism. Berg 2000. P. 207.





## Chapter 4 SECTIONS SAVING SERVICE SPACES

### REFERENCES



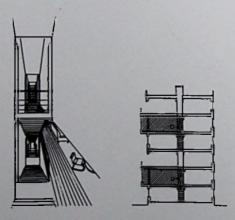
#### IMMEUBLE-VILLAS Le Corbusier

#### 1922-1925

Some authors believe the 1925 version of the Immeuble-villas project to be a *sine qua non* precursor for the solution of alternate access corridors, built for the first time in the Ginzburg and Milinis building. In fact, this is a double-corridor with maisonettes, similar to that used in the double-corridor Narkomfin building. However, other authors like R. Sherwood<sup>10</sup> point to the influence which Le Corbusier's 1930 visit to Moscow had on the later design of the Unité d'Habitation with its double-load interior street.

10. R. Sherwood. Modern Housing Prototypes. Harvard University Press, 1978. P. 120.





#### DOM-KOMMUNA (Theoretical proposal) Soviet Union STROIKOM

### 1928-1930

The designs for housing projects commissioned by STROIKOM, (Building Committee of the Russian Soviet Federative Socialist Republic), are the most interesting Rationalist proposals of the 1920s and precursors of much of European collective housing. In these projects, the transition from a bourgeois lifestyle to the new Socialist lifestyle was developed by applying progressive modifications to the room layouts. In these designs, driven by function and economics, the decrease in the area set aside for private life was counterbalanced by increasing that set aside for collective living. The glazed gallery was the large socializing space, as were the annex buildings where the communal services such as the laundry, kitchen, canteen and baths were located.

For the first time, we see the solution of alternate access corridors for the dwellings to save on circulation space.

The illustrations on this page are preliminary studies for the type solutions which the group led by Ginzburg was working on.





For the first time ever, the design for the circulation spaces considered the flows to be opportunities for events and socializing. Collectivizing the bulk of the household functions facilitated the incorporation of women into public life at the expense of, amongst other collateral effects, having to bear mutual surveillance and reinforced community control. Reducing privacy to the sphere of the bedroom was a good way to undermine bourgeois conventionalisms.

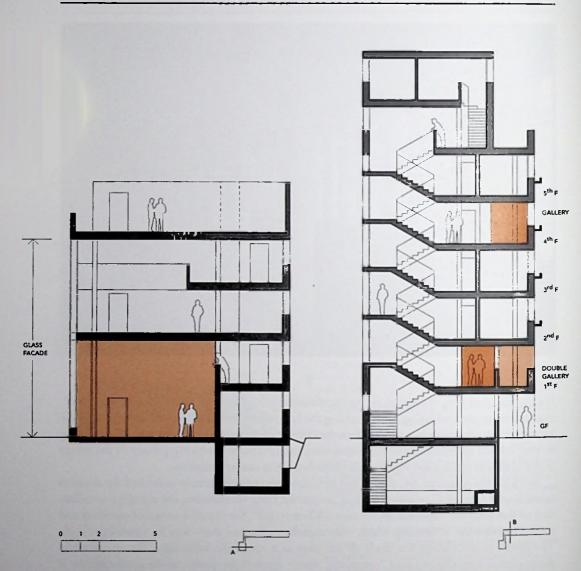
In 1930, the magazine SA, already out of Ginzburg's control, actually published the decision taken by the Central Committee of the Communist Party condemning the complete socialization of domestic life. The title for the text: "Where to go?" The directive censured corridors and the collectivization of housing which only months earlier had been seen as a paradigm shift. The Party's policy change was made all too clear as it stated the following: "We are presently disappointed with this so-called "commune" which deprives the worker of the usual space he is entitled to, converting it to corridors and covered passageways. The "commune-lie" which only allows the worker to sleep in his accommodation. The "commune-lie" which reduces living space and comfort (which gives us queues for the bathrooms, for the services, for changing rooms, for the canteen) is starting to worry the working masses."<sup>11</sup> Ginzburg and other members of the OSA began to notice that their works were starting to be rejected.

11. Paolo Sica. Historia del Urbanismo del siglo XX. Instituto de Estudios de Administración Local, 1981. P. 289.

02

# Chapter 4 SECTIONS SAVING SERVICE SPACES

NARKOMFIN DOM-KOMMUNA Moisei Ginzburg, Ignaty Milinis



The north facade of the whole common block is totally glazed and looks onto the park. Ginzburg conceived this large glass front as mobile and removable but the financial costs of this idea meant it was never implemented. Between 1949 and 1951, a blind wall was put up on the ground and first floors. Much of the original transparency was lost.

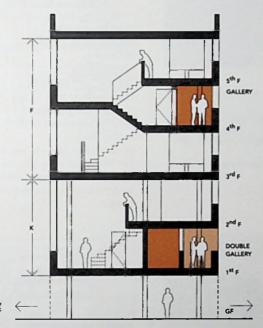
There are two circulation cores in the residential block and these are located near the end walls. Each core serves symmetrically -in the project solution- four K cells and eight F cells. In the 1950s, a lift was installed in the south core which improved access to the fifth floor.

#### SECTIONS A, B AND C

"Man's way of life, that worldly atmosphere which encompasses his daily existence and does not directly reflect the harsh and implacable struggle for survival -the most active facet of his life- has always been a highly conservative element." MOISEI GINZBURG, 1924.



1:200



Pedestrian link

## SECTION C

The elements forming section C, probably the section which has been most often imitated and re-created in the history of social housing, are the following in ascending order: Open plan ground floor with *pilotis*.

Double gallery with access area and socializing area.

Type K Housing unit built with double-height over the access gallery.

Type F Housing unit, below, built on two levels.

Second access gallery.

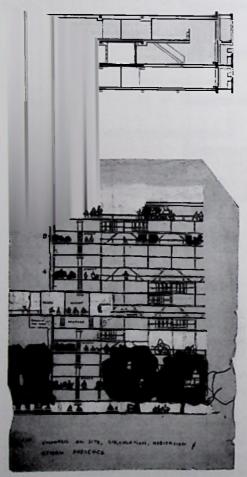
Type F Housing unit, above, built on three levels over the second gallery.

In total, this comprises three dwellings over five floors and served by two galleries, a brilliant solution to save on circulation space and to provide spatial gains for the dwellings.

# Chapter 4 SECTIONS SAVING SERVICE SPACES

#### REFERENCES





UNITÉ D'HABITATION Marseille, France Le Corbusier

1934. 1946-1952

Living room of the ES2 dwelling, with the kitchen at the rear. In the case of the Unité d'Habitation, the cell is also extended vertically to light the plan which is 17 m deep.

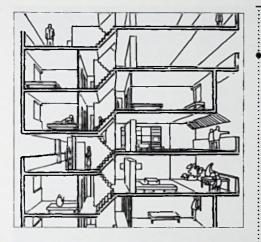
In the section, one can see that the access gallery has here been moved to the interior of the building. The units are over this interior corridor and they are front-to-back units on both the upper and lower floors.

GOLDEN LANE (COMPETITION) London, United Kingdom Alison and Peter Smithson

#### 1952

Sketch of the section with partial elevations. The caption on the original reads: "Emphasis on location, circulation, liveability and human presence." The interior streets are marked every three or four storeys. The corridors are open on one side and provide access on several storeys, as in the Narkomfin building. There is also an accessible rooftop garden.





#### PAMPUS

Amsterdam. The Netherlands J. H. van den Broek and J. B. Bakema

#### 1965

Pampus was planned as a city of 350,000 inhabitants on land reclaimed from the sea, located in Lake IJ in East Amsterdam. The drawing represents a cross section of a residential building with a similar plan to the Narkomfin F cells. One corridor every three storeys is more economical than access at all levels and enables multiple options for layouts.



#### EASTWOOD

Roosevelt Island. New York. USA Sert. Jackson

#### 1970-1976

Sert first tried out the skip-stop single-load gallery in the Peabody Terrace residence for married students (Cambridge, 1964). When President Nixon's Welfare Reform programme was launched, aimed at curbing the deterioration of American cities by building affordable high-rise housing, Sert and Jackson took part in the plan for Roosevelt Island designing a huge urban complex including over 1,000 dwellings, public spaces and amenities. In the more basic Eastwood blocks, they tried out the skip-stop gallery model, with access to three floors in order to economize on common spaces. The 3 m wide module was the base which a great variety of typologies could be adapted to.

# Chapter 5 ENVELOPE THE GLASS WALL

NARKOMFIN DOM-KOMMUNA Moisei Ginzburg, Ignaty Milinis



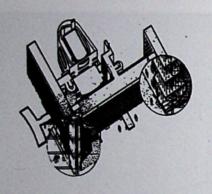
### THE SINKING OF THE SOCIAL CONDENSER

### CONNECTION BETWEEN ANNEX AND RESIDENTIAL BUILDING

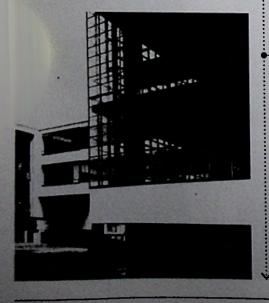


### Chapter 5 ENVELOPE THE CURTAIN WALL

#### REFERENCES







CENTROSOYUS Moscow. Soviet Union Le Corbusier

#### 1929

The design for the main facade of the Centrosoyus was based on the principle of exact breathing, which according to Le Corbusier, could adapt to any climate. This comprised a double skin, in this case glazed but which could also be made of stone or mixed, with an interior cavity a few centimetres wide. They were called neutralizing walls.

Using a primitive air conditioning system -usine à l'air exact, (exact air factory)- air was circulated through the envelope at a constant temperature of 18° and the building was kept hermetically sealed and artificially ventilated.

The Centrosoyus was completed in 1936 by Nikolai Kolli, with many modifications to the original design.

#### BAUHAUS

Dessau, Germany Walter Gropius , Adolf Meyer

#### 1925-1926

Following on from his experience with the Fagus factory, Gropius again used the glass wall envelope to enclose the workshop wing. The differences compared to Fagus were that here he recessed the structure from the continuous envelope, removed the opaque strips and perfected the ventilation system using pulleys which made it easier to open the windows. Nevertheless, he kept the single-glazing while Ginzburg opted for double-glazing forced by the more extreme weather conditions in Moscow.

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### THE SINKING OF THE SOCIAL CONDENSER

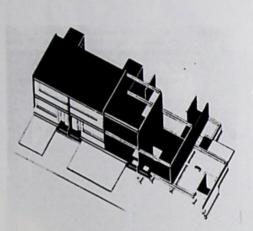
NARKOMFIN DOM-KOMMUNA Moisel Ginzburg, Ignaty Milinis



The north facade of the communal facilities block in the Narkomfin building was built as a large four-storey double-glazed wall. Ginzburg was fascinated by the new technical advances developed in the field of metal profiles. In issue 4 of SA magazine, published in 1926, there already appeared a commercial model, *Fenestra*, for a large opening with tilt and turn elements.

### Chapter 6 BUILDING SYSTEMS PIONEER PREFABRICATION

#### REFERENCES



#### DESSAU-TÖRTEN Dessau. Germany Walter Gropius

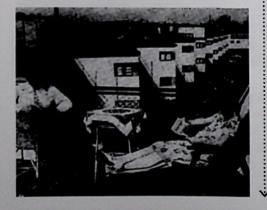
#### 1925-1928

Gropius' structure for the row houses for the new Törten district was made of reinforced concrete with light-weight concrete blocks manufactured on-site to which a compressed 5 cm layer was added. Gropius used clinker for the light-weight cement panels of the interior supporting walls.

PRAUNHEIM Frankfurt. Germany Ernst May

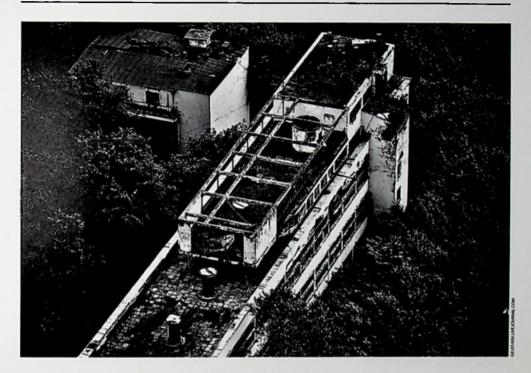
#### 1926-1928

May experimented with the flat roof solution on the row housing built in his city expansions in Frankfurt. The Praunheim terraced rooftops are precursors to the solution used for the Narkomfin building.



#### THE SINKING OF THE SOCIAL CONDENSER

NARKOMFIN DOM-KOMMUNA Moisei Ginzburg, Ignaty Milinis



This building was the first example of on-site prefabrication in the Soviet Union. The project engineer, Sergei Prokhorov, faced with a shortage of building materials such as steel and bricks, opted for a method which Walter Gropius had experimented with in Dessau-Törten.

The Narkomfin building has a structure of reinforced concrete columns and beams on concrete pad foundations. The free-standing columns are circular with a 35 cm diameter. The load-bearing columns built into the walls are rectangular with different sizes according to their locations and loads.

The concrete blocks of the outer walls and the floor slab were furnace-clinker bricks made on site. Elements such as beams, pillars, doors and windows were systematized. The flat roof follows the example used in the work implemented by Ernst May with thermal insulation installed using compressed peat boards and bitumen-based damp-proofing. Inside, materials filled with organic wood-cement type materials, which were lighter and provided better thermal insulation than ordinary concrete, were used for partition walls and floor coverings.<sup>12</sup>

12. www.narkomfin.ru/eng/restoration/progress.aspx

### **EPILOGUE** THE SINKING OF THE SOCIAL CONDENSER

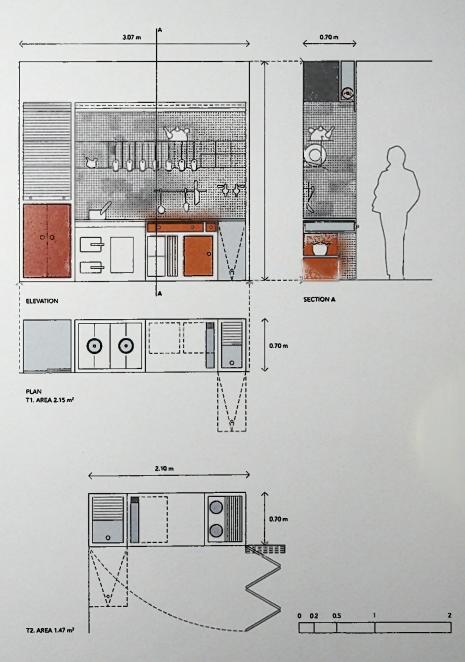
### **FAREWELL TO UTOPIA**

In 1930, a few months after the Narkomfin residential block had been completed, Party policy underwent a dramatic change. Lifestyle reform was no longer seen as a path towards Socialism and dwellings with individual kitchens were being planned again. From this point on, the home ceased to be a target for State policy. Although at that time it was believed that everything concerning efficiency and functions outside the home, such as laundry, education and leisure should be collectivized, furthermore it was also believed that the essence of the house, the home and as such food preparation, could not be organized according to guidelines issued by those in power, but that the individual should go back to taking charge of his or her own personal preferences.

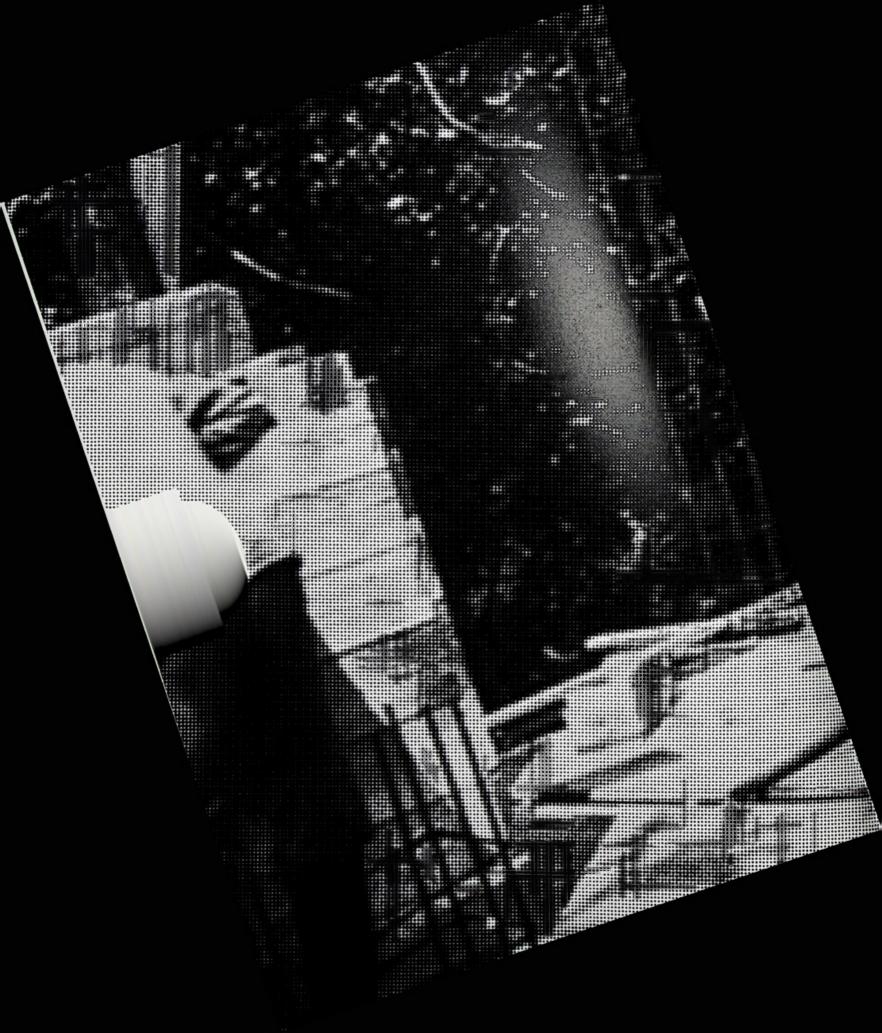
Due to the failure of the previous model, kitchens were fitted into the F cells, similar to those in the illustration on the right, and according to the designs drawn up by STROIKOM, in the niche planned by Ginzburg for this purpose.

Seeing the kitchen as an essential part of private life meant the acceptance of defeat in the transition undertaken away from bourgeois lifestyle and towards the new Socialist order. However, the censure and fall of the proposed residential model cannot be seen as a failure of the architectural prototype. The result was a response to one context and that context had changed. In the words of Ginzburg "the scale of the problems has changed as well as the organization of their solutions."<sup>13</sup>

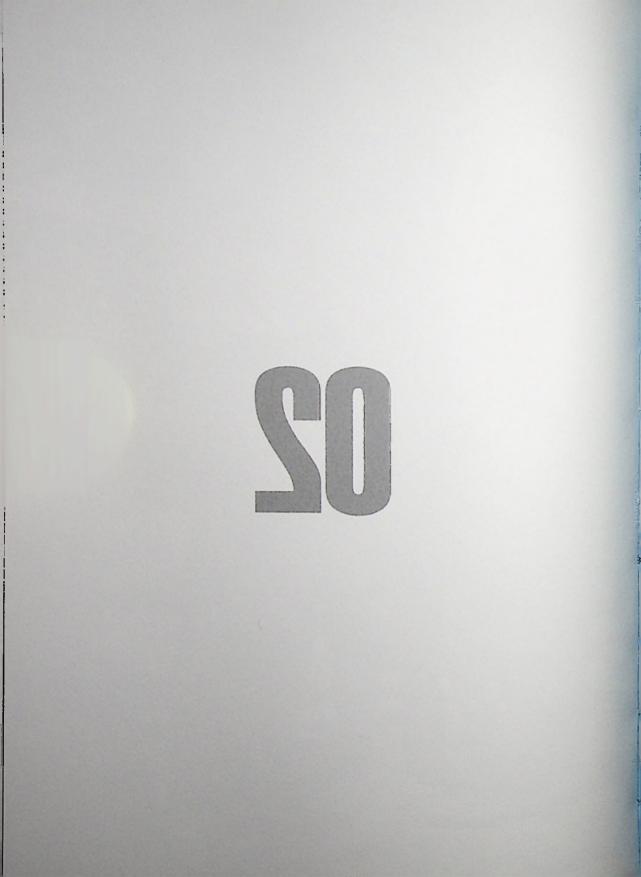
13. Victor Buchli. An Archaeology of Socialism. Berg, 2000, P. 67.

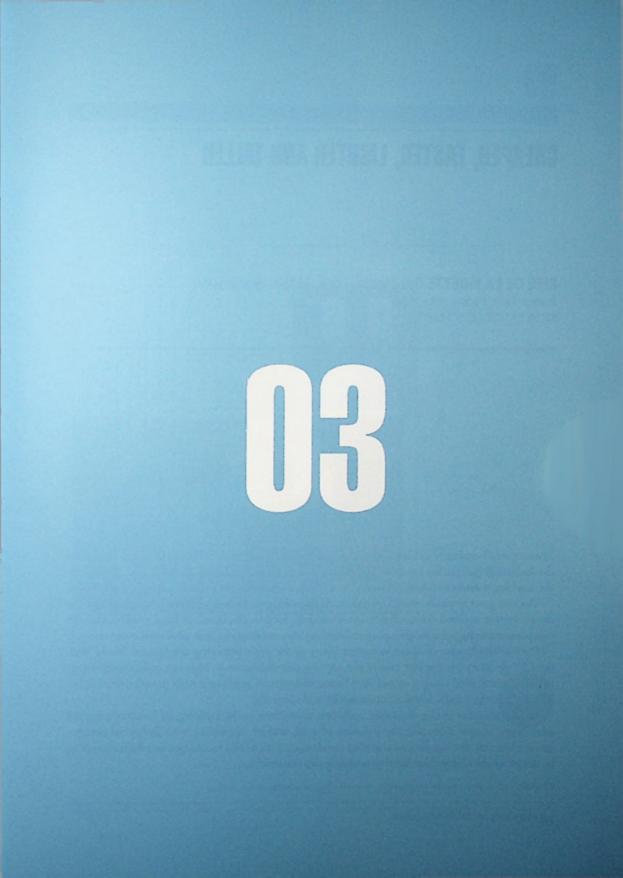


The economy of space produced from the rationalization of the traditional kitchen managed to fit the basic functions into 1.4 7m<sup>2</sup>.









# **CHEAPER, FASTER, LIGHTER AND TALLER**

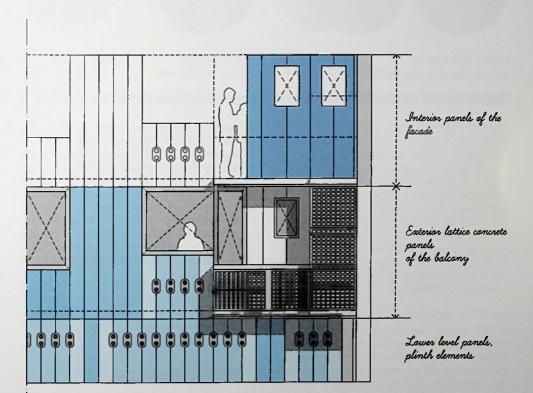
CITÉ DE LA MUETTE Beaudouin, Lods, Mopin, Bodiansky Drancy (Paris. France) 1931-1934 48°55'13.10"N / 2°27'19.74"E

Systematized housing is an objective which has emerged parallel to collective housing. Ever since the Industrial Revolution boosted city growth and demonstrated the need to provide shelter for the working masses, building as fast and as cheaply as possible has become a constant objective.

The two great methods which systematized housing process development is based on are: the closed system method (three-dimensional models, formwork-tunnel or large panels) and the component method also known as open building industrialization (sub-structural components).

Despite the heyday of systematization being in the years following the Second World War, the Cité de Muette is the first case of the use of industrialization in high-rise collective housing. It was implemented using a mixed steel framework system reinforced with pre-fabricated lightweight concrete panels, installed horizontally and vertically.

Its relevance lies in the architects' ambition to improve house-building by incorporating the advantages of new materials: the lightness of steel, and by assembling with industrial components. However, fire regulations curtailed the development of this mixed system which seemed to be the most suitable system for systematizing dry construction.



"Techniques are the very basis of the poetry." LE CORBUSIER, 1930.<sup>1</sup>



03

1. Le Corbusier. Précisions sur un état présent de l'architecture et de l'urbanisme. G. Crès, 1930. P. 67.

### **CHARACTERS**



LODS / BEAUDOUIN Architects, 1891-1978 / 1898-1983



After having finished his degree in 1923, Marcel Lods started work at Albert Beaudouin's studio and soon after formed a partnership with Beaudouin's nephew, Eugène. In 1933 he became a member of the CIAM. His interest in integral pre-fabricated architecture led him to propose large housing estates during the postwar period. He founded the GEAI *Groupement pour* l'Étude d'une Architecture Industrialisée (Study Group for Industrialized Architecture), with which he managed to build the Grand'Mare in Rouen, the project which came the closest to his ideal of transforming construction into assembly.

#### **EUGENE BEAUDOUIN**

In 1928, Eugène Beaudouin, son and nephew of architects and who was now working in partnership with Marcel Lods, inherited the studio and its client base from his uncle, Albert, with experience in standardized components. The young partnership kept alive the interest in this field of research. The collaborative work with Lods, Prouvé and Bodiansky brought about a series of pioneering pre-fabrication projects such as *L'École de Plein Aire* in Suresnes (1934-35), the BPLS (1935) easy assemble/dismantle steel-framed housing prototype, the Buc Aviation Club (1937) and the Clichy Maison du Peuple (1935-1939). In 1939, Eugène Beaudouin decided to bring his partnership with Lods to an end and focused his career on teaching and urbanism.



HENRI SELLIER Urban planner, 1883-1943

An active socialist, he gave up his political career to devote himself to the urban reform of the Paris slums. As head of the La Seine Department Office for Public Housing he commissioned over 13,000 dwellings between 1919 and 1939. His interest in systematized construction was to influence architects such as Beaudouin and Lods who worked on projects for the OPHDS. Sellier organized study trips to Germany, the Netherlands and Austria to compare and to learn about collective housing construction systems and also published articles on French works in this field.



VLADIMIR BODIANSKY Engineer, 1894-1966



JEAN PROUVÉ Craftsman and Engineer, 1901-1984

Born in the Ukraine, he emigrated to France in 1917 and worked as an engineer in the automotive and aerospace industries. Through aviation he got to know Marcel Lods, an expert aviator, who introduced him to the world of architecture. He took over the process of adapting the Mopin-patented system to the design for the Cité de la Muette and later joined the Lods-Beaudouin studio as an engineer. His in-depth knowledge of aircraft and car manufacturing led him to propose light-weight materials which had previously been unheard of in the construction industry.

In addition to his works carried out in the studio and in collaboration with Prouvé he also worked alongside Le Corbusier in the Marseille Unité d'Habitation and on the creation of the Atelier des Bâtisseurs, ATBAT. Jean Prouvé's interest in manufacturing light-weight components and the fact that he had a metal workshop, the Ateliers Jean Prouvé, led him to participate in the Lods and Beaudouin project, not merely as the metal framework designer but also as the off-site manufacturer of these components and the person in charge of the panel moulds which were built on-site.

Prouve's ability to find a solution for any requirement led to him designing sliding windows and shutters which retracted into the wall.

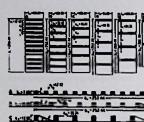
His collaborations with Lods, Beaudouin and Bodiansky continued and he also worked for Henri Sellier in the project for the Maison du Peuple in Clichy.





# Chapter 1 URBAN DESIGN REDUCING LAND USE AND CUTTING COSTS

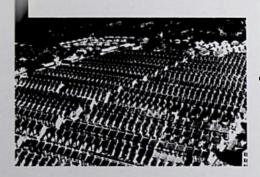
REFERENCES











#### LOW-RISE, MEDIUM-RISE OR HIGH-RISE CONSTRUCTION? Walter Gropius

#### 1927

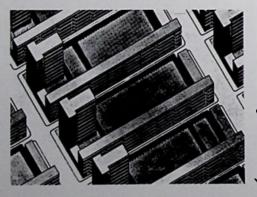
In his paper "Low, Mid- or High-rise Building?" at the CIAM (Brussels, 1930)<sup>2</sup> Gropius advocates the introduction of the high-rise building based on more rational land use, reduced construction and transport costs, without being detrimental to the basic necessities: ventilation, lighting and space.

2. Eric Mumford. The CIAM Discourse on Urbanism, 1928-1960. Cambridge, MA. 2000. P 49-58.

#### LOW-RISE, HIGH-DENSITY Unidentified location

#### Early 20th Century

Marcel Lods kept this unidentified photo in his professional archive. It was quite likely that he took it himself during a flight over Great Britain and in it he observes the terraced layout of low-cost housing using the system known as back-to-back.



VERTICAL CITY Ludwig Hilberseimer

#### 1927-1931-1935

Hiberseimer's proposal for a Vertical City, mixing different building heights and uses, had a greater influence on the design for la Muette than Le Corbusier's Contemporary City (1922).

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#### CHEAPER, FASTER, LIGHTER AND TALLER

#### CITÉ DE LA MUETTE Beaudouin, Lods, Mopin, Bodiansky

The Cité de la Muette was the first large experiment in systematized housing to be built in Europe. Until then, the large social housing projects which had been built in Germany and the Netherlands, as well as some isolated cases in Vienna and Moscow, had implemented neither high-rise construction nor complete systematized construction.

In France, the passing of the Loucheur Law in 1928 to promote affordable housing required both cost reductions and a step forward in trialling new building methods. In this favourable context, Marcel Lods and Eugène Beaudouin made their own attempt at systematized housing in the Cité du Champ des Oiseaux in Bagneux, South Paris, with the structural engineering carried out by Eugène Freyssinet.

In 1929, after having recently completed the project, they were commissioned by Henri Sellier, director of affordable housing for the Paris region, to design a large garden city in Drancy, in the east of the capital, and hence make an attempt to combat growing land occupation by single-family houses. On a plot comprising nearly 24.7 acres, the plan was to house approximately 4,000 residents, with densities which were completely urban yet maintaining 80% of the plot area free.

Lods and Beaudouin applied the full range of CIAM principles to the garden city model: mixing in high-rise and linear buildings, a green space surround, the facilities necessary to create a community spirit and industrialized construction. The view he had of Paris from his plane -a speck on the horizon-<sup>3</sup> led Lods to propose the ex-nihilo city as a solution to the fog- and pollution-filled metropolis.

In late 1934 when the towers and the linear blocks were finished, rising building costs meant the U-shaped building was not completed and this was abandoned without the interior partitioning.

The whole complex was planned to be given up for rental yet the lack of facilities and the poor communication links to central Paris, as well as defective installations meant it was not occupied. In 1939 it was used to house police officers and their families and in 1942 it became an internment camp for the Jewish population. Once World War II was over the Cité remained empty until it was destroyed in 1976 with the exception of the U-block which is at present still in use as a housing block and which has been renovated respecting the original modulation.

Originally conceived as a garden city, la Cité de la Muette with its five sixteen-storey tower blocks is considered to be the first grand ensemble in France.

3. Marcel Lods. "La crasse de Paris ou les hommes enfumés". L'Architecture d'aujourdhui 6, junio 1938 P. 82-89.

# Chapter 1 URBAN DESIGN REDUCING LAND USE AND CUTTING COSTS

"The tentacular city is a fact. Its advantages and disadvantages may be discussed, but it would be stupid to deny it and reckless to hinder its social role." HENRI SELLIER, 1920.4



Henri Sellier. Les Banlieues urbaines et la réorganisation administrative du département de la Seine.
 Ed. Marcel Rivière et Cie, coll. Les documents du socialisme, 1920.

Patio Block

U-Black PHASE 03



The Cité de la Muette was made up of 1,234 dwellings, of which only 1,033 were actually built. They were grouped in four different formalizations; five 16-storey towers, 10 linear 3- or 4-storey blocks which were laid out south of each tower block in a comb layout, a set of stepped blocks forming a sequence of courtyards to the north of the tower blocks and a large U-shaped block which is the only one left standing today and which was designed to house all the facilities around a large square. The ground floor of this block is a porticoed gallery for retail units. Vehicle transit crossed the comb-layout blocks through the south end, leaving the remainder of the plot space traffic free.

# Chapter 2 CONSTRUCTION SYSTEM ON-SITE PREFABRICATION

CITÉ DE LA MUETTE Beaudouin, Lods, Mopin, Bodiansky



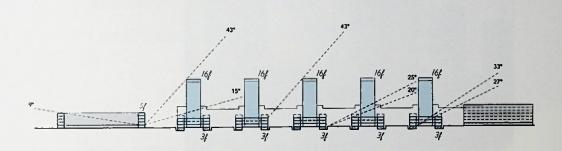
The layout of the buildings on the plot allowed for the concrete panels to be made on-site, taking advantage of the empty spaces between the blocks and meaning no transportation was required. The manufacturing facilities were set up on the north-west angle and the components were moved on rails. The buildings were erected following an order from west to east.

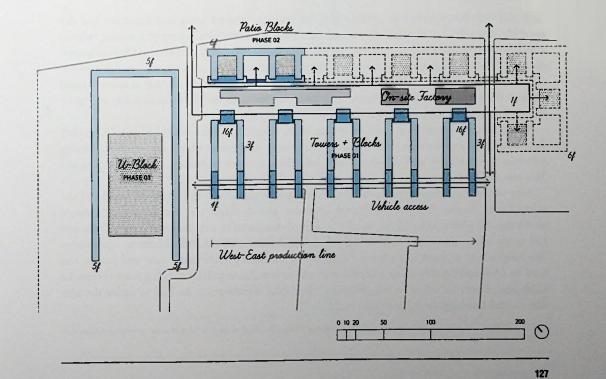
Local unskilled labourers were employed. The steel framework, designed by Vladimir Bodiansky, functioned as scaffolding, as an auxiliary structure onto which the panels were mounted.

The larger components were pre-fabricated in the on-site production facilities, with metal moulds designed by Jean Prouvé which permitted vibration to attain greater resistance. The light-weight components, such as the metal frames for the openings, which called for a more precise production process, were manufactured in Prouvé's own workshops.

### CHEAPER, FASTER, LIGHTER AND TALLER

#### SITE PLAN AND SECTION





1:4.000

### Chapter 2 CONSTRUCTION SYSTEM HYBRID STRUCTURE

CITÉ DE LA MUETTE Beaudouin, Lods, Mopin, Bodiansky



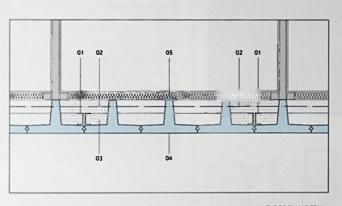
Lods and Beaudouin aimed to revolutionize the building process using prefabrication and dry assembly and with this in mind they based their work on a complex system of pre-study phases which involved engineers and architects working alongside manufacturers and builders. On completion of the design process they had a wide range of compatible components available which they could interchange at will. Replacing the concept of construction with that of assembly and likewise the trade of builder for that of assembler was for Lods and Beaudouin a way to ensure savings in terms of time, improvisation, errors and materials.

When they explained their building system in the magazine *Chantiers* (1/2 March 1933) they described the framework and the components: a light steel frame which was reinforced using columns and pre-fabricated concrete slabs and other, also pre-fabricated, facade components. This was a hybrid system yet the components were all closely inter-related.<sup>5</sup>

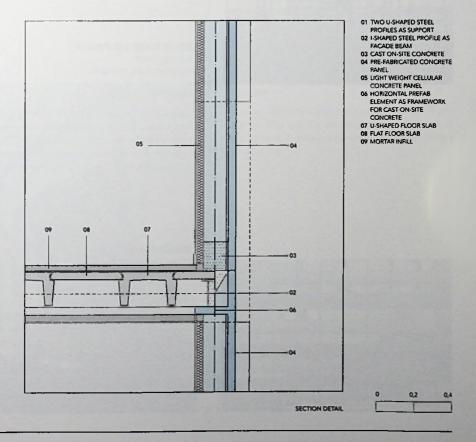
One of the basic requirements for the dry assembly process was to reduce the weight of the components. Eugène Mopin, the French engineer who designed the system used in Drancy, stated that his patent reduced the weight by a third compared to conventional construction and had many other advantages such as simplified foundations and less need for lifting equipment. The Mopin system, based on a hybrid structure of steel and prefabricated slabs and panels, was used by Lods and Beaudouin in several works and its benefits were later to bring interest from Le Corbusier. However, when he was designing the Unité d'Habitation, he had to shelve the idea due to steel shortages in the post-war years.

5. Robert Weddle. "Housing and Technological Reform in Inter-war France: The Case of the Cité de la Muette" Journal of Architectural Education Volume 54, 3, 2001.

#### DETAILED SECTIONS OF THE FACADE



FLOOR PLAN DETAIL



1:20

# Chapter 2 CONSTRUCTION SYSTEM HYBRID STRUCTURE

#### REFERENCES





SINGLE-FAMILY HOUSE Stuttgart. Germany Walter Gropius

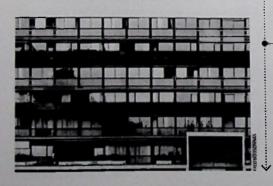
#### 1926

Walter Gropius's proposal for the Weissenhof experimental residential settlement comprised two single-family houses built with a framework of steel porticoes fixed to a concrete slab and enclosed with cork panels covered with mortar.

#### CITÉ DU CHAMP-DES-OISEAUX Bagneux. France Beaudouin, Lods, Freyssinet

#### 1930-1939

Lods and Beaudouin erected 972 dwellings using as little manual labour as possible by using the Mopin system for the first time. It was the first attempt at high-rise industrialized house-building and the direct precedent for the Cité de la Muette.

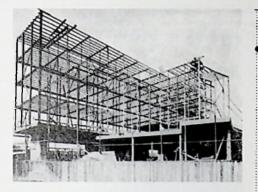


IMMEUBLE CLARTÉ Geneva. Switzerland Le Corbusier, Pierre Jeanneret

#### 1930-1932

Based on the suggestions of his client, the Swiss industrialist Edmond Wanner, Le Corbusier designed this rental housing building with a criterion of full standardization ranging from the steel framework to the facades. The developer was also both the builder and the component assembler. L'Immeuble Clarté is one of the milestones in Le Corbusierian research work on industrialization.

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SWISS PAVILION Paris. France Le Corbusier, Pierre Jeanneret

#### 1931-933

The Swiss Pavilion is the first fully industrial implementation in the work of Le Corbusier with all the components built off-site. The steel framework is from the same time as the Muette framework and is also assembled using dry partitions.

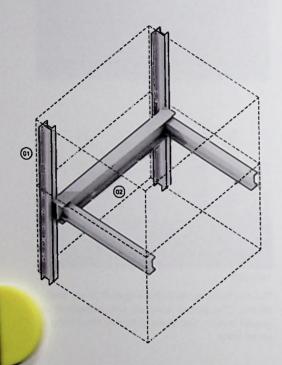
#### BERGPOLDER Rotterdam. The Netherlands J. Brinkman, Van der Vlugt, Van Tijen

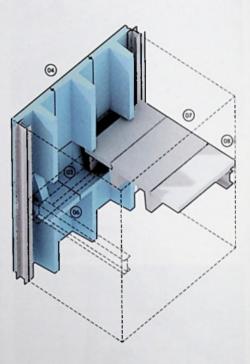
#### 1933-1937

The first high-rise social housing built in the Netherlands. The portico structure was assembled at ground level in nine-storey units and lifted using a gantry crane.

# Chapter 2 CONSTRUCTION SYSTEM HYBRID STRUCTURE

CITÉ DE LA MUETTE Beaudouin, Lods, Mopin, Bodiansky





Phase 01 MAIN STEEL STRUCTURE

As in the Cité du Champ-des-Oiseaux, at Drancy the main steel structure is made up of 140 I-shaped beams, and columns each comprising 60 U-shaped components. The joints between the different components are welded; the outer face of the beams onto the inner edge of the profiles which form the supports. This makes a light-weight frame which is reinforced when the concrete slabs and panels are fitted.

Phase 02 PREFABRICATED COMPONENT ASSEMBLY

These are laid out onto and supported by the main metal structure and later a series of T section panels are fixed to form the building facade. A like number of concrete components are dovetailed horizontally to form the floor slab.

#### CHEAPER, FASTER, LIGHTER AND TALLER

#### ASSEMBLY PROCESS

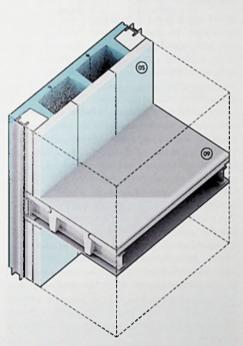
"Corbu' had heard of the Cité du Champ-des-Oiseaux. He wanted to see for himself. We arranged a visit. He arrived with his partner Pierre Jeanneret and the two of them spent some time looking over the finished work. On leaving, Le Corbusier summed it all up in words which I shall never forget:

-This is incredibly logical. It is pure common sense.

It is a miracle that you have done this..." MARCEL LODS. 1976.\*



03



01 TWO U-SHAPED STEEL PROFILES AS SUPPORT 02 I-SHAPED STEEL PROFILES AS SUPPORT 03 CAST ON-STE CONCRETE 04 PRE-FABRICATED CONCRETE PANEL 04 DRIZONTAL PREFAB ELEMENT AS FRAMEWORK FOR CAST ON-SITE CONCRETE 04 U-SHAPED FLOOR SLAB 08 FLAT FLOOR SLAB 09 MORTAR INFILL

Phase 03 STRENGTHENING CONCRETE AND FINISHES

Lastly, after a series of sandwich panel cladding has been installed, functioning as the necessary insulation components, light-weight concrete is poured on top which works together with the initial metal structure. The set of pre-fabricated components acts as lost formwork to obtain this mixed structure.

The exterior of the facade panels, made from vibrated concrete, contains white marble to alter the greyish colour of the cement. Inside, a second aerated concrete panel incorporates a wood panel finish. Between the two panels, a cavity allows for aeration and houses the guiderails for the sliding windows and the shutters.

# Chapter 2 CONSTRUCTION SYSTEM HYBRID STRUCTURE

#### REFERENCES







UNITÉ D'HABITATION Marseille. France Le Corbusier

#### 1946-1952

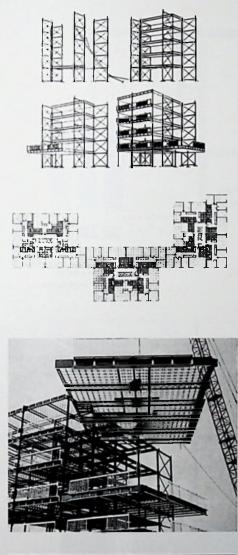
After the end of the Second World War, Le Corbusier brought his partnership with Pierre Jeanneret, who had been in charge of the technical aspects of the studio, to an end and he met Vladimir Bodiansky who had worked on the Cité de la Muette as an engineer. Bodiansky took Jeanneret's place and showed Le Corbusier the possibilities of the systematized construction process trialled in la Muette, in particular the Mopin system. His aim was to use this system in the Marseille Unité d'Habitation but the price of steel made him discard the idea and he used a structure of columns and concrete beams instead, a structure into which he inserts the housing units with their own steel framework, according to the principle which Le Corbusier termed "bottle rack." The advantage of these two independent structures was the inter-changeability of the housing units and the sound-proofing, as each unit had its own installations. Nevertheless, superimposing both structures, each one load-bearing, meant twice the usual building size and weight. Apart from Bodiansky, Jean Prouvé also participated in the construction process with his moulds for vibrated light-weight concrete panels and metal components for anchoring units together.

LAKE SHORE DRIVE Chicago. U.S.A. Mies van der Rohe

#### 1948-1951

Despite the fire regulations, Mies used a steel frame for the Lake Shore Drive apartments. The structure is protected on the main columns with a layer of concrete and clad with steel plate on the facade grid. There are concrete slabs and the glass wall envelope comprises pre-fabricated two-storey high 6.30 m wide components which are welded to the structure.







LA GRAND'MARE Rouen. France Lods, Depondt, Beauclair

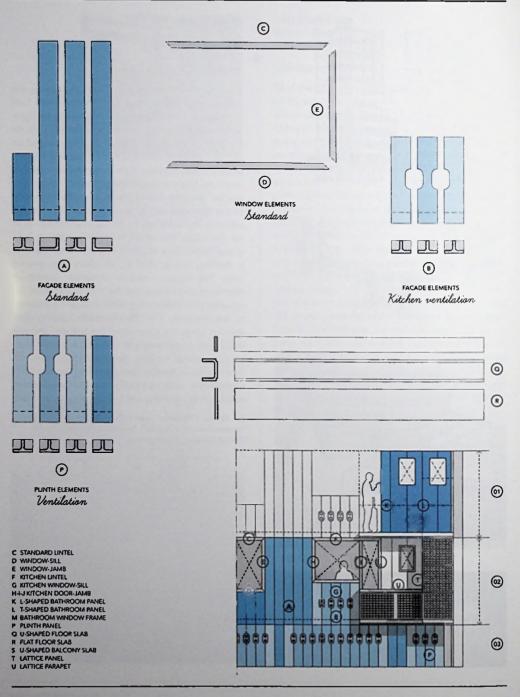
#### 1968-1970

The Grand'Mare housing complex represents the high point of Marcel Lods' aspirations in the field of industrialized construction. The search for lightweight pre-fabricated components leads him to try out a three-dimensional steel structure, based on that conceived by Eero Saarinen for General Motors, which he uses in place of the conventional concrete structure. This is a spatial cavity, finished using lightweight concrete components on neoprene pads as the floor and vermiculite boards for the ceiling," allowing the installations to be channelled, both for the upper and lower floors and enabling individual HVAC. The structure has the dimensions of a dwelling and is lifted in one piece from ground level. The facade envelope comprises aluminium double-glazed frames and the interior partitions are installed after the building work and can be adapted to requirements. The 500 affordable housing units erected using this system had the financial and political support necessary to spread the system over to other social housing developments, based on cost reduction, flexible floor plans and fast-assembly components. Lods had finally managed to transform building into assembly and builders into assemblers.

 Abalos, J. Herreros. "Implicaciones constructivas de la mecanización del ambiente". Tecnología y Arquitectura 10, 1990. P. 10-25.

# Chapter 3 ENVELOPE PREFAB COMPONENTS

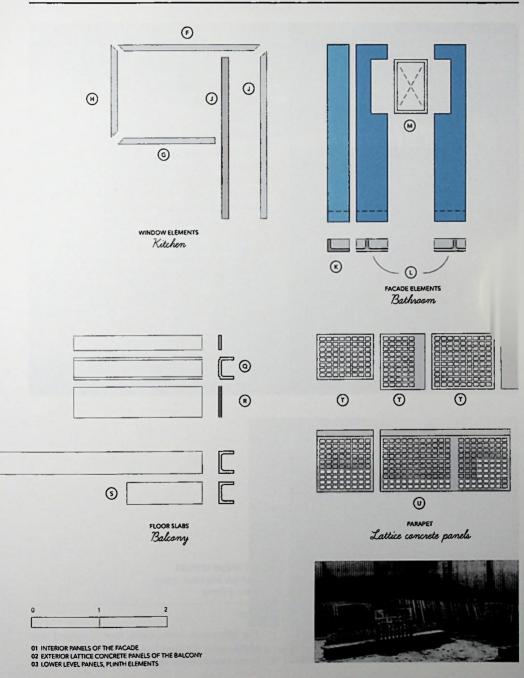
#### CITÉ DE LA MUETTE Beaudouin, Lods, Mopin, Bodiansky



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### CHEAPER, FASTER, LIGHTER AND TALLER

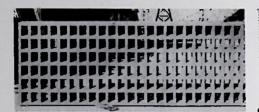
FACADE ELEMENTS



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# Chapter 3 ENVELOPE PREFAB COMPONENTS

REFERENCES





UNITÉ D'HABITATION Marseille. France Le Corbusier

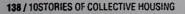
### 1946-1952

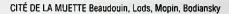
The Unité d'Habitation parapets were made on-site from vibrated concrete, following a similar process to that used in La Muette. The experience which Jean Prouvé and Vladimir Bodiansky had acquired from working on the Lods and Beaudouin project came to good use in order to perfect the component production in the first Unité d'Habitation in Marseille. The system was later repeated in the rest of the buildings (bottom photo, Unité Berlin) as well as in the Sainte-Mairie convent, La Tourette (1956-1960).

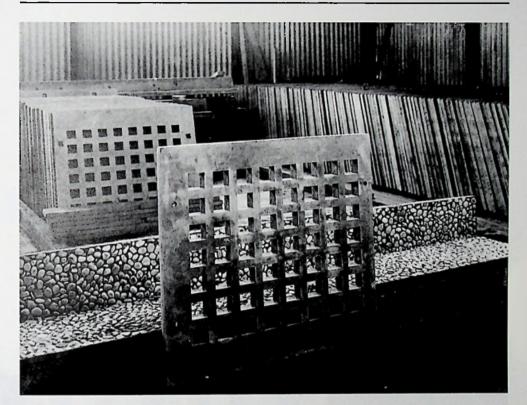


### 2010

The latticework components form a second skin which covers the West facade. The modules are different sizes both horizontally and vertically.









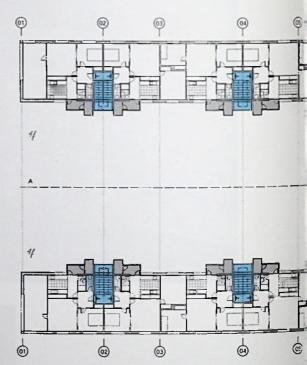
Detail of the light-weight concrete components which were used to make the latticework of the balconies of the Cité de la Muette, both for the tower blocks and the comb-layout buildings.

# Chapter 4 FLOOR PLANTS TOWERS, BARS

CITÉ DE LA MUETTE Beaudouin, Lods, Mopin, Bodiansky



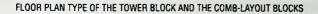


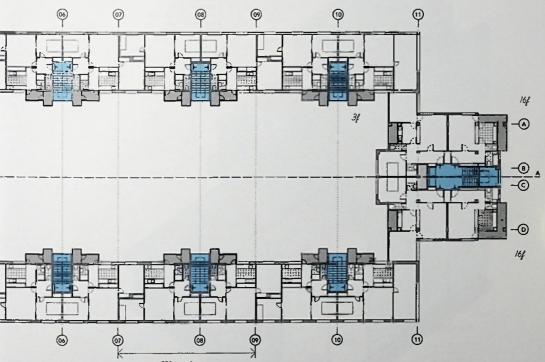


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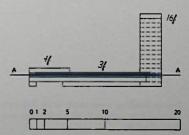
The linear blocks comprised family housing units while the tower blocks contained four one-bedroom apartments on each floor. The staircases are fully pre-fabricated components. The concrete floor slabs are visible in the stair landings. In 2001, U-Block was listed as part of French architectural heritage.

### CHEAPER, FASTER, LIGHTER AND TALLER





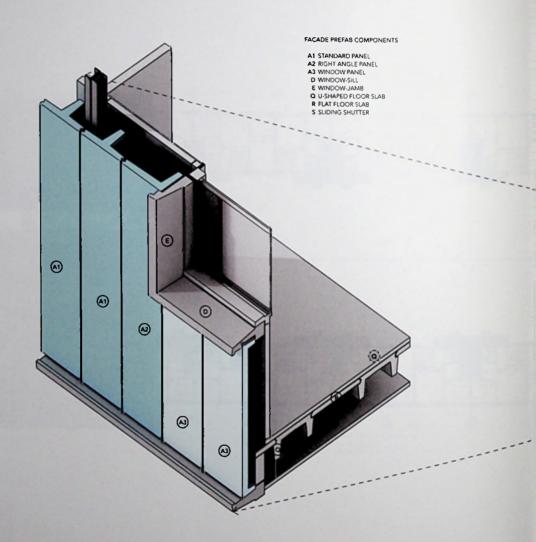
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# Chapter 5 DWELLINGS LOW COST COMFORT

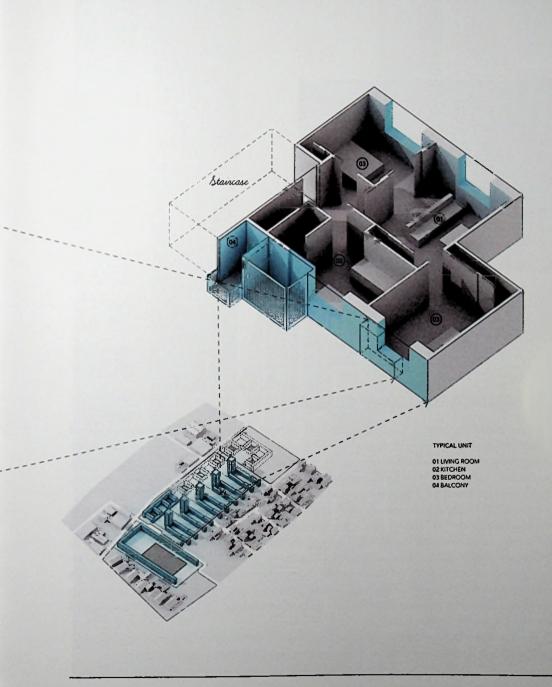
CITÉ DE LA MUETTE Beaudouin, Lods, Mopin, Bodiansky



Interior finishing: wood panels in the bedrooms or aluminium panels in the kitchens, bathrooms and entrances. The main interest of the architects was to fit all the dwellings with installations which provided comfort such as central heating or an automatic waste disposal system.

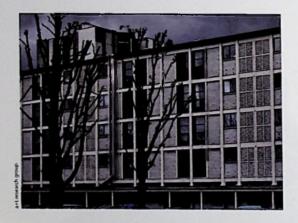
### CHEAPER, FASTER, LIGHTER AND TALLER

### COMB-LAYOUT BLOCK HOUSING TYPE



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### EPILOGUE CHEAPER, FASTER, LIGHTER AND TALLER

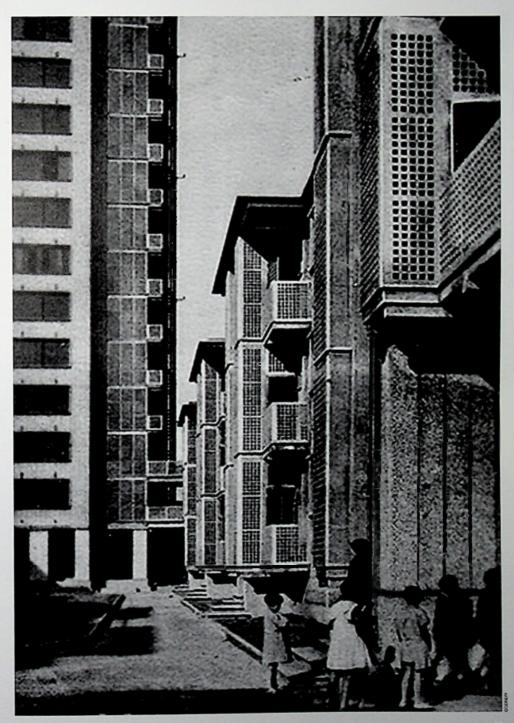


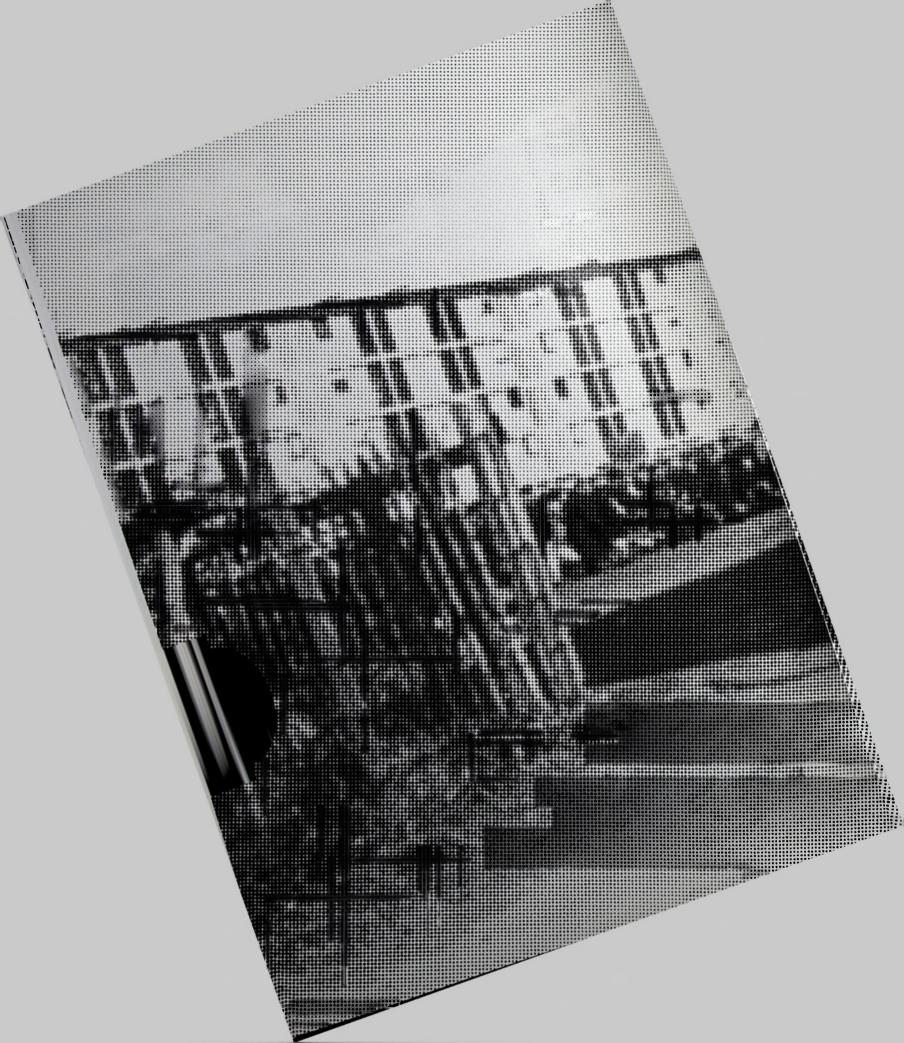
### FROM OBLIVION TO HERITAGE-BUILDING

Since the end of the Second World War, the Cité de la Muette has only ever been remembered as an internment camp. Most of the 76,000 French Jews, deported to extermination camps, left Drancy between 1942 and 1944. After 1976, when all the buildings except the U-shaped one were demolished, La Muette seemed destined to architectural oblivion, with those responsible for French heritage giving their express refusal to even consider its being protected.

From 1999 on, the municipal authorities permitted the metal frames designed by Jean Prouvé to be replaced with PVC frames which brought concern from some professionals who warned of the impending deterioration of the facades in the whole complex. In 2001, the Ministry of Culture decided to protect six construction components as part of French architectural heritage. These components are the facades and all their parts, the roofs, the staircase, as well as the basement and the courtyard. In the case of these last two it was for reasons related to their use as an internment camp. From them on, the renovation work on the frames was implemented according to Prouvé's original designs.

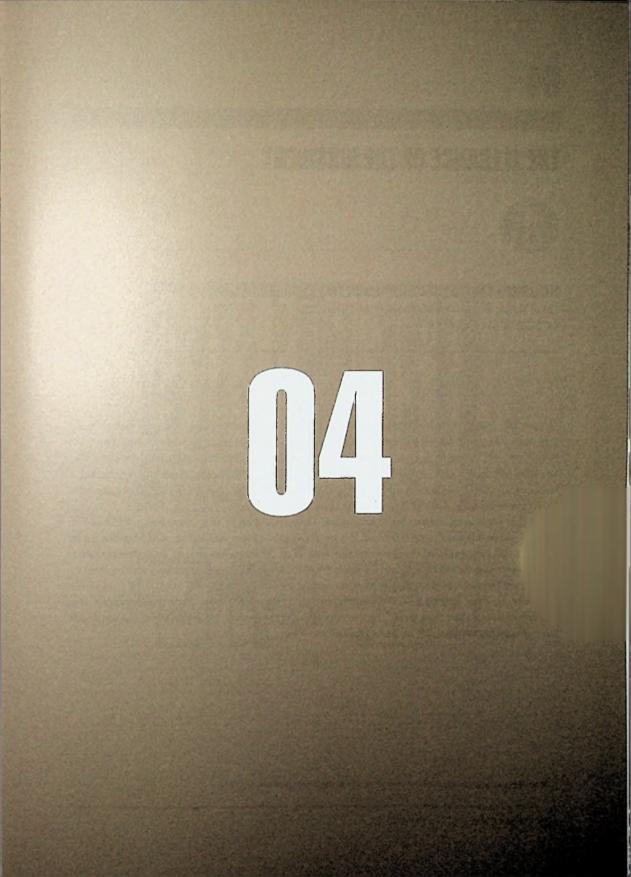
The qualities which made this complex a precursor of industrialized construction were overshadowed by one of the unfortunate twists and turns which history sometimes takes.











### HOUSING FOR BORSALINO EMPLOYEES Ignazio Gardella

Corso Teresio Borsalino (Alessandria-Italy) 1948-1952 44°54'25.28"N / 8°36'55.00"E

In later life, Ignazio Gardella stated that he no longer believed in the relationship between reason and beauty but that he still believed in the relationship between beauty and truth and that truth is not attained by rational means alone.<sup>1</sup> He maintained his scepticism regarding the rationalist standard -all that is useful is beautiful- and preferred to believe the opposite: all that is beautiful is useful. This clash of opinions is the key to his work and explains his position in the Italian panorama in the pre-war and in dialectical post-war years.

At that time of manifestos and movements, while unbroken loyalties were being declared and politics and trends were being redefined, in a small city in the Piamonte region, world-famous for its hats, Gardella was building dwellings for the workers of the Borsalino factory. A modest construction project with 32 dwellings, with a familiar feel -ceramic brickwork, wooden shutters, eaves to protect the facade-... Houses similar to many others.

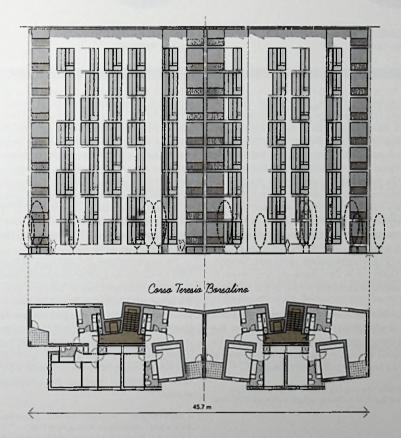
However, these houses were annoyingly arrogant. They refused to show their structure and would not reveal their floor plan. They were overly elegant in their modesty, displaying too much unnecessary beauty and this was inexcusable.

. Antonio Monestiroli. "Eleganza viene da eligere, ovvero da scegliere." Casabella 736, 2005.

"I moved away from dogmatic rationalism as I have always believed that there was more to architecture, something difficult to achieve with rationalism." IGNAZIO GARDELLA, 1995.<sup>2</sup>



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2. Antonio Monestiroli. Op. cit.

### **CHARACTERS**



IGNAZIO GARDELLA Architect, 1905-1999



ERNESTO NATHAN ROGERS Architect, 1909-1969

Born into a family of four generations of architects, Ignazio Gardella chose to study Engineering. In the 1930s, he was a member of the Milanese group led by Terragni and despite sharing the spirit of Modernism which was at the heart of Italian Rationalism, this did not stop him from building a brickwork lattice influenced by the Lombardy tradition in the *Dispen*sario Antitubercolare (1936-1938). This was his stance from the very start: anti-dogmatic and open.

After having worked with Franco Albini in the war years, he completed his engineering training along with that of architect in 1949. From that point on and right up to 1975 he participated, along with Samoná, Albini, De Carlo, Tafuri, Zevi, Benevolo and others, in the free teaching experiment known as the Scuola di Venezia.

He was active in the CIAM congresses for 26 years, as well as the internal debates emerging from the magazines *Domus* and *Casabella*. When he was 81 he stated: "I don't believe in manifestos or movements claiming their hegemony over architecture."<sup>3</sup>

3. Ignazio Gardella. The Last Fifty Years of Italian Architecture Reflected in the Eye of an Architect. Lecture at Harvard GSD, 1986. The circle around Ernesto Nathan Rogers, firstly in articles for the magazine *Domus* and later in *Casabella-continuità*, attempted to relocate Modernism within an uninterrupted historical line -beginning with the Renaissance and lasting right up to the 20<sup>th</sup> Century-where the modern was part of tradition and independent from ideology. The *Case Borsalino* was one of the projects with which Ernesto N. Rogers kicked off a new era for Casabella (199, 1953). This was to promote the reinterpretation of Modernism, historic awareness and the need for a third way between the modern and the vernacular.

He was a member of CIAM from 1936 onwards. In 1959 he stirred up a bitter controversy from the pages of *Casabella* with Reyner Banham, over an article the latter published in *Architectural Review* where he called the Italian post-war architecture Neoliberty,<sup>4</sup> clearly alluding to its break with Modernism of which, in his view, the works built by the Gardella generation in the post-war period were clear proof. Rogers defended the young Milanese architects' right to evolve in an article titled "Reply to the custodian of refrigerators."<sup>5</sup>

 Reyner Banham. "Neoliberty. The Italian Retreat from Modern Architecture". Architectural Review, April 1959.
 Ernesto N. Rogers. "L'evoluzione dell'Architettura. Risposta al custo dei frigidaires." Casabella-Continuità 230, 1959.



Following the Second World War, in Italy the principles of the CIAM, -the so far unquestionable *tabula rasa* were confronted with historical awareness and moreover the defeat of Fascism. The Italian version of Modernism, known as Rationalism, had become stigmatized for its close relationship with power during the inter-war period. The defeat of Fascism and the victory of the resistance movement obliged its heirs to incorporate other references, with a more individual approach to the project, paying more attention to the context and the vernacular, making it less monumental and more routine.

In the State-sponsored social housing blocks of the early post-war years, different approaches can be observed, (Albini, Ridolfi, Libera, BBPR) which can be differentiated according to the proportion of Rationalism, history or context they incorporate and which can be broadly defined as Neo-realist. Ignazio Gardella worked with the group of Milanese architects on several public housing projects where popular elements were generously incorporated, but, when he was given the opportunity to carry out a social housing project on his own, he was not willing to settle for being Neo-realist. It was in this panorama, where exerting freedom of choice was to criticize the status quo, that he designed the project, the *Case per Impiegati della Borsalino*, on the outskirts of the city, alongside industrial units, open to farm land and sitting opposite the blocks of the old town. This work was commissioned by the benevolent enlightened hand of the family, which had for several generations been funding numerous city works, such as the aforementioned *Dispensario Antitubercolare* and the Leatherwork Building, both works by Gardella.





### Chapter / DISSIDENCE 1: ATMOSPHERE VERSUS MACHINE

### REFERENCES







INA TOWERS Rome. Italy Mario Ridolfi

### 1951

Following the publication of the Borsalino Housing in the first issue of Casabella-Continuità, Giancarlo de Carlo compared them to Ridolfi's work in the Viale Etiopia, a group of towers where the structural grid becomes the most expressive element in the project. Gardella stood out for "his will to choose, to isolate the essential nucleus of reality," Rodolfi for "an anti-formal commitment which surpasses complacent solutions."<sup>6</sup>

6. Casabella-Continuità 199, 1953.

ZATTERE HOUSING Giudecca, Venice. Italy Ignazio Gardella

#### 1953-1958

This project manages to achieve Gardella's constant aim to transfer the urban significance within housing scheme onto the exterior. Unlike the Modern architects, concerned with designing housing with improved living conditions, Gardella sought to design a building which would improve the environment into which it was inserted and which would contribute to the liveability of the city.

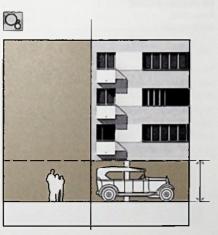
EX-JUNGHANS HOUSING Giudecca, Venice. Italy Cino Zucchi

### 1997-2002

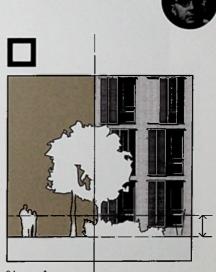
The connection between this project and the Borsalino Housing -or with the neighbouring Fondamenta delle Zattere housing- does not lie in the layout or the elements used but in the capacity to build a contemporary work based on traditional materials and techniques, thus adding atmosphere to the atmosphere.

#### HOUSING FOR BORSALINO EMPLOYEES Ignazio Gardella

"Setting means familiarizing, avoiding surprises, bringing about that when a building emerges in one location and with one form, one not only perceives but also feels that it was there before or that something preceded it and that this somehow survives in it." GIULIO CARLO ARGAN, 1959.\*



Rational



Vernacular

As part of his independent approach, Gardella chooses for the Borsalino Housing a language half-way between the vernacular and the rational, in his aim to create an atmosphere. The concept of atmosphere has been one of the most recurring themes in Italian architecture. The group linked to *Casabella-Continuitá* adopted this theme, importing it from Husserl's phenomenology, to define the scope of the relationship between the subject and its surroundings. E. N. Rogers himself coined the term pre-existing atmospheres.<sup>7</sup> Giulio Carlo Argan stated that the theme of atmosphere is the theme of habitat, seen in its broadest sense,<sup>8</sup> with its economic and programmatic aspects.

The Modernist machine vision was stamped onto this building which is rooted to the ground, where the expressiveness is not structural but atmospheric. Concealing the structure was seen as a deviation by critics. Nonetheless, the structure is legible from the roof down to the ground due to the terraces and the height of the openings.

E.N. Rogers. "Le preesistenze ambientali e i terni pratici contemporanei." Casabella-Continuitá 204, 1955.
 Giulio Carlo Argan. "Ignazio Gardella". Edizioni di Comunità, 1959.

# Chapter 2 DISSIDENCE 2: GRAVITY VERSUS PILOTIS

### REFERENCES



VIA MESSINA HOUSING Roma. Italia Adalberto Libera

### 1940-1941

This was Libera's vision for affordable housing in the pre-war years: the orthodox principles of rational architecture at the service of housing as simple and modest as necessary yet managing to ensure human dignity for all social classes. He participated, along with Gio Ponti, in drafting a Charter for the Home, a programme reviewing rationalist housing.



TUSCOLANO III HOUSING Rome. Italy Adalberto Libera

### 1950-1954

After a discrete retreat during the war and the early post-war years, Libera returns to building large social housing schemes and, following a trip to Morocco, with a stop-off in Marseille, he designs the Tuscolano III Horizontal Housing Unit which aside from the courtyard houses also includes this building containing minimal dwellings for single people. Links to the prevailing trends are maintained. The fine columns from the previous decade are replaced with structural porticoes, far more expressionist than that reflected by their load-bearing role.

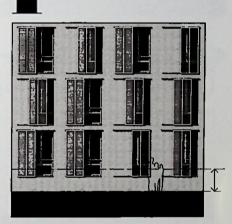
The roof, as in the case of the Borsalino Housing, now reflects a certain distancing from Modernism.

#### HOUSING FOR BORSALINO EMPLOYEES Ignazio Gardella

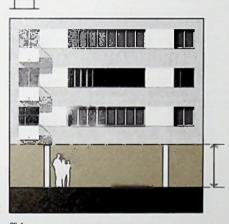
"No choice can be objective, no one can come out of himself, no one can -as Paul Valéry says- stand on his own shoulders." IGNAZIO GARDELLA, 1986.9.



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Pilotis

The volume rises solidly from the ground, it does not stand on *pilotis*. It sits firmly on the edge of the plot, willing to conform and to play a role in street and city life. Here, like in most Gardella projects, it is impossible to break the building down into parts, despite the fact that its layout follows an order, like classic buildings. However, this is an order which is not based on dogma but on freedom of choice.

So, where do reason, truth and beauty lie? How is it possible to attain beauty without letting truth fully express itself? In architecture, Truth is a concern which is born with Gothic builders and goes through history finding disciples to defend it in each era, associating it with tectonic integrity, with structural rationalism. Concealing the base of the structure, adopting a form which was not dominated by the construction principle was, at the time, equivalent to laying oneself open to criticism.

9. Ignazio Gardella. Op. cit.



# Chapter 2 DISSIDENCE 3: VOLUME VERSUS FLOOR PLAN

### REFERENCES





MANGIAGALLI SOCIAL HOUSING Milan. Italy Albini, Gardella

### 1950-52

This joint project with Franco Albini was conceived shortly after the Alessandria housing scheme. Some of the features of the layout, such as the size and pattern of the openings, the projection of the eaves, the folds in the volumes and the stainwell block latticework, afford it a remarkable similarity.





FRATELLI DI DIO Sesto San Giovanni. Italy Giancarlo De Carlo

### 1950-1953

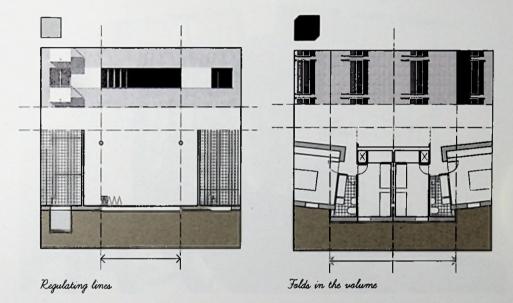
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Compared to the floor plan of the Borsalino Housing, the floor plan of this block by De Carlo, in his more rationalist period, displays itself more clearly on the facade. The layout of the rooms corresponds to the modulation of the structure which also dominates both elevations.

### HOUSING FOR BORSALINO EMPLOYEES Ignazio Gardella

"When I work, I am not free to do what I want unless I betray the nature of what I am designing." IGNAZIO GARDELLA, 1995."





Gardella never believed that Le Corbusier could take three months to design a floor plan and three hours to design the elevations as he was certain that no leading Modern architect had ever literally followed the standard motto that Function follows Form.<sup>11</sup>

In this project, the design for the floor plan is independent of the structure and depends on the complete set of project elements such that it contracts or dilates to the benefit of the volume, without any negative effects on the function. The rooms maintain their geometric regularity and are added with a variable alignment such that the folds in the complete volume do not interfere with the liveability of each room.<sup>12</sup> Only the service spaces adapt to the minor deformations required by the different angles of the plan, designed to let in daylight and maintain the views.

10. Antonio Monestiroli. Op. cit.

11. Ignazio Gardella, Op. cit.

12. Angelo Lorenzi. "Casa Borsalino" in Ignazio Gardella Architettura. Electa, 1998.

### Chapter 2 DISSIDENCE 3: VOLUME VERSUS FLOOR PLAN

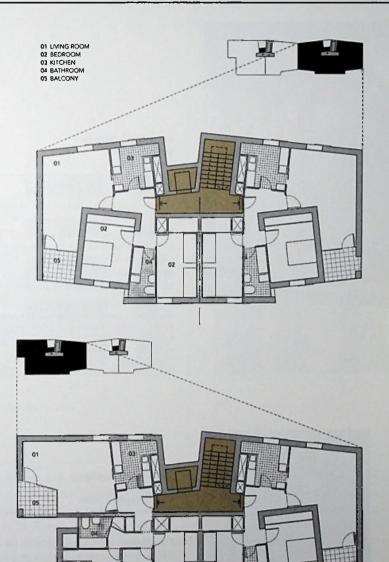
HOUSING FOR BORSALINO EMPLOYEES Ignazio Gardella



The floor plan comprises four dwellings, each one containing two bedrooms, except the flat located on the west side, which has three. The aim of the project is to open up all the rooms to the south side, while the north side is reserved for elevator and staircases, kitchens and an opening which brings cross-ventilation to the living room. The compromise between providing natural ventilation for all the rooms and using a single floor to ceiling opening for the facade layout, leads it to break up the wall in order to integrate ventilation for the bathrooms into the folds of the south facade. The movement in the facade does not affect the geometric regularity of the rooms.

The interiors of the Borsalino Housing were used as models for average Italian dwellings in the magazine *Domus* to promote, using this real-life stage set, contemporary household furniture. The proportions of the spaces were considered to be the most suitable proportions to represent the purchasing power of the average Italian.

### TYPICAL FLOOR PLAN



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# Chapter 3 DISSIDENCE 4: VERTICAL VERSUS HORIZONTAL WINDOW

### REFERENCES

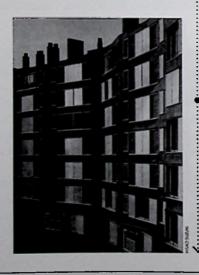


### BARCELONETA HOUSING Barcelona. Spain Coderch, Valls

#### 1952-1954

The influence of the Borsalino houses on those built by José Antonio Coderch in the Barceloneta has been mentioned by several writers.<sup>12</sup> Nonetheless, the real importance was that through Coderch, Gardella influenced the opening up of an alternative route in Catalonian architecture in which there was space to review the modern and the vernacular.

 Kenneth Frampton "Homenaje a Coderch" in 2G 33, 2005 Also stated by Blanca Lleó in "Aprendiendo de un humanista moderno" in Ignazio Gardella. 1905-1999. Catalogue of the exhibition. Madrid, 2000.



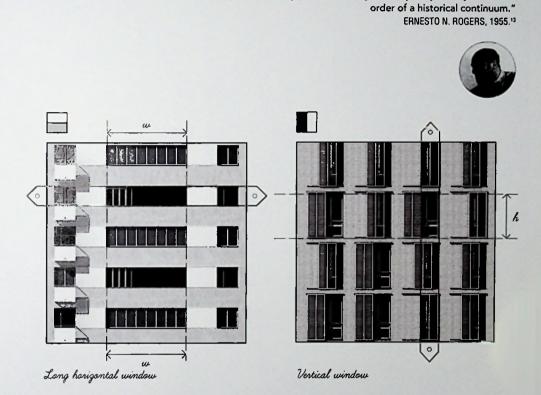
OLYMPIC VILLAGE HOUSING Barcelona. Spain Martínez Lapeña & Torres

#### 1991

The Olympic Village development best reflects the influence of the work of Gardella on the work of José Antonio Martínez Lapeña and Elías Torres, as seen in the use of brickwork, the verticality of the openings, the solid base, the inflections of the wall, the massiveness afforded by the blind dividing walls and the use of sliding shutters.

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### HOUSING FOR BORSALINO EMPLOYEES Ignazio Gardella



"Being modern simply means feeling contemporary history within the

It is a well-known fact that the shape of the windows drew a line between the advocates and detractors of Modernism following the controversy between Auguste Perret and Le Corbusier in 1923.<sup>14</sup> The vertical component is essential to the tradition, as is the circular component, according to E. N. Rogers,<sup>15</sup> so the decision by Gardella to provide daylight using vertical openings from floor to ceiling was a clear statement to distance himself from the International Style in favour of an atmospheric influence.

The facade layout is based on a rhythm between the opening module and the wall and becomes more dynamic through the use of sliding shutters which act as a diaphragm. The opening which pierces the envelope from floor to ceiling tacitly respects the structural framework.

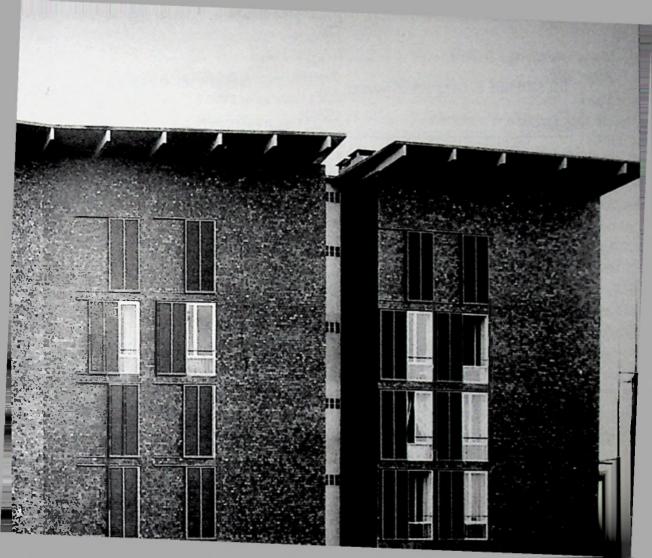
13. E. N. Rogers. "Le preesistenze ambientali e i temi pratici contemporanei" in Casabella 204, 1955.

14. Bruno Reichlin. "For and against the long window. The Perret-Le Corbusier controversy" in Constructing Architecture: Materials, Processes, Structures, a Handbook. Birkäuser, 2005. P. 175-183.

15. E. N. Rogers. Esperienza dell'architettura. Giulio Einaudi Editore, 1958.

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## Chapter 3 DISSIDENCE 5: EAVES VERSUS PARAPET

REFERENCES





### 1951-1954

For one to understand the rift caused by the Borsalino Housing roof, one only has to compare it with the roofs used in the town of La Martella, a new town in a completely rural setting which was criticized in its time for sailing too close to the vernacular and which had not actually dared to incorporate the eaves, an essential element in rural constructions.

STONE HOUSE Tavole. Italy Herzog & de Meuron

#### 1982-1988

This project for a rural environment belongs to a stage when the architects were in a transition period moving from modern tradition to their own perception of the world. They reflect the structure in the floor plan and the elevations but the volume rises up as a solid from the ground level. The local stone is levelled with the concrete on the facade. They use the inverted roof with reduced eaves on three sides, letting it float over the long window, altering the rustic nature of the building.

### BRUNNER HOUSE

Langnau am Albis. Switzerland Burkhalter & Sumi

#### 1987

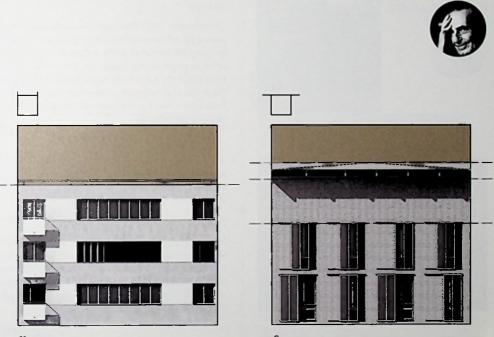
If in the Borsalino Housing concrete had taken the place which timber had once occupied in the eaves, in this project by Burkhalter & Sumi, built in a workshop completely off-site, timber returns to the roof structure.



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#### HOUSING FOR BORSALINO EMPLOYEES Ignazio Gardella

"The classicism I refer to is like the continuous and constant will to discover and order, a measure, a modulation that will make the architectural organism clearly perceptible under the cruel light of the Mediterranean sun." IGNAZIO GARDELLA, 1986.<sup>16</sup>



Parapet

Eaves

The roof slab is flat and is supported by orthogonal beams on the facades which leaves a space for ventilation. The decision to shape the roof and extend it out in a slim ample cornice, with the beams becoming corbels and overrunning the edges of the facades, is in itself a declaration of independence which granted the roof the importance lacking in the base.

It was clear that the dwellings belonged to a time continuum, which Gardella defined as Classicism.<sup>16</sup>

16. Ignazio Gardella. Op. cit.

## Chapter 3 DISSIDENCE 6: CERAMIC VERSUS CONCRETE

### REFERENCES





MAISONS JAOUL Neuilly-Sur-Seine. France Le Corbusier

#### 1954-1956

Conceived in 1937, they were not built until almost twenty years later and they are a sign of Le Corbusier bringing his period of white architecture to a close, as far as single-family houses are concerned. Dating from about the same time as the Borsalino building, the traditional materials confront concrete with the force of the raw material, with no concession to the picturesque.

HAM COMMON HOUSING Richmond. United Kingdom Stirling, Gowan

#### 1955-1958

Just as Gardella had clearly distanced himself from Modernism following the Borsalino houses, Stirling-Gowan did the same with the Ham Common dwellings. This was their response to white concrete architecture, in this case based on the British tradition of brickwork construction.

PALLARS HOUSING Barcelona. Spain MBM Arguitectes

### 1958-1959

The use of brickwork on the facade in this case was merely due to adapting to the construction possibilities on offer in this country, where industrialized processes made construction work more expensive. In this example, knowledge of traditional techniques offers the possibility to build a wall which conceals the structure and is broken up in the staircases.

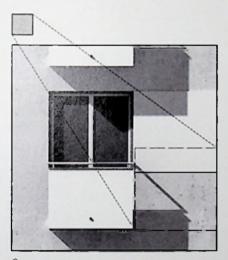
170 / 10STORIES OF COLLECTIVE HOUSING

#### HOUSING FOR BORSALINO EMPLOYEES Ignazio Gardella

"Its stylistic sources go well beyond the wild Liberty of, say, d'Aronco, and draw clearly from the Wagnerschule in Vienna, and even from the Amsterdam school (particularly from de Klerk) and the Glasgow school. From these last two sources come, presumably, the preoccupation with brick, and a tendency to square off the profiles and silhouettes of projections and roof-slabs." REYNER BANHAM, 1959."



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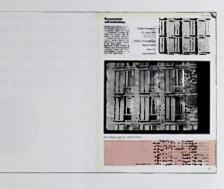
Concrete

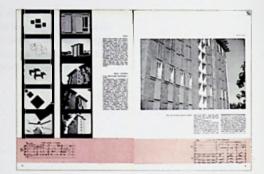
Brick

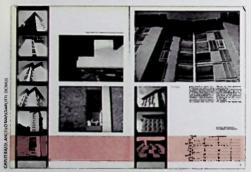
Clinker brick, which had been used by the Arts & Crafts movement, one of the styles most cen sured by Modernism, was chosen as the material to clad the walls, in a very clear gesture to place a continuous skin in front of the envelope. With the passage of time, it is difficult to perceive the rupture which such a decision meant. It is necessary to return to the works of the time to be able to realize the complete predominance of white architecture in collective housing from the 1930s on and to calculate the effects on this panorama spreading out over Europe of the vision of a volume, which despite its evidently being part of contemporary architecture, had decided to use a traditional element such as brickwork to modulate the facade.

17. Reyner Banham. Op. cit.

### EPILOGUE THE ELEGANCE OF THE DISSIDENT







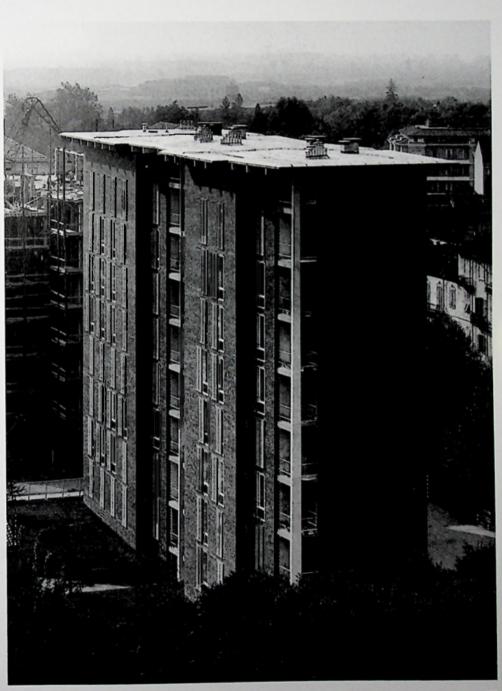
### A HOUSE LIKE MANY OTHERS

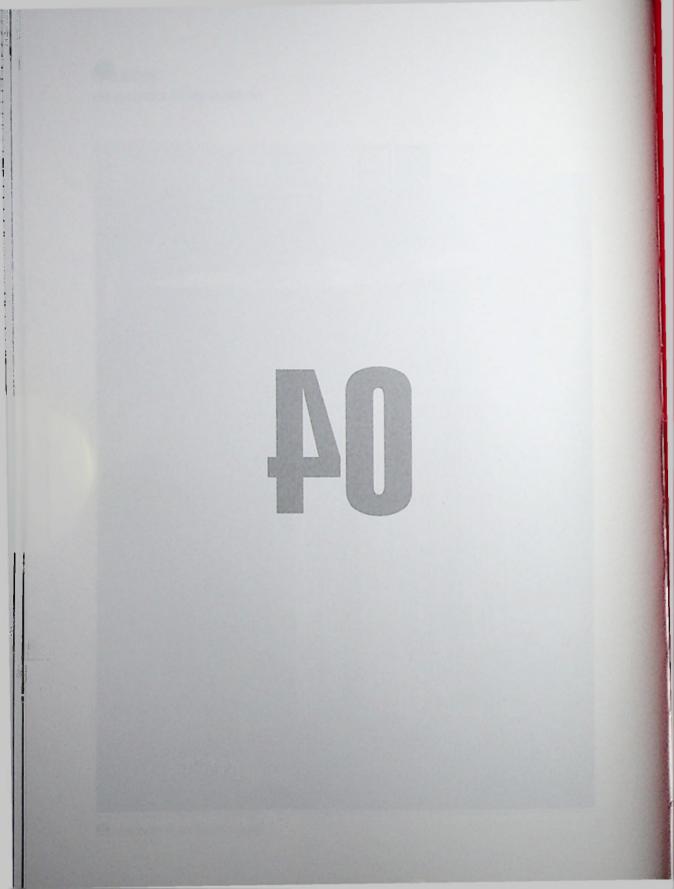
In 1953, Angelo Mangiarotti and Carlo Bassi attempted to show the public at large what modern Italian architecture involved, using some examples of recent works, filmed in 11-minute documentary footage. One of the projects chosen was the Borsalino tower. Highlights of the documentary stills and texts were published in the magazine *Domus*, some of the pages of which are shown.<sup>18</sup>

The text written by Alfonso Gatto has this to say about it: "What one can see here is a house like many other houses. This is also an architecture, yet not all houses are architecture.

Why is it an architecture? it is an architecture because it is a form existing in space: its vertical and horizontal developments, by virtue of their structure and plan, combine to naturalise it both inside and outside, relative to the sun and the air, the landscape and the whole of nature."

18. Carlo Bassi, Angelo Mangiarotti. "Posizione dell'architettura," Film 11 min. Extract from Domus 284, 1953.







MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti

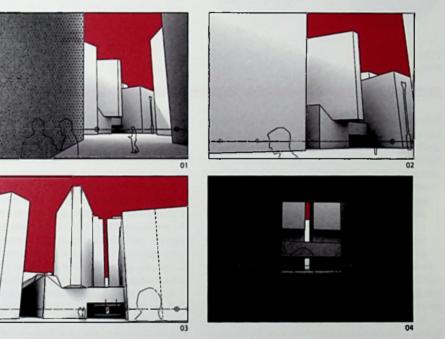
Corso Italia with Via Rugabella (Milan-Italy) 1949-1956 45°27'29.63"N / 9°11'18.18"E

Luigi Moretti was interested in integrating art, architecture and technique. He worked hard to bring continuity to the classical tradition in Italian Architecture and he wondered how he could adapt this to the new functional requirements. The construction boom which took place in Italian cities in the post-war period had a strong focus on renovating and increasing density which itself brought issues in integrating the new volumes into the historic centres. The Corso Italia complex, built in the first half of the 1950s, displays a new way of confronting the consolidated city, free from the regulatory constraints and technical limitations of the Italian Ottocento.

The sketches drawn by Moretti to adapt the programme were mostly based on three volumes located in parallel or perpendicular to the main street. He proposed numerous planimetric variations. At the same time, he carried out many perspective studies -sketches of simple volumes- to see how the proposal might fit into the consolidated fabric of downtown Milan. The sequence established by Moretti and incorporated into his planning approach resembles the script for a film, as this enables him to visualize the complex articulation of spaces, the relationship between the buildings and the different approaches to the facades. The space dilates or contracts, opens up or closes in, depending on the position of the viewer. This way of grouping volumes together, continuing on from the classic sobriety which he had taken on board in the early years of his career, becomes influenced by Baroque dynamics as he adds the time dimension to a composition which can only be experienced by moving around the site. Moretti brings time into his approach and this way makes one perceive his architecture as if it was a film sequence-scene.

On the next page, the final scenes of this play on perspective show perpendicular views of the Corso Italia where two compositional resources stand out: the groove and the wedge. The crevice, which splits the background block in two, plays a supporting role and it is the prow of the grounded ship, which represents the housing block, which performs a lead role in the scene.





"Moretti becomes neither an eclectic nor a modernist; rather, his work defies any easy categorization, even as one of the first, if rarely acknowledged, postmodern architects." PETER EISENMAN, 2008.1





1. Peter Eisenman. Ten Canonical Buildings 1950-2000, Rizzoli, 2008. P. 27.

# **CHARACTERS**



LUIGI MORETTI Architect, 1907-1973

Biological son of the Belgian architect and engineer Louis Rolland, in the late 1930s he took part in designing several buildings for Benito Mussolini in the Foro Italico and in the EUR (*Esposizione Universale di Roma*) which commemorated Fascism coming to power. He was the only significant architect to be imprisoned for his political activity in favour of Fascism and the Republic of Salò. After the war he was pressured by the left-wing press which never forgave his political links with *II Duce*.

In 1950, he founded the magazine Spazio, of which he edited only seven consecutive issues up to 1953. In 1954, he founded an art gallery in Rome of the same name, in partnership with the critic Michel Tapié, creator of the *art informel* (informal art) concept.

In 1956, following the dissolution of Cofimprese (Compagnia Finanziaria per Imprese da Construzioni)) the construction company which Moretti had been a partner in, he joined the management of the Società Generale Immobiliare and from this position he came into contact with the world of big business and the Italian aristocracy. Between 1957 and 1987 he set up the IRMOU (Istituto Nazionale di Ricerca Matematica e Operativa per l'Urbanistica) dedicated to the study of parametric architecture, which was to transform the subjective variability of architecture into a new science based on objectively quantifiable measurable parameters.

The lack of commissions in Italy led him to go abroad in search of work. From 1960 to 1965 he built the Watergate Complex in Washington. He worked, together with Pier Luigi Nervi, on the Montreal Stock Exchange Tower which at the time was the tallest reinforced concrete building in the world. In 1957, Moretti was awarded the National Prize for Architecture.

Luigi Moretti also collected art, especially classical busts, 18<sup>th</sup> Century paintings and works by contemporary artists such as Burri or Fontana. The art gallery he opened in Rome in 1954, despite only being open for one year, allowed him to come into contact with Classical and Baroque art traders and with young, mostly Italian and French, contemporary artists. Moretti admired the work of Borromini and Caravaggio. He wrote dense suggestive texts, with interpretations on light, shade, profiles and he carried out in-depth studies of the interior space in Italian Baroque architecture.





ADOLFO FOSSATARO Investor, film producer, 1890-1963

#### DESCRIPTION OF

In 1945, when the war ended, Fossataro was a fellow inmate of Luigi Moretti in the San Vittore prison, Milan. That same year, on leaving jail, they co-founded the Cofimprese construction company which was at first involved with rebuilding post-war Milan and then later widened its horizons to include Moretti's hometown, Rome. In 1947, Cofimprese, with Moretti as architect, was in charge of the construction of Il Girasole house, which Fossataro and his family made their residence in Rome.



BERGMAN / ROSSELLINI Actress/Film Director

Count Fossataro produced, with Roberto Rossellini as director, the film Viaggio in Italia (Journey to Italy, 1954) starring Ingrid Bergman and George Sanders. The plot of the film brings the contradictions and anxieties of modern living up against the emotional intensity of the past, condensed into the ruins of Pompeii.

Although Roberto Rossellini's work and his stark way of displaying reality had little in connection with the way in which Moretti confronted the urban project, what became quite clear in his cinematic vision was his professional relationship and friendship with the film producer Adolfo Fossataro. This artistic world overtook his classical training and led him to an approach to architecture involving movement and the passage of time as the main factors in composing volumes.

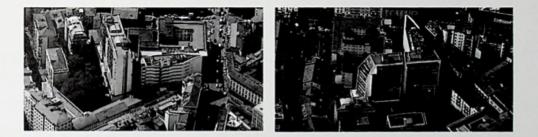
# Chapter / URBAN DESIGN CONTEXT AND MARKET

MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti



Development of this multi-purpose complex was managed by the real estate agency Santa Eufemia Nuova and the construction work by Cofimprese, whose major shareholders were Luigi Moretti and Adolfo Fossataro. The urban planning agreement for the area, which had been badly damaged during the war, stated that the site owners had to reach an agreement with the Council. Given the lack of planning regulations, there was greater freedom regarding the maximum height of the build. This meant that it was here that the uniformity of the 19<sup>th</sup> Century city with its eight-storey buildings was broken. Composition became freer and multi-voice dialogues emerged with four-, six-, nine- and fourteen-storey volumes. The border between the block perimeter and the street was perforated with openings displaying the interior of the block. The project, with its specific features, became a new approach to intervening in the city, without the constraints of a Master Plan.

The financial viability of the project was highly valued as the architect held a stake in the construction and development companies. One of the initial conditions was to attain high residential density, resulting in it being able to adapt to a wide range of potential buyers who were still undefined at the start of the construction work.



While the works were still in progress, the building was sold on to the company Palmolive and the Banca Monte, and both of them imposed their own terms.

For Moretti, one thing was the project and another thing the reality of the work, with its "evil spirits"<sup>2</sup> as he called them. In this case, these negative forces fighting against the integrity of the project were an American supervisor imposed by Palmolive, the new owner, and another architect, who had not been involved in the design process but who was in charge of the interiors.

Moretti tackles the integration of the four main volumes by shaping each part in accordance with the specific features of the site and the functional limitations of the subordination imposed by the new street perpendicular to the Corso Italia. This pedestrian level passageway frames the perspectives and creates a changing film set as the viewer moves around.

2. Cecilia Rostagni. Luigi Moretti, 1907-1973. Mondadori Electa Architettura, 2008. P. 242.

# Chapter 1 URBAN DESIGN BREAKING THE GRID

REFERENCES

# **OPPOSITIONS 4**

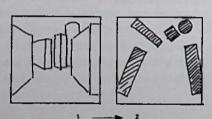


OPPOSITIONS 4 Architectural journal Kenneth Frampton and Mario Gandelsonas, editors

#### 1974

Luigi Moretti was finally fully recognized when he was re-discovered for the History of Architecture by Peter Eisenman and was published in issue 4 of the magazine Oppositions. Two of his best-known texts were published: "The Value of Profiles" (1951) and "Structures and Sequences in Spaces" (1952). Until then he had been an outcast. According to Eisenman, Moretti's work has always been one of the keys to interpreting post-modern architecture.





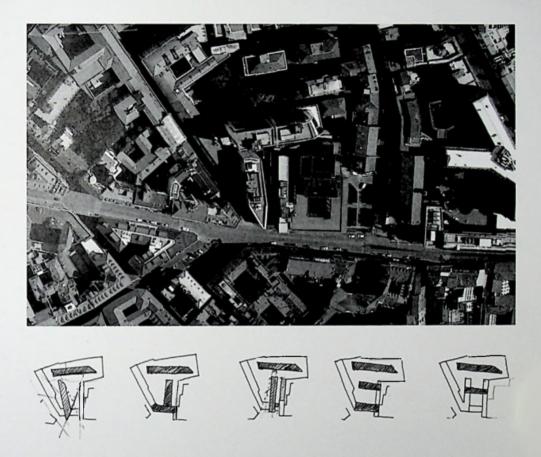
PARALLAX AS GENERATOR Steven Hol!

#### 1988

This diagram explains the notion of "parallax as generator,"<sup>3</sup> as against "floor plan as generator". Unlike the traditional design method whereby a posteriori perspective views are based on the floor plan, he approaches the project from the basis of fleeting representations obtained from different viewpoints which are then transferred to the floor plans.

3. Antonio Román. "Steven Holl, la arquitectura anclada en el futuro". Interview. Tecnología y Arquitectura 11-12. 1990. P. 160.

#### MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti



Moretti creates a new road, perpendicular to the Corso Italia which runs underneath the complex at two points: firstly under the bridge joining the dividing office building and the wedge-shaped block and secondly splitting the tallest building in the complex in two. To prevent this volume from becoming a blind screen, he pierces the seven upper storeys and this way opens up the views through the building.

The multiple attempts to compose the volumes in this project all involved destroying the idea of construction aligned to the perimeter of the plot. The highest density in the operation is moved to the rear of the site and in the layouts shown in some prior drafts, several blocks start appearing, first parallel to the Corso Italia, then swivelling round until finally they exhibit only their narrower sharp end wall.





# Chapter 2 URBAN FORM COMPLEXITY AS SOLUTION

MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti

There were two basic issues facing the project: that of integrating a complex programme into a space with great urban significance and that of inserting the architectural work into a complex with a great temporal factor, in terms of the historical past and the future promised by technological development.

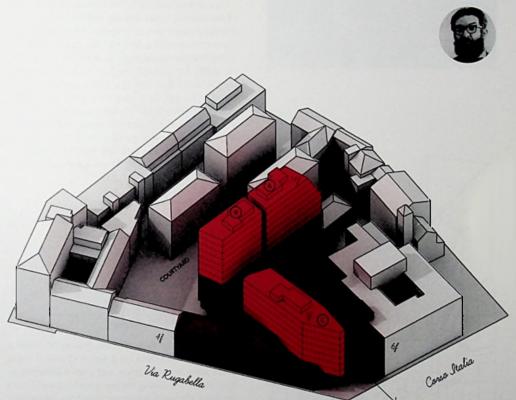
Its conception is related to the theory developed by Sigfried Giedion:<sup>4</sup> to anchor the historical content of tradition to the ideas of each period and to overcome the congenital contempt towards the past of the modern avant-garde. The materials chosen by Moretti to compose the facades highlight the multi-purpose character of the complex: glazing with regular modulation for the office area and mosaic, stone and concrete for the housing blocks.

With these ideas, fitting an intense programme into post-war Milan could not have been an easy task. Skilfully combining offices, housing, retail space and car parking in an irregular plot in the historic centre, while also opening up a new street splitting the plot in two, must have been complicated, especially as another aim was to achieve financial viability. In this Corso Italia project, Moretti tried out a wide range of solutions, which were based on interplaying each block with the other blocks while preserving an intelligent relationship with the surrounding buildings.

4. Sigfried Gideon. Space, Time and Architecture. The Growth of a new tradition, Harvard University Press. 1977.

#### **AXONOMETRIC**

The evidence of the eyes often contradicted the myth; again and again the architectonic qualities that we sought were to be found in work of the Roman school, notably (and surprisingly) in the work of Moretti, whom the Milanese would brush off as 'not socially serious'." REYNER BANHAM,1959.<sup>5</sup>

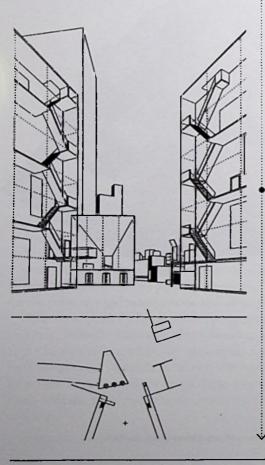


5. Reyner Banham. "Neoliberty. The Italian Retreat from Modern Architecture". Architectural Review, April 1959.

# Chapter 2 URBAN FORM INCOMPLETE PERCEPTION

#### REFERENCES





CORSO ITALIA Milan. Italy Historic photograph

#### Early 20th Century

Urban setting with the statue of Saint Helen at the centre of the Corso Italia. The Neoclassical starkness of the existing urban facades and the uniformity of the build height give us an idea of the rupture which the introduction of a dynamic view at the very heart of the historic centre must have meant. In some of his drafts -for instance the one on the next page-Luigi Moretti sketches in a statue of a man on a horse in the style of Henry Moore. He positions it in the corner, on top of the low-rise block parallel to the Via Rugabella, in direct dialogue with the statue of Saint Helen, who at the time stood on a column at the centre of the Corso. Moretti has this symbolic element facing the prow of the wedge-shaped block.

MILAN PORTA VITTORIA Milan. Italy Steven Holl

#### 1986

In this project for Porta Vittoria, Steven Holl uses a design method based on a series of partial views which were drawn a *priori* and then transferred to floor plans, reinstating the perspective. Later, based on these elements, he recomposed the urban plan he came up with for this area in Milan. In the 1980s Holl used the concept "experiential continuum of enmeshed space"<sup>6</sup> to refer to the continual perception of the foreground object or the background figure seen as one unit. According to this idea, the urban condition is fragmentary and incomplete and the city can be best understood from street level, based on complementary partial views, something an aerial view can never provide.

 Steven Holl, Juhani Pallasmaa, Alberto Pérez Gómez
 "Questions of Perception." Phenomenology of Architecture. a+u, 1994. P. 48.

### MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti



Thirty years before Steven Holl, Moretti had already used this compositional approach for the Corso Italia complex, establishing dialogues between the hot spots in the project. These spots were loaded with meaning by adding figurative elements which formed relationships with the existing landmarks.

# Chapter 2 URBAN FORM THE PROW WHICH CONFRONTS ITS ENVIRONMENT

REFERENCES







WOGA COMPLEX Berlin. Germany Erich Mendelsohn

#### 1925-1931

The programme included a retail street, housing units for single people, a building for collective housing, offices and a cinema. The most remarkable part of the Woga complex was the Universum cinema with its semi-circular plinth and its slim narrow tower resembling the prow of a boat. Moretti's wedge-shaped block straddles the plinth in a similar way.

STUDENT HALL OF RESIDENCE New York. U.S.A. Peter Eisenman

#### 1989

Eisenman came up with the idea for a symbolic building which would be neither a historicist pastiche nor a traditional monument. Just as Moretti had fought against Modernist principles, here Eisenman comes up against symmetry, axiality and regularity. He proposed adding volumes freely to express the complexity of the site, the programme and the spirit of the time.

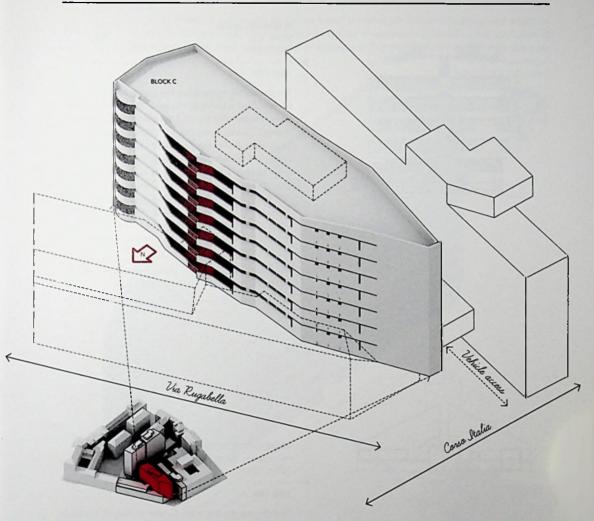
SPITTELAU VIADUCTS HYBRID BUILDING Vienna. Austria Zaha Hadid Architects

#### 1994-2005

Three blocks forming a strip of dwellings, offices and studios straddling a disused viaduct. In this case the composition is self-perpetuating as the urban constraints are non-existent. This work is located on the banks of the Danube Canal in a setting where there is none of the urban intensity of Corso Italia. The folds and irregularity of the storeys subordinate functionality to expressibility.



#### MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti

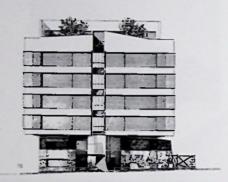


Another obstacle which Italian architecture of the 1950s had to overcome was the inevitable adoption of an urgent process for reconstruction work on historic centres in order to repair the damage done during the war years. The free-for-all which ensued in the face of a lack of planning regulations at the time favoured the appearance of expressive architecture which distanced itself from the Ottocento approach to composition. In this case, Moretti did not eschew monumentality and he attempted to make the volumes more dramatic, accentuating the acute angle of the housing Block C which soars over Corso Italia. He adopted the figure of the prow of a boat, as the expressionist architecture in northern Europe had done in the 1920s, often shifting the historical city landmarks into the background.

# Chapter 2

# URBAN FORM THE GROOVE WHICH BREAKS WITH THE PAST

#### REFERENCES



IL GIRASOLE HOUSE Rome, Italy Luigi Moretti

#### 1947-1950

Six years after completing the Corso Italia complex, Moretti built II Girasole House in Rome for his business partner and friend Fossataro, where he uses themes re-discovered by Postmodernism thirty years later. As Reyner Banham had stated in his dispute with Ernesto Nathan Rogers in the late 1950s, Luigi Moretti's architecture was one step ahead of the inflexibility of Modernism's most orthodox side. For Banham, II Girasole encompassed progressive aspirations and proposals for formal renovation which distanced it from the trend which he himself termed Neoliberty.<sup>7</sup> Robert Venturi highlighted the calculated ambiguity it reflects.<sup>8</sup>

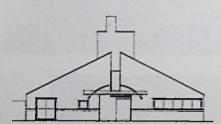
7. Reyner Banham. "Neoliberty. The Italian Retreat from Modern Architecture" Architectural Review, April 1959.

8. Robert Venturi. Complexity and Contradiction in Architecture. The Museum of Modern Art Press, 1966. P. 20

VANNA VENTURI HOUSE Pennsylvania. United States Robert Venturi

#### 1959-1964

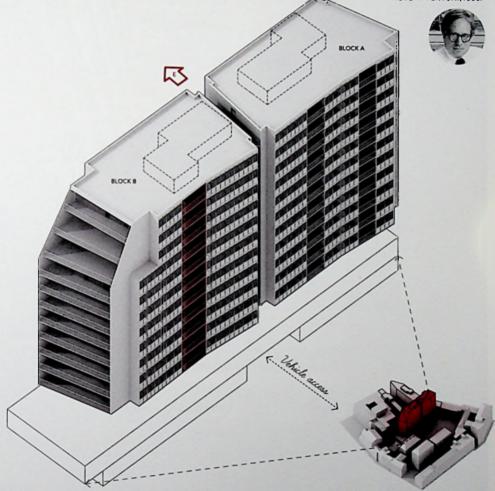
The groove on the main facade of Robert Venturi's mother's house is a symbol of the break with the precepts of Modernism. In this work, the complexity of the floor plan, the contradiction between appearance and actual size and the importance of the symbolic form represented by importing resources from the History of Architecture all stand out. This idea is hinted at in small details, such as the front opening which shows later planes of other elements located on superimposed layers. Some years earlier, Moretti had aimed for this same effect in II Girasole house and then later on in the Corso Italia complex.



### MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti

"Luigi Moretti's apartments on the Via Parioli in Rome: are they one building with a split or two buildings joined? The calculated ambiguity of expression is based on the confusion of experience as reflected in the architectural program. This promotes richness of meaning over clarity of meaning."

**ROBERT VENTURI, 1966.9** 

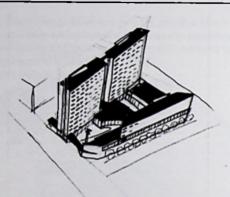


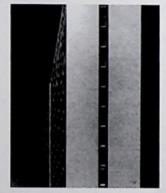
The purpose of the groove in the Corso Italia mixed-use block of dwellings and offices, which splits the volume in two, is to create independent vertical cores for commercial reasons, but its deeper aim is to combat the harmony, unity and purity preached by Rationalism.

9. Robert Venturi. Op. cit.

# Chapter 2 URBAN FORM THE GROOVE

#### REFERENCES

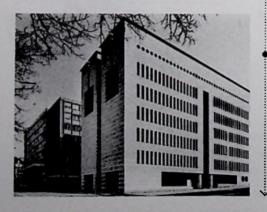




CASA-ALBERGO Milan. Italy Luigi Moretti

#### 1947-1950

This building, which was complete when Moretti was starting the Corso Italia project, was a programme of 22 mini-apartments for single people. Already in the higher volume there appears the use of a block with two strips of rooms and a central corridor split in two, down to the ground floor, by a central groove. Each half has its own circulation core and ends in two blind walls with a recessed row of windows.



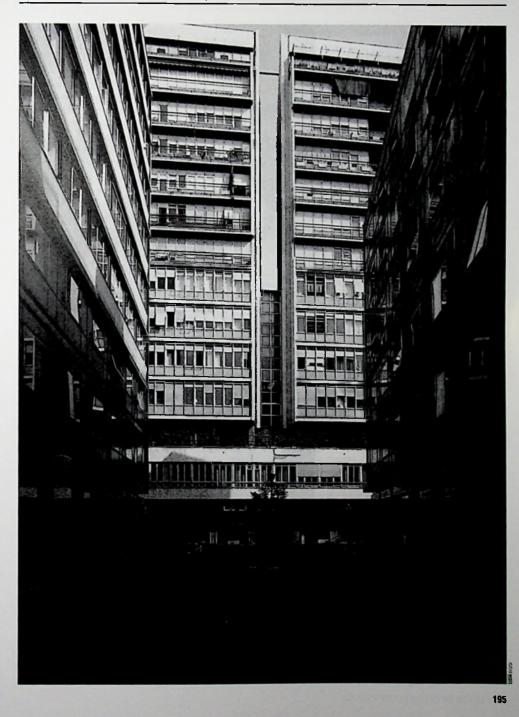
BANK BRUXELLES LAMBERT Geneva. Switzerland Mario Botta

#### 1987-1996

Mario Botta's architecture might not appear to be influenced by the work of Moretti but when one observes the facades of the Bank Bruxelles Lambert and analyses the work in depth, with its incisions in the exterior wall splitting the built prism of the bank in two, one can appreciate how it has the same compositional solutions as those used in the Corso Italia to fragment and stylize Blocks A and B by dividing them into two separate units.

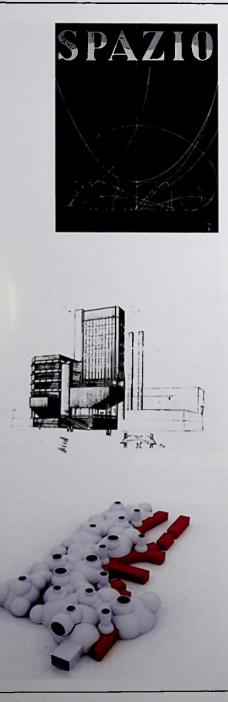


# MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti



# Chapter 2 URBAN FORM THE VOID AS MODELLER OF SPACE

#### REFERENCES



#### SPAZIO 7 Luigi Moretti

Luigi worett

#### 1952-1953

Front cover of the last issue of the magazine Spazio, in 1953. The purpose of this publication was to establish cross-relationships between different art forms in which space is an essential theme, such as architecture, sculpture, painting and cinema. In 1964, Luigi Moretti made the film *Michelangelo*, where he analyses the work of Michelangelo from a different viewpoint to that held in the more disciplinary History of Art. Moretti wrote in a previous issue of the magazine Spazio: "(...) the interior volumes have a specific presence of their own, independent of the figure and corporeality of the material which encloses them, up to the extent that they are formed by a thin gaseous substance, lacking in energy yet very capable of absorbing it."<sup>10</sup>

10. Luigi Moretti. "Strutture e sequenze di spazi". *Spazi*o 7, 1953. P. 10.

### ENGINEERING BUILDING Leicester. United Kingdom

Stirling, Gowan

1959-1963

Stirling was more interested in Moretti's research on interior space.<sup>11</sup> In the latest project with James Gowan, the Leicester Engineering Laboratory, the Italian architect's influence makes its presence felt in the complexity of the volume.

11. James Stirling. "The 'Functional Tradition' and Expression". Perspecta 6. The Yale Architecture Journal, 1960.

OOSTCAMPUS Oostkamp, Belgium Carlos Arroyo

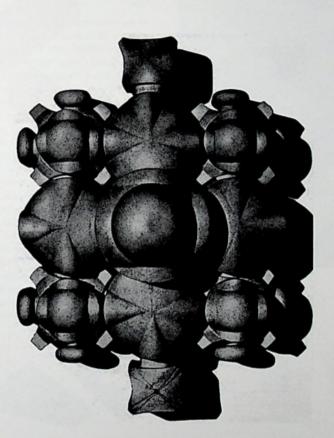
#### 2012

Carlos Arroyo, in this re-use of an industrial shed, creates a landscape of white clouds, a bubble-space which models the interior. The exterior skin of the unit is preserved as it was. The white domes are selfsupporting plaster shells which remind one of the Moretti models. (See right)

#### MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti

Moretti's models inverted this convention by taking space, rather than its enclosing surface, as a starting point for analysis". PETER EISENMAN, 2008.<sup>12</sup>





Luigi Moretti dedicated several articles to interior space as an essential modeller in architecture. He made plaster models of Baroque and contemporary interiors in an attempt to understand architectural form from another viewpoint. With this he managed to show some hidden relationships such as structure-form, empty-full or exterior-interior which until then had gone unnoticed. This image was reproduced in the Moretti article *"Strutture e sequenze di spazi"*, published in the magazine *Spazio*. It is a bird's eye view of the model for the interior volume of the San Filippo Neri church at Casale Monferrato (1671) by Guarino Guarini.

12. Peter Eisenman. Ten Canonical Buildings 1950-2000, Rizzoli, 2008. P. 31.

# Chapter 3 USES THE URBAN HYBRID

#### REFERENCES



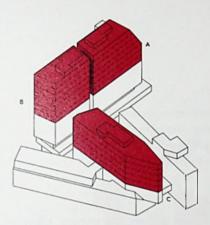
#### TORRE VELASCA Milan. Italy BBPR

#### 1954

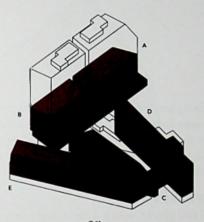
At the same time as the Corso Italia, just 200 metres down in Via Rugabella, the Torre Velasca was being built by the BBPR team, Ludovico Belgiojoso, Enrico Peresutti and Ernesto Nathan Rogers. This 26-storey building was the result of the high-rise concentration of all the uses planned in the design process, leaving free space around the base instead of extending the uses out onto the plot. The uses included are: car parking, ground floor retail area, offices on the next eighteen floors and eight residential floors at the top. In those years, rebuilding the historic centres damaged by Second World War bombing, was an opportunity to increase density in the heart of the city by incorporating mixed uses. The debate created in Italy regarding the integration of new architecture with that already existing was mostly focused on these interventions as a reaction to modern utopia and with the desire to reflect in this new architecture some aspects of the hybrid vitality of the consolidated city. Contextualization was a new constraint to be applied to these intense programmes which were authorized during the rebuilding period and both Torre Velasca and Corso Italia were influenced by these ideas.



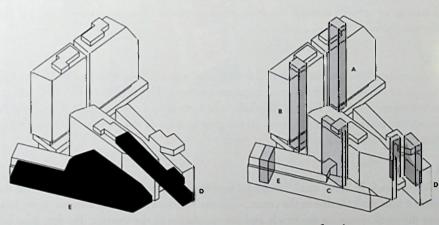
#### MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti



Dwellings



Offices



Commercial spaces

Circulation cores

This complex is a hybrid as it incorporates, on one single plot and in four main volumes, three different uses: retail, office and housing, with about 40 units, plus the car parking.

The retail spaces were given a typical layout for ground floor premises in relation to the street level. The offices were located in the E and D blocks and in the A and B building lower storeys, forming the backdrop to the perspective from the Corso Italia.

# Chapter 4 FLOOR PLANS THE REFINED FIT OF THE FLOOR PLAN

MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti

The floor plan of the Corso Italia complex ground floor expresses the subtlety of fitting functions and routes into the conditions imposed by the elements existing in the location. The composition clearly shows two orthogonal axes which organize buildings A, B and C and other compositional lines linked to the border situations, such as the Via Rugabella and the Block D in the south of the site.

### BLOCK A AND B

These two blocks, which form a single unit on floors one and two, are oriented following the grid of the west side of the whole block. The structure serves the car park at basement level, the offices on the lower floors and also the dwellings on the upper floors. The ground floor allows for the passage of vehicles through the central section which coincides with the oblique groove on the upper floors.

### **BLOCK C**

The wedge-shaped block becomes diluted on the retail ground floor which at its northern alignment adapts to the edges of the plot, as a unique situation. This merger of Blocks C and E creates an unbroken facade on the Via Rugabella which remains a narrow street. On Corso Italia, underneath the overhang, space is freed on the ground floor of the prow so as to create a small pedestrian or rest area at the vehicle access point.

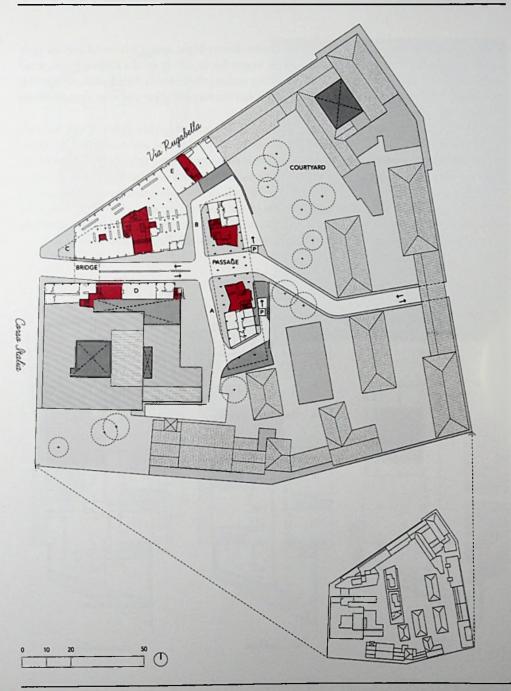
### **BLOCK D**

The dividing block D is for retail use on its first floor and office use on the other five floors. It contains a stair shaft located in the centre, with the elevators in another different core. Moretti positions the work spaces on the facade and the circulation in the interior. The first floor bridge linking blocks C and D is set aside for commercial-office use. The first floor of the wedge-shaped block plays a different role than the rest of storeys.

### **BLOCK E**

The Via Rugabella building is the most difficult of all to view. It has a retail ground floor and offices on the upper floors with a glazed facade layout similar to the Block D located to the south. The three floors of offices become two floors at the area where it meets the wedge-shaped block. The strip parallel to Corso Italia contracts precisely at the point where the prow-building flows out. The sensation is that the full force of this wedge-shaped block comes crushing down on this linking element, formally weaker.

GROUND FLOOR PLAN

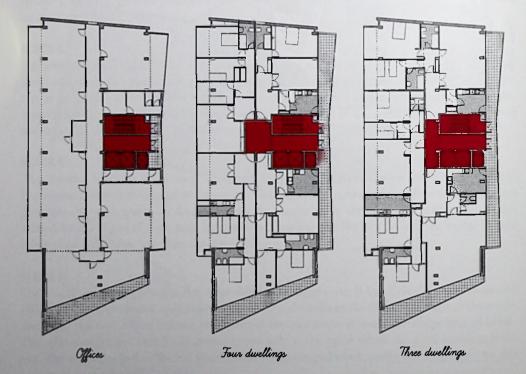


# Chapter 4 FLOOR PLANS STRUCTURE ADAPTING TO DIFFERENT USES

#### MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti

Block A-B, north and south-facing and fourteen storeys high, uses a structural system optimized for four different uses: dwellings on the upper floors, offices on the middle floors, retail stores on the ground floor and basement parking making the support distribution compatible with many different layouts. Moretti proposed solutions for two, three and even four dwellings per each half-storey.

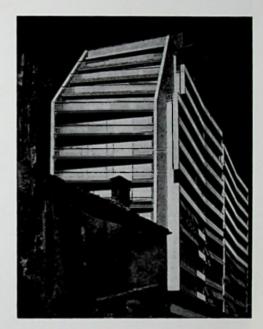
In the offices, the facade is continual and non-differentiated so that divisions can be made at any point. This way, the premises for sale can be adapted to the size demanded by clients with different requirements. The flexibility of this complex assures, according to Moretti, an excellent return on investment, as the two structural lines have an additional fixed overhang of 1.40 m on one face and a variable one of 1.20 to 2.20 m on the other face, which acts as a counterbalance and reduces the reinforcement in the concrete structure. These overhangs are either inserted into the built volume or remain on the outside, like long balconies, according to compositional requirements or to the relationship of suitable listed usable floor area.

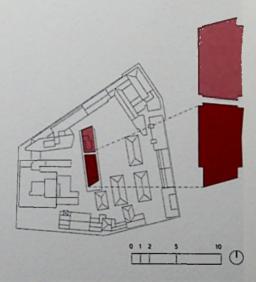


### BLOCK A-B: FLOOR PLANS



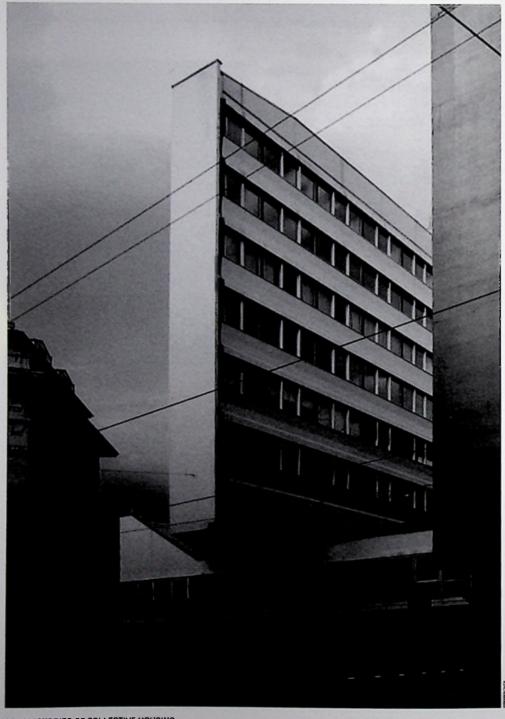
Two dwellings GENERAL FLOOR PLAN





05

# Chapter 4 FLOOR PLANS STRUCTURE ADAPTING TO DIFFERENT USES



204 / 10STORIES OF COLLECTIVE HOUSING

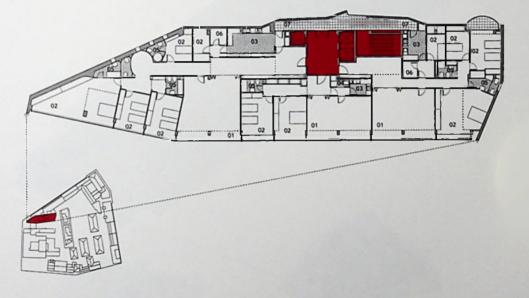
#### MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti

#### **C BLOCK: FLOOR PLAN**

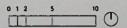
05

"The construction is raised up over the base, in an impossible equilibrium and soars some 30 metres above the Corso, like a subtle prow in the air (...) like a flying palace." PIERO BOTTONI. 1954.<sup>13</sup>





01 LIVING ROOM 02 BEDROOM 03 KITCHEN 04 W.C. 05 BATHROOM 06 STORAGE 07 SERVICE ENTRANCE



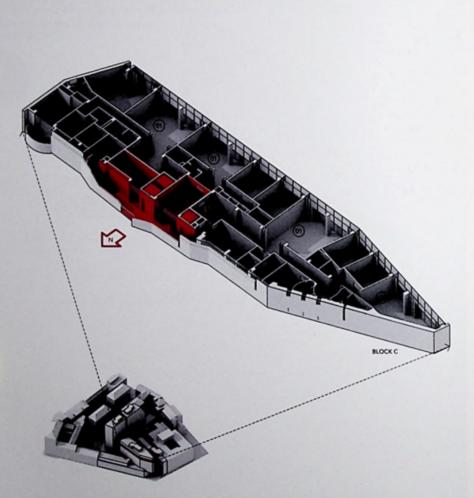
The top six floors of the wedge-shaped Block C are reserved for residential use. In this case, there are three dwellings per floor and each one is a different size. This way, the units on offer are aimed to appeal to the widest range of possible buyers. The developer's interest in having Moretti on board was to make the real estate operation financially viable.

13. Piero Bottoni. Antologia di edifici moderni in Milano. Editoriale Domus, 1954. P. 65-69.

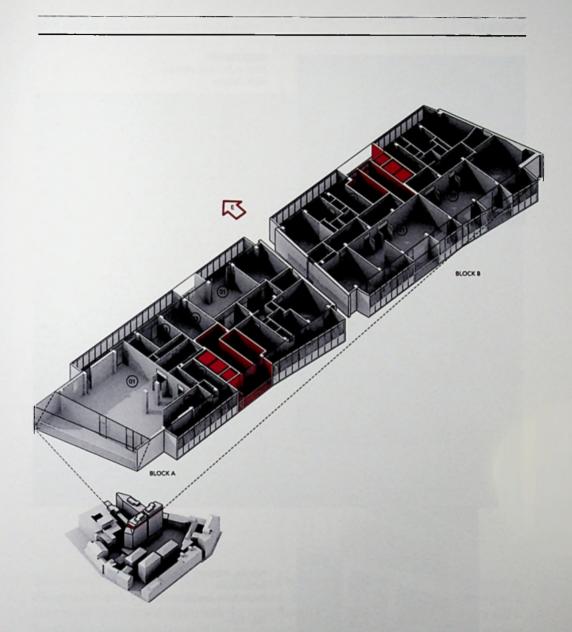
# Chapter 5 DWELLINGS ORIENTATION AND VARIETY OF UNITS FOR SALE

MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti

01 LIVING ROOM 02 KITCHEN 03 BEDROOM



In this block, the orientation is the determining factor in the interior layout. Most of the living areas face south. The structure also follows the same layout as in blocks A and B, with two bays and a small overhang at both sides of the floor slab to reduce the strain at the centre of the span. There is only one single circulation core in the central position, on the north facade, facing the narrow Via Rugabella.



The vertical circulation cores are laid out according to the lower storeys and the basement car park. The excessive proximity of the wedgeshaped Block C makes it necessary to move all types of living spaces away from the west face of Block B and to put the vertical circulation core there, meaning that the two dwellings in this part of the building are preferably east-facing. On the other hand, Block A, which is not restricted in this way, takes advantage of its south-facing orientation by locating the living spaces and large terraces on that side.

# Chapter 6 ENVELOPE GLASS FACADE

#### REFERENCES







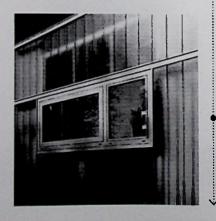
#### 1911-1925

In the Fagus factory, Walter Gropius sought light, ventilation and cleanliness for workspaces and by moving the columns onto the interior of the facade managed to bring a lightness which, later on, would be taken to an extreme with the development of the American curtain wall. Luigi Moretti, in the office building, Block D, with the best of intentions, displays this lightness and transparency on the facade which is closer to the city's historic buildings on Corso Italia and Via Rugabella. These are the contradictions and ambiguities which satisfied Moretti.

POLICE STATION Boxtel. The Netherlands Wiel Arets Architects

#### 1994-1997

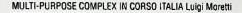
The glazed facade of this Police Station has a double skin. The exterior is a continual layer into which the operational openings are inserted with their aluminium frames. The openings on the interior layer do not always correspond to the opening ones on the facade. This layout is a step forward in comparison to the Moretti glazed facade which was based on one single layer and a repeated module.



FEDERAL INSTITUTE FOR SOCIAL PEDAGOGICS Baden. Austria Riegler Riewe Architekten

#### 1997-1999

In this case, the cavity between the exterior glazing and the interior insulation functions as a solar collector. It accumulates the heat gains produced from its south-facing position and then transfers them to the north facade in order to reduce the heat loss.





The whole north facade of Block D is glazed and its layout contains fixed and opening elements, tilting sashes with a horizontal axis at the centre. The entire facade is unprotected glazing as it faces north. This material breaks with the massiveness of the facades in the historic centre and it is only the balance in the layout of the openings which preserves the rhythm of the surrounding buildings.

The energy issue was not taken into consideration by Moretti as passive HVAC was not yet part of the spirit of the times. However, he did cleanly incorporate the flatness of the glazed wall with its two different properties: transparency and translucency.

### Chapter 6 ENVELOPE SHADE AND MOVEMENT

#### REFERENCES





#### THE FLAGELLATION OF CHRIST\* Michelangelo Merisi da Caravaggio

#### 1607-1610

In 1951, in the magazine Spazio, Moretti wrote an article titled: "Discontinuity of Space in Caravaggio". The grazing dramatic light in Caravaggio's paintings is what Moretti is aiming at in his buildings. With this intention, he folds and undulates his facades, searching for subtle orientations so that the sunset might re-create the light and shade of his hometown, Rome. Moretti, in one of his comments, imagines the young Caravaggio, at high noon, during his first visits to Rome, as he walks in the shade of palaces and churches, the torus of a column or the cyma of a cornice appears and he thinks that it was all these impressions which were behind Caravaggio's famous chiaroscuros.

"Museo di Capodimonte. Naples, Italy

CONVENTO DEI FILIPPINI Rome. Italy Francesco Borromini

#### 1637-1667

According to Sigfried Giedion: "Borromini was firstly a sculptor of buildings who worked most fully through an inseparable union of mathematically elaborated ground plans with fantastically hollowed spaces, in structures of which it is hard to say where architecture stops and sculpture begins. (...) By his treatment of the wall and the ground plan Borromini gave a new flexibility to architecture. He infused movement into the whole body of architecture."<sup>14</sup> The north facade of the wedge-shaped Block C of the Corso Italia complex expresses this idea of movement by playing with the wave-like lines of the floor plan and the shade produced by the grazing light.

14. Sigfried Gideon. Space, Time and Architecture. The Growth of a New Tradition. Harvard University Press, 1977.

#### THE PROJECT AS SCRIPT

#### MULTI-PURPOSE COMPLEX IN CORSO ITALIA Luigi Moretti



The text "The Values of Profiles", "Valori della Modanatura," published by Moretti in issue 6 o the magazine Spazio, was a direct challenge to the smooth sleek nature of the Modernist wall. For Moretti, profiles and their respective folds in Baroque architecture and sculpture produced emotions in the viewer which contrasted with the pure lines of Modern Art. The original *tesserae* of the north side of the wedge-shaped Block C in Corso Italia represent a corporeal material, like marble, where the traditional elements of the hollow space, like glass or the frame, vanish and there only remain points and lines of shade which refer back, in an abstract way, to the theme of permeability of bodies against the light in Baroque sculpture. Moretti's profiles break with the idea of the smooth appearance of the modern white box and suggest a universe of new formal possibilities, which would be developed in greater depth, from the 1970s on, by Postmodernism.

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### EPILOGUE THE PROJECT AS SCRIPT

### A TRAILER OF HISTORY

The path explored by Moretti's architecture in the 1950s in an aim to overcome that imposed by the International Style led him towards values which welcomed differences, a varied offer, eclecticism and consumerism. Values which would be brought back thirty years later and championed by unabashed Postmodernist aesthetics.

Moretti, being a businessman, assumed his rupture with the past and used specific formal resources which provided him the best opportunities to penetrate the market. As a mathematician he drew up the lines for what he called "parametric architecture" and made an effort to use objective values to identify the freedom of form in space.<sup>15</sup> As an architect, he pursued the clarity of structure with the same relish as he did the expression of the facades.

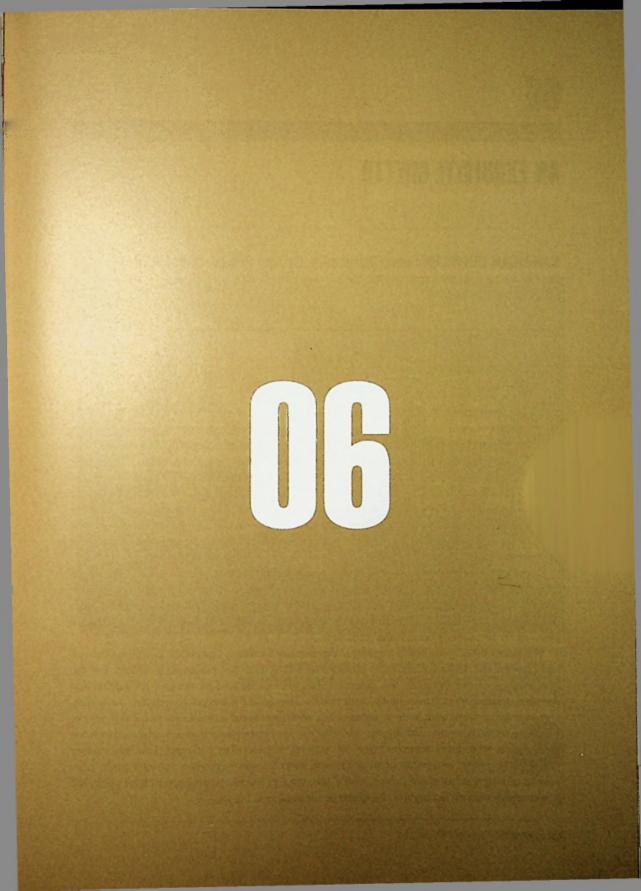
Like other architects educated under the umbrella of Rationalism, he preferred walking in the rain alone to systematically accepting orthodoxy. He conceived his work within a historic continuum in which he himself imposed the speed of his style changes, with the inevitable lack of understanding of his peers. The fact that he stood out in the Italian post-war scene is not so much due to his condition as a loser as to the variety of his interests and his capacity to express them freely.

The Corso Italia project, like Moretti himself, is not a child of its time. The work is, to use a film analogy, a trailer, a hint at future trends, something only confirmed thirty years later when Post-Modernism arrived on the scene, forty years later with Deconstructivism and fifty years later with Parametric Architecture.

15. Miguel A. Alonso del Val. "De nuevo en la cocina". Arquitectura 282. COAM, 1990. P. 20-27.







BARBICAN COMPLEX Peter Chamberlin, Geoffry Powell, Christof Bon, Arup The City (London, United Kingdom) 1955-1983 51°31'8.73"N / 0°5'38.68"W

Following the Second World War bombing, the population of the City of London had fallen from 100,000 to just under 6,000 inhabitants. In 1951, the Conservative government, with Winston Churchill back as British Prime Minister, was fearful of losing its power base in London's financial district, the City, due to a dramatic decrease in the number of voters. So they put forward the proposal of significantly increasing the number of dwellings in the area.

On winning the Barbican competition, Chamberlin, Powell and Bon were commissioned to design a proposal to raise the amount of dwellings density to the City by incorporating not only residential uses but also providing education and culture-centred buildings. The aim was for the heart of the city to appeal to the widest range of potential residents who could afford to pay a reasonable rent.

Initially, the housing was to target single people with middle-management positions in the City. There was no public funding available and the objective was for the operation to be financed by contributions paid by the would-be buyers once construction had been completed. The Council's political goal was to bring in residents with a profile close to the Conservative ideals of the incumbent municipal authorities.

The political shift was highly significant for the area in that it altered the prevailing inertias and changed the dominant office programmes replacing them for residential buildings. For the final solution for the Barbican, five different mixes were introduced for the layout. The first was direction-related, mixing long blocks with towers. The second was typology-related, combining high-rise access shafts with interior passageways, with communal staircases for two dwellings per floor, and terraced houses. Thirdly, the option of the semi-open block aligned to the road in some cases and in other cases integrated into the network of pedestrian walkways. Fourthly, mixing private, semi-public, and public open spaces with water features, vegetation and hard pavements. Finally, mixing education and culture-related uses into the residential programme with a drawing power which reached far beyond the sphere of the local area.

06



"The Barbican, to put in bluntly, is Britain's largest voluntary ghetto -but not for the reason of high rents alone. It matches in its style and planning, architecture and amenities, what is now the prime educated middle-class dream of a good life in the city."

REYNER BANHAM, 1974.



1. Reyner Banham. "A Walled City. The Barbican in the City of London". New Society 629, 1974. P. 222.

### CHARACTERS



CHAMBERLIN, POWELL & BON, (CP&B) Architects



DUNCAN SANDYS Politician, 1908-1987

Peter Chamberlin (1919-1978), Geoffry Powell (1920-1999) and Christoph Bon (1921-1999) taught at Kingston Polytechnic, now known as Kingston University School of Architecture. They were involved with social issues and were more interested in their teaching work than using the media to broadcast their theories on architecture. They were in their thirties when they were awarded the Barbican commission and this work was to take up roughly another three decades of their lives. Bon had spent some time at the Belgiojoso, Peressutti and Rogers, BBPR studio.

In 1951, Powell won the competition for the Golden Lane site which was close to the Barbican. The three of them had entered this competition on the agreement that if one of them won, the prize would be divided out between the three. Having set this precedent, four years later, they were awarded the commission to design the Barbican, taking on a new client, the Corporation of the City of London, which at the time was the administrative body in charge of urban planning in the historic centre of London.

In 1953, they attended the CIAM IX Congress in Aix-en-Provence, where the Smithsons, who had successfully aired their losing proposal for the Golden Lane competition, expounded the idea of extending the analysis of housing away from the unit out to the street, the district and the city in a multi-scale sequence. With this they coincided with a new trend in the contemporary British approach towards a greater integration of residential buildings into mixed-use estates with separate pedestrian and vehicle transit. He was elected Conservative M.P. at the age of 27. After the Second World War ended, he entered Parliament, heading the nationalization of the state steelworks, uniting the airline companies and restructuring nuclear policy.

As Minister for Housing and Local Government (1954-1957) he supported mixed uses in central London, passed the Clean Air Act (1956) and created the framework for green belts around cities. He focused his efforts on strengthening residential use in the design for the Barbican as he did not want to see the City deserted outside office hours. For Sandys, incorporating a residential area into the City also meant more votes for him as at the time the population of this city centre area had fallen dramatically. He was Churchill's son-in-law at the time the Barbican redevelopment was being planned. In the 1960s, he also participated in the talks on independence for nearly a dozen British colonies.

#### BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup



ERIC F. WILKINS Politician, -1957



REYNER BANHAM Historian 1922-1988

Local councillor, he was the leading supporter of the plans to increase the resident population of the City of London. In 1953, he organized a campaign aiming to get this idea approved by the LCC, the London County Council, based on the guidelines of the Abercrombie Greater London Plan of 1944.

In 1954, prior to all the CP&B plans, the LCC itself had presented its own solution for the area, whereby for the first time ever, the idea of the podium appeared as an integral part of a system of elevated pedways throughout the City. This plan also included a large number of dwellings. At the time, there were many ideas emerging as to how to regenerate the City and one of them, more specifically the plan by Kadleigh, Horsburg and Whitfield (1954) put special emphasis on the commercial programme and although it was rejected, it changed the LCC's approach to the magnitude of the operation.

In 1955, after the recognition received for the Golden Lane solution, Wilkins proposed that the initial project that Chamberlin, Powell and Bon had developed for the Barbican be put to the vote. The idea was approved by a small number of votes and this was to be a deciding moment for the future redevelopment of this part of the City. Wilkin's manoeuvre had led to the adoption of mostly residential use for the Barbican. He died in 1957 of a heart attack as a result of the stress of the negotiations.

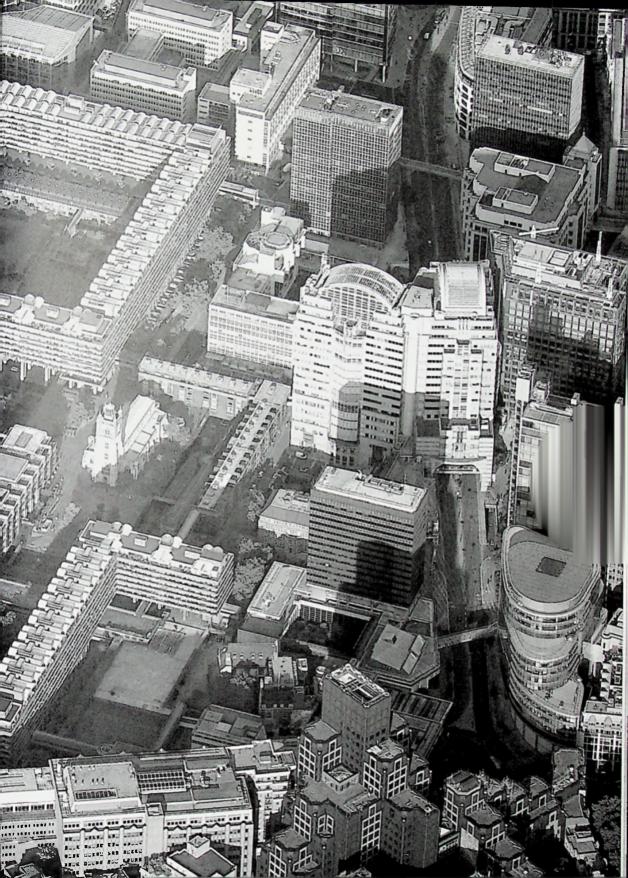
Nikolaus Pevsner made a positive critique of the general idea for the layout of the Barbican. He liked the pedestrian walkways, the variety of blocks and towers, the mixed uses and the historic references. However, if there was one person clearly against the solution which was finally approved for this part of the City, it was without a doubt Reyner Banham.<sup>2</sup>

Although Banham was involved in the study of modern architecture following the path marked out by Sigfried Giedion and Nikolaus Pevsner, he was closer to Alison and Peter Smithson's group than to the complacent and minimally transgressive modern architecture practised by Chamberlin, Powell and Bon. The lack of radicalism of the Barbican bothered him and for this reason he criticized its romantic classicism, its brut bush-hammered concrete, its evocation of classic ruins and how it reminded one of the architecture of Georgian London.<sup>3</sup>

- 1. David Heathcote. Barbican. Penthouse over the City. Wiley, 2004. P. 80.
- 2. Reyner Banham, Op.cit.

3. Reyner Banham. Megastructure. Urban Futures of the Recent Past. Harper & Row, 1976.





### Chapter / HISTORICAL CONTEXT DENSITY OR SPRAWL

**ORTHOPHOTO FROM 1945** 



The Barbican estate is located within the City of London, an area which in the mid-19<sup>th</sup> Century had started to lose population due to an increase in office land use. The lack of residents had turned it into an area with two different densities: over a million people used it every day yet from 6pm on it became a ghost town.

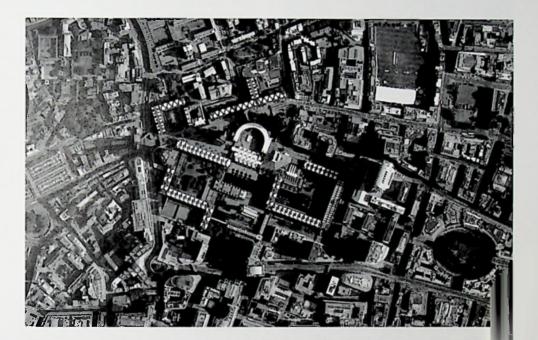
In the early 1940s, the bombing which had taken place during the Second World War had destroyed most of the buildings. For fifteen years, the area which the estate currently stands on was a large wasteland used as a playground by East End children.

The first redevelopment proposals emerged in 1954 and involved a cityscape of office blocks with retail units on the ground floor. The interests of the authorities responsible for the City and of the London County Council converged to monetize the void by building offices. Nevertheless, a group of councillors, from within the City authorities aiming to incorporate housing into the area, fought and won the battle to alter the fate of the site.



BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

**ORTHOPHOTO FROM 2010** 



A committee led by Councillor Eric F. Wilkins managed to get the Corporation to commiss Chamberlin, Powell and Bon, who had recently won a competition in the nearby Golden Lane site, to draft a proposal which was actually far more modest than the final project and combined offices and housing. It was presented in 1955 in a controversial meeting of the Corporation where it was passed based on a faulty recount of the votes cast.

Nonetheless, definitive backing came in 1956 through a letter from the then Minister for Housing and Local Government, Duncan Sandys, to the Lord Mayor of London, the highest authority in the City, in which Sandys suggested that the Barbican should become a real residential area with schools, public spaces and services even if this was to mean less income from the land. From this moment on Chamberlin, Powell & Bon presented their successive proposals which were enlarged with newly integrated wider programmes as talks with the institutions progressed.

The definitive project was approved in 1959 and construction work began in 1960. The residential complex was completed in 1975 while the Barbican Centre cultural complex was finished in 1983.

### Chapter / HISTORICAL CONTEXT DENSITY OR SPRAWL

#### REFERENCES



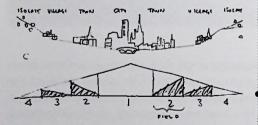
#### URBAN PLAN London. United Kingdom Patrick Abercrombie

#### 1943

This bubble diagram was part of the County London Plan (1943) headed by Patrick Abercrombie. At the centre, the City appears as the hub of a system of interconnected communities.

While the Abercrombie Plan aimed to decentralize and rehouse the population in the suburbs, Chamberlin, Powell and Bon argued that it was necessary to reduce the quantity of daily commutes into London.

CP&B suggested a density twice that proposed in the Abercrombie Plan for the satellite estates which was 100-135 people per acre. The Corporation had its doubts that Abercrombie would be able to solve the City's problems and so established another strategy to convert this central urban fabric into the first example of social and functional redevelopment in post-war London.



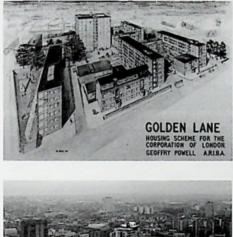
#### DOORN MANIFESTO Team 10

#### 1954

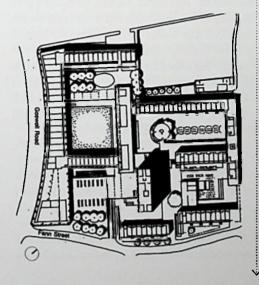
The response to Modernist doctrine began to emerge in Doorn. The concerns of the leading dissidents of the CIAM, the Team 10, were about how to create a real community based on the concept of grouping together housing units. The Patrick Geddes Valley Diagram "house-street-district-city" was used by Team 10 to explain this gradual change towards a denser way of living, which was their aim for the city. The Barbican also reclaims this high density urbanism as a reaction to the peripheral garden city.



#### BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup







#### GOLDEN LANE

The City. London. United Kingdom Chamberlin, Powell & Bon (CPB)

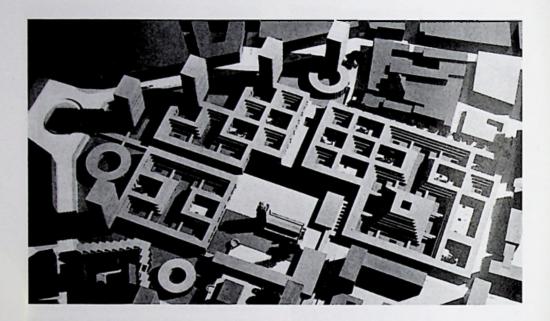
#### 1951-1962

In the early 1950s, Chamberlin, Powell and Bon had little experience in building residential complexes. They were focused on their academic work and only had one ongoing project. They entered the Golden Lane competition as individual entrants among a total of 178 projects, and Geoffry Powell's project emerged as the winning proposal. They honoured their prior agreement that if one of them was to win they would jointly develop the project. They subsequently set to work to find a solution of a highly urban character, avoiding garden city type low density solutions. Their mixing one 16-storey tower with apartment blocks and other buildings of superimposed maisonettes gives us an idea of the wide range of typologies which was later to be incorporated into the Barbican. The uses are also varied as despite there being a prevailing residential use, there also exists a good level of communal facilities such as retail units, workshops and schools. All this was integrated into a set of open spaces which interconnected at different levels with alternating hard and soft surfaces. Water, a feature which reappears in the Barbican, is represented here in a small pond in the east corner. The difference between the Barbican Estate and the Golden Lane Estate is that the latter was designed as social housing while the Barbican was designed for residents in the medium-high income bracket. This programme was developed for a density of 200 people per acre, which was the maximum density permitted by the County of London Plan in central districts.

### Chapter 2 URBAN DESIGN NEGOTIATING HEIGHT AND OCCUPANCY

BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

1955 PROPOSAL

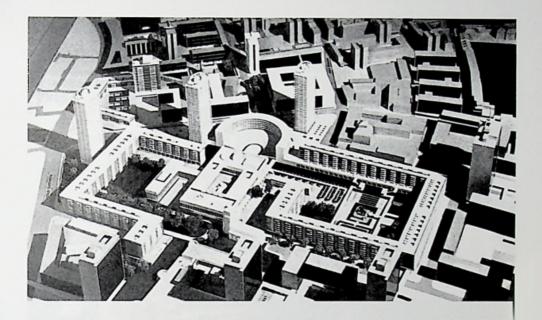


The first commission was limited to the area south of what was then Barbican Street (now Beech Street) to design (mostly one or two-bedroom) dwellings for 6,000 people, an exhibition hall, sports areas, retail stores, restaurants and large office blocks. This initial solution included a grid of rectangular closed four-storey blocks with public and private courtyards and five twenty-storey towers at the north-west end. There was a clear east-west axis layout running from the central square to the area around the Aldersgate (now Barbican) underground station along a porticoed shopping street. Route 11 bordered the site to the south. The inspiration came from the medieval Italian town, with defensive towers and moat, and this underpinned this stage set-like design at the very heart of which lay the whole cultural and educational programme shaped like a cut-off pyramid. The central square was laid out around the renovated Saint Giles Church. This initial design was rejected due to its being too dense and having too few open spaces.



#### BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

1956 PROPOSAL



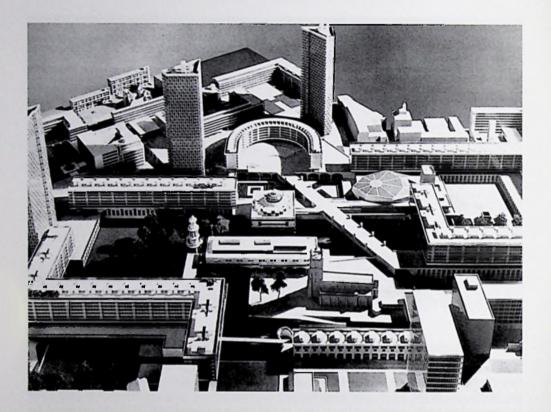
Peter Chamberlin decided to give a preview of this proposal to the Minister for Housing and Local Government, Duncan Sandys, who gave it his firm backing on the grounds that the residential content had increased significantly. The area to be redeveloped augmented surface area to the North and to the South. The programme for square blocks with courtyards was perforated and opened up by incorporating larger open spaces which included, as CP&B had proposed for Golden Lane, landscaped spaces, paved spaces and water features. These open spaces were of a different nature to those of the 1955 plan and had now become private spaces for residents. Nine six to nine-storey blocks were incorporated. The educational programme was located at the centre of the site with two schools added, now aligned along a north-south transverse axis ending at a semi-circular open air stage.

Due to the educational programme, the area set aside for open spaces increased because of the need for play and recreation areas. As a counterbalance to this, three rectangular residential towers appeared. One was 31 storeys high, the other two 29 storeys high. The design became three-dimensional with low level courtyards and pedestrian highwalks. The open spaces were enhanced with the addition of both a hedge maze and a large pyramid-shaped Conservatory. Water entered the picture in the shape of an ornamental lake, a canal, fountains and waterfalls. In this proposal, the retail programme present in the 1955 design was relocated and this was now concentrated at the south and east ends of the site. A wider variety of sizes of housing units was introduced, including some four-bedroom apartments located on the south side.

### Chapter 2 URBAN DESIGN NEGOTIATING HEIGHT AND OCCUPANCY

BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

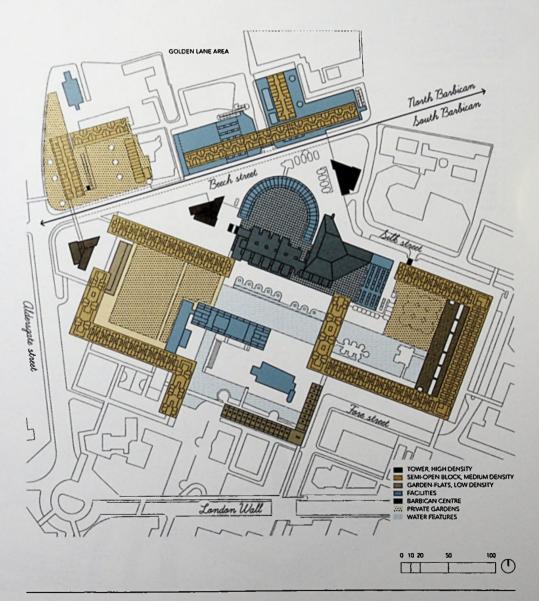
1959 PROPOSAL



The area for redevelopment was extended to the whole area of the present Barbican plot. In this solution, the three towers had polygonal floor plans and were 37 storeys high. The blocks gradually approached their definitive format, grouped in U- or Z-shapes. Some blocks were erected upon thick columns to reduce the feeling of being enclosed and to give crossed sightlines. One element which distorted the orthogonality of the floor plan was an oblique road, running north-south which crossed the large central lake and which was proposed by the municipal engineer who was not keen on the architectural solution. In order to lessen its effect on the design, CP&B imagined this road as an arched viaduct crossing over the central lake like a Roman bridge. This road was scrapped from the 1960 design due to its excessive cost. Within the educational programme, it was decided that a concert hall seating 1,000 people and a theatre seating 700 would be included which could be used by external companies outside teaching hours. The semi-circular housing building on the north side of the site, came from the previous design and was shaped like an open air amphitheatre. 2,000-vehicle car parking facilities were built below the pedestrian podium and some of the blocks.

#### BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

The estate was divided into two areas: one to the south of Beech Street and the other to the north, between Beech Street and the Golden Lane Estate. To give the exact details, these two areas occupy a surface area of 28.4 acres in the first case and 6.2 acres in the second case; a total of 34.6 acres (14 hectares). This includes a programme for 2,113 dwellings grouped in blocks up to seven storeys high and in three 43- and 44-storey towers. The density of dwellings and the superimposed circulation spaces enable large areas of land to be left free for facilities and public spaces, of which 8 acres (3.2 hectares) is set aside for gardens, the Conservatory and water features.



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## Chapter 2 URBAN DESIGN NEGOTIATING HEIGHT AND OCCUPANCY

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GARDEN

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Bench street

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#### HOUSING

01 SPEED HOUSE 02 WILLOUGHBY HOUSE 03 BRANDON MEWS 04 ANDREWES HOUSE 05 GILBERT HOUSE 06 MOUNTJOY HOUSE 07 THOMAS MORE HOUSE 08 SEDDON HOUSE 09 LAMBERT JONES HOUSE 10 DEFOE HOUSE 11 LAUDERDALE TOWER 12 SHAKESPEARE TOWER 13 CROMWELL TOWER 14 THE POSTERN

- 15 WALLSIDE
- 16 JOHN TRUNDLE COURT 17 BUNYAN COURT
- 18 BRYER COURT
- 19 BEN JONSON HOUSE
- 20 BRETON HOUSE 21 MILTON COURT (DEMOLISHED)

- FACILITIES A FROBISHER CRESCENT
- B AUDITORIUM / CONCERT HALL C ART GALLERY
- D LIBRARY E THEATRE
- F CONSERVATORY
- G GUILDHALL SCHOOL OF MUSIC AND DRAMA
- H CITY OF LONDON SCHOOL FOR GIRLS
- I ST GILES' CHURCH J MUSEUM OF LONDON K EXHIBITION HALL
- L POST OFFICE
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SPEED GARDEN

MOORGATE

- Antering - Link

### Chapter 2 URBAN DESIGN THE SITE

BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

"Uninterrupted by road traffic (which is kept separated from pedestrian circulation through and about the neighbourhood) a quiet precinct will be created in which people will be able to move about freely enjoying constantly changing perspectives of terraces, lawns, trees and flowers seen against the background of the new buildings or reflected in the ornamental lake."

CHAMBERLIN, POWELL & BON, 1959.4

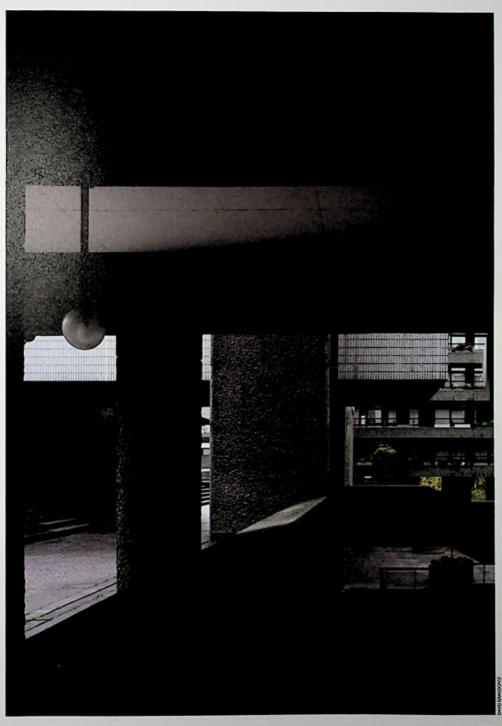


Plans for rebuilding central London employed the idea of the Precinct in which every action included residential buildings in a semi-closed block within an environment of pedestrian circulation spaces divided off from the new roads being built. The Modern principle which is most noticeable in the Barbican design is that involving the separation of vehicle and pedestrian transit. However, the mixed use, with a clear aim to offer services beyond the scope of the area into which the estate had been inserted, is a direct criticism of the segregation of functions imposed by the Athens Charter. CP&B's efforts to mix historic Italian *piazzas* with what were at the time new modern isolated block proposals led to an original and novel fusion of the semi-closed block over a podium with interconnected open spaces which attempted to continue on from the great British tradition of Georgian architecture.

The entire built environment in the Barbican is erected on a platform, the podium, which becomes the access base for the buildings. This elevated stage functions as a pedestrian street and also serves as a socialization area. For this reason, the ground floor in contact with the terrain does not correspond to the area where urban life takes place which is on the upper level. From this super-elevated position, one can look out over the open spaces and the lake in the same way that one could watch over the interior of a walled stronghold from the ramparts of a medieval fort.

The construction of a perimeter podium is one of the estate's most characteristic and controversial features because of the way it divides off the streets from the perimeter. This is exaggerated by the different level between the north and south ends of the estate which made it necessary to raise the podium by 3 metres on the north side due to the topographical characteristics of the land. Within the site, space flows from East to West under the large columns which support some of the housing blocks.

4. Chamberlin, Powell & Bon, Barbican report, 1959.



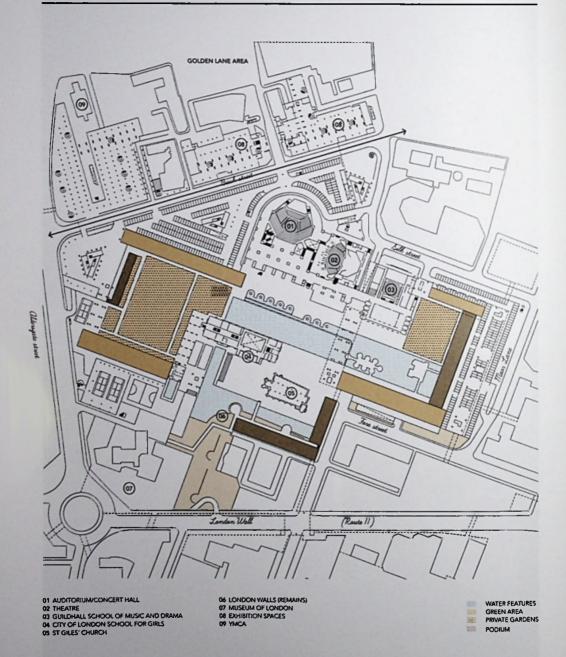
233

(16)

### Chapter 2 URBAN DESIGN THE SITE

BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

**GROUND FLOOR PLAN** 

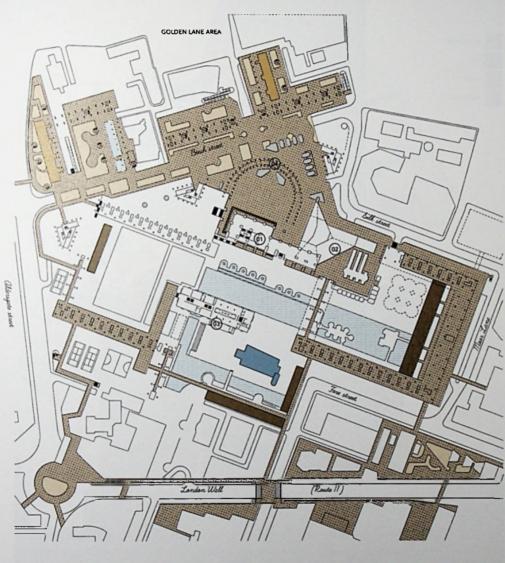


Reference for plans: "The Urban Enclave. De stadsenclave". DASH. Nai, 2011. P. 124-125.

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#### PODIUM

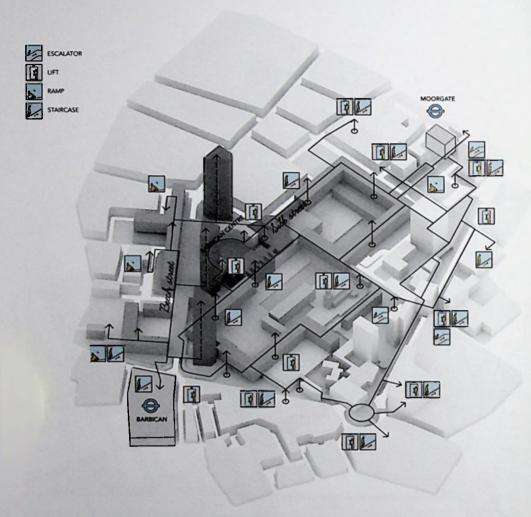


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### Chapter 2 URBAN DESIGN SEGREGATED CIRCULATIONS

**PEDESTRIAN ACCESS** 



An elevated +6 to +9 m pedestrian street, the highwalk, runs throughout the estate and links it to the adjacent office buildings. Access to the residential tower blocks is via the podium or from the car park. Most of the walkways are covered. The walk shown in the photo on the opposite page runs above Beech Street, the underpass designed for vehicles.

The idea of burying roads and elevating pedestrian walkways allows for the uses to be stacked even though the estate functions on a separate level to the surrounding streets with the exception of the access point to the Barbican Centre from Silk Street.

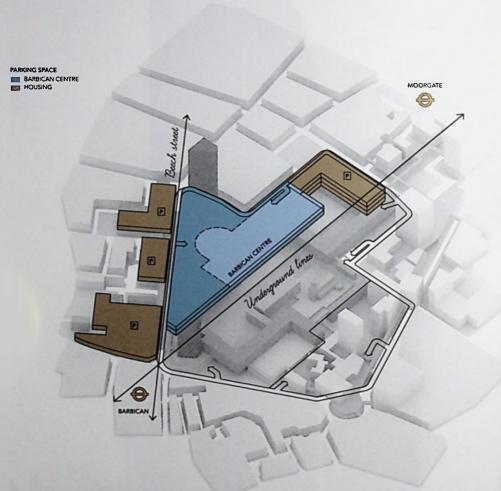
BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup



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### Chapter 2 URBAN DESIGN SEGREGATED CIRCULATIONS

VEHICLE ACCESS



The Barbican site is crossed from East to West by three Underground lines, the Circle, Hammersmith and Metropolitan lines, and by Beech Street, the road-underpass which runs beneath the podium and which is shown in the photo on the right. Traffic is kept hidden or outside the perimeter of the estate and this only interfaces with the roads at the entrances to the underground parking which is in turn connected by lifts and staircases to the residential blocks and to the facilities. Segregation of the circulation spaces is not only physical but also visual as once one enters the precinct, the traffic is out of sight.

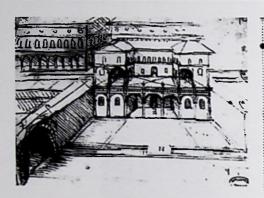
The original idea for the project was to have one parking space per dwelling in the area. There are over 2,000 parking spaces on the whole estate with road access from the perimeter streets.

### BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup



### Chapter 2 URBAN DESIGN SEGREGATED CIRCULATIONS

#### REFERENCES







THE IDEAL CITY Leonardo Da Vinci

#### 1488

Leonardo Da Vinci had already drawn up his early proposal for the ideal city based on superimposed and segregated flow on upper and lower levels, stating that only the "gentili uomini" or pedestrians should transit the upper streets.<sup>5</sup>

5. Leonardo Da Vinci. París Manuscript B, 1488-90, fol. 16r.

GRAND CANAL Venice. Italy

"The best example of a city where foot and service traffic is completely segregated is Venice where all supplies are carried to the city on canals, while pedestrians walk on pavements which cross the canals by bridges. This segregation has worked admirably for many centuries and there is no good reason why the principle should not be applied equally effectively in the City of London."<sup>6</sup>

6. Chamberlin, Powell & Bon, Architects. Barbican Report, 1959.

ADELPHI TERRACE London. United Kingdom Robert Adams and brothers

1768-1772 (demolished in 1936)

The elevated podium for these 24 row houses which the Adams brothers built on the banks of the River Thames was one of the historic buildings included in the documentation handed in by CP&B when they presented their project in 1959. It is a true precedent for stacking domestic and commercial uses in the city of London, with a will to being a representative urban complex with a built-in elevated street. It is seen as a precursor for the Barbican due to the superimposed flows and functions. In turn, the arches supporting the street were also an, albeit inverted, reference for the spaces for the dwellings on the Barbican lower floors which are underneath the podium.

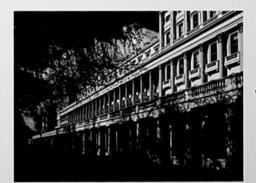
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ALBANY COVERED WALK London. United Kingdom Unknown architect

#### 1803

Chamberlin, Powell and Bon also included this example in the presentation of the 1959 Barbican Development document. This was a means of relating the urban design for the Barbican with those historic buildings in London with an appealing residential character. This covered walk was located inside Melbourne House in Piccadilly. The original building was designed by William Chambers and then later redesigned by Henry Holland who incorporated chambers for bachelors into the gardens. This reminds us of the covered highwalks which run through the whole Barbican area and link up the different buildings.



CARLTON HOUSE TERRACE London. United Kingdom John Nash

#### 1827-1832

Another example of a building raised on a podium which CP&B recovered as a way to reinforce the London character of their design for the Barbican. The efforts made by Rudolf Wittkower and John Summerson to assign a truly British character to Neoclassicism<sup>7</sup> was to influence the generation of architects which CP&B belonged to and changed their way of interpreting Georgian architecture

7. John Summerson. Architecture in Britain 1530-1830. Penguin, 1953.

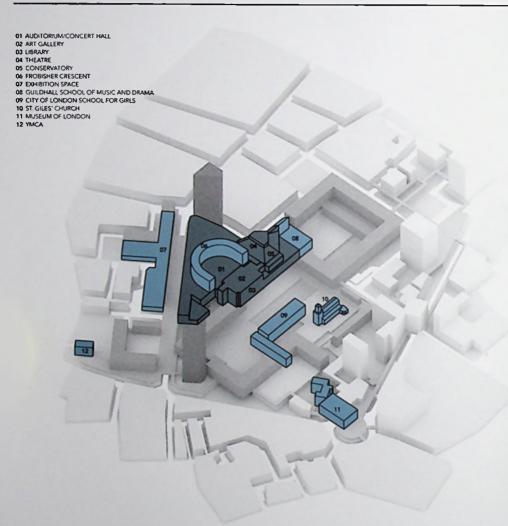
Rudolf Wittkower. Architectural Principles in the Age of Humanism. Alec Tiranti Ltd, 1952.





### Chapter 3 USES MIX AND INTENSITY

#### FACILITIES



Intensity mainly originates from the functioning of the Barbican Centre, a cultural centre which spreads itself out over different buildings, interconnected by pedestrian platforms, lobbies and access points. Here we find concentrated the Concert Hall, the Theatre, the Guildhall School of Music, the Library, the Art Gallery and the Conservatory which was shaped around the theatre stage tower to minimize the impact of the built environment, in particular given its proximity to the Gilbert House dwellings. This complex is well oriented with a south-facing facade and a lake-side terrace.

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## Chapter 3 USES MIX AND INTENSITY

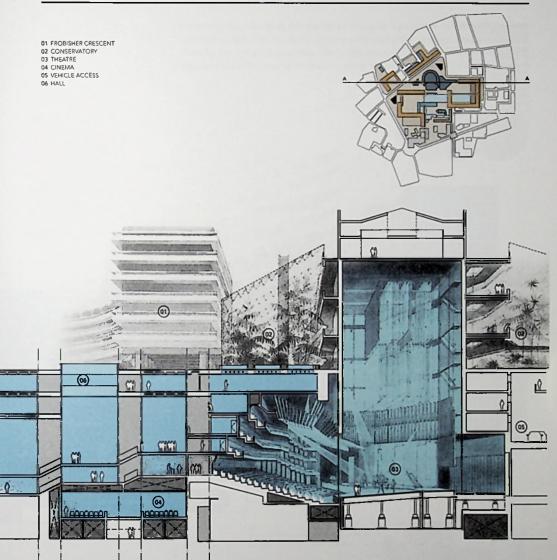
BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup



Constructing the Concert Hall in the shape of a shoebox was not viable for reasons of space. The example for this was the home of the Berliner Philharmonie by Hans Scharoun, erected five years before CP&B finished the final design for the Barbican Concert Hall in 1968.

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#### AA SECTION

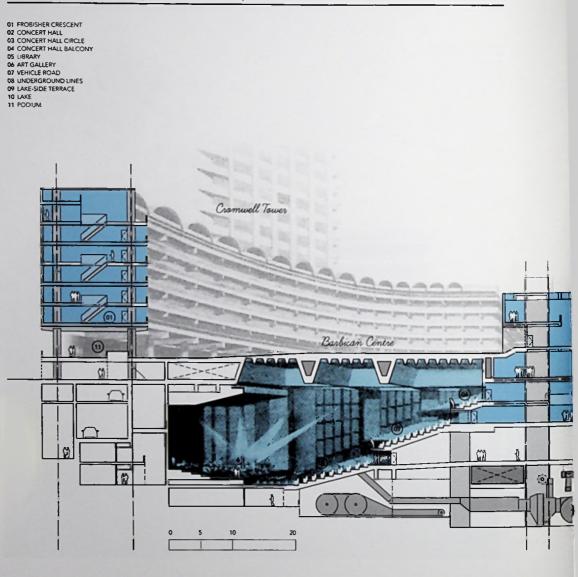


The large volume of the Barbican Centre, its location amidst housing blocks and the desire of the city authorities to avoid any interference with the residential use meant CP&B were required to fine-tune the section and use the structural elements of some buildings to enclose others. These proximity issues were solved by Ove Arup. One example is the Frobisher Crescent foundation walls which are also the rear wall of the concert hall.

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## Chapter 3 USES MIX AND INTENSITY

BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

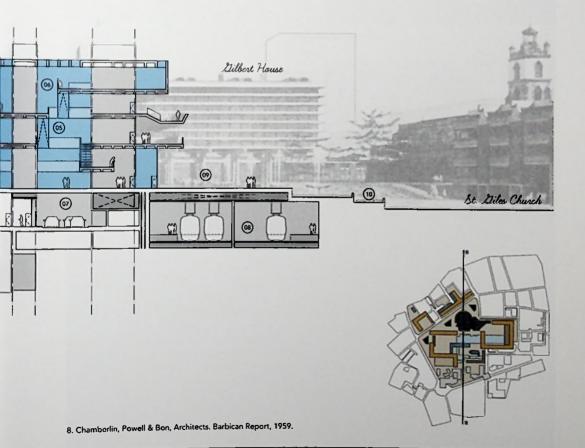


At present, the cultural programme has been intensified and spread out over seven floors. On Floor 4, there are two conference rooms and seven meeting rooms. On Floor 3, the Art Gallery and the Conservatory. On Floor 2 stands the Library. On Floor 1, there is the second amphitheatre. The main entrance to the Concert Hall from the lake-level terrace, the first amphitheatre and the Exhibition Hall are all on the Ground Floor. The stalls and the main entrance to the Theatre are on Floor -1. A cinema and another small room are on Floor -2. The complex is served by three restaurants.

**BB SECTION** 

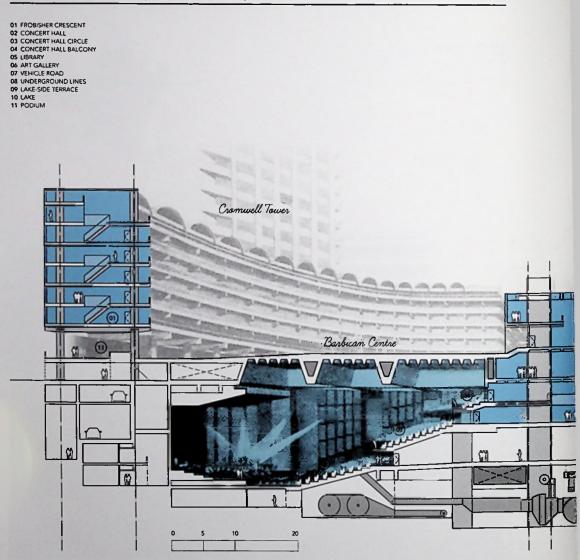
"The intention underlying our design is to create a coherent residential precinct in which people can live both conveniently and with pleasure. Despite its high density the layout is spacious; the buildings and the space between them are composed in such a way as to create a clear sense of order without monotony." CHAMBERLIN, POWELL & BON, 1959.





## Chapter 3 USES MIX AND INTENSITY

BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup



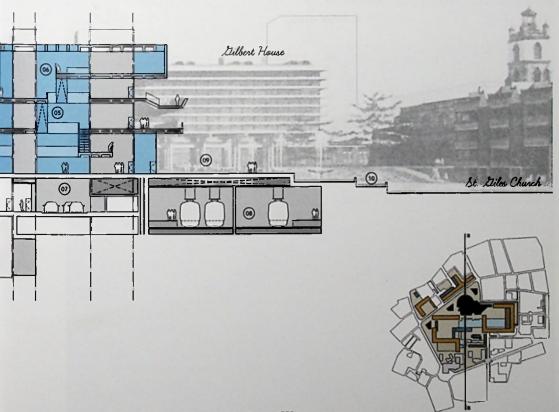
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"The intention underlying our design is to create a coherent residential precinct in which people can live both conveniently and with pleasure. Despite its high density the layout is spacious; the buildings and the space between them are composed in such a way as to create a clear sense of order without monotony." CHAMBERLIN, POWELL & BON, 1959.<sup>8</sup>



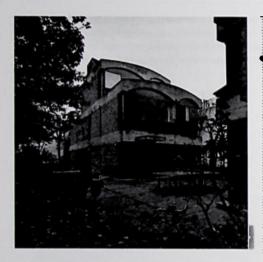
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8. Chamberlin, Powell & Bon, Architects. Barbican Report, 1959.

## Chapter 4 MATERIALS BOURGEOIS BRUTALISM

#### REFERENCES



MAISONS JAOUL Neuilly-sur-Seine. France Le Corbusier

#### 1951-1956

CP&B themselves recognized the influence Le Corbusier had had on them and this found an almost literal expression in certain building solutions. The vaulting for the Barbican penthouses recalls the brickwork vaulting used by Le Corbusier in Maisons Jaoul. Combining raw concrete with uneven brickwork walls generates the same sensations as that produced by the maisonettes which top the Barbican residential blocks. CP&B coincided with Le Corbusier at the CIAM IX, Aix-en-Provence, 1953.

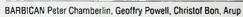


PALACE OF ASSEMBLY Chandigarh, India Le Corbusier

#### 1953-1963

In this building which houses the Legislative Assembly, the corpulence of the details and the hyperbolically sized structures express naval references until then unheard of in architecture. In the Barbican, one of the most characteristic elements is the use of "boat edge" balustrades.

The concrete surface in this case has been bush-hammered and there are no marks left visible from the formwork, the complete opposite of the Chandigarh case. These features of softened Brutalism are what Reyner Banham criticized about CP&B's work.









## Chapter 5 URBAN FORM URBANLY CENTRAL, SUBURBANLY PRIVATE

BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

If we take the separation of circulation fluxes as their starting point, then add in high-rise living while at the same time preserving within the City the row housing typology, we can see clear evidence of the efforts CP&B must have gone to in their attempts to provide both liveable conditions and sunlight for all the dwellings.

The Barbican Estate comprises 18 residential blocks and three towers. One of the blocks Milton Court (20) has been demolished. The largest apartments are located on the south side. On the north side there are more one- or two-bedroom apartments. The other types vary according to the orientation of each block.

#### **BLOCK WITH AN UP-AND-OVER LAYOUT**

The dwelling type of the block located East of the site, facing the narrow Moor Lane, is characterized by its being built on three levels with a front-to-back layout. The aim of the architects was to provide maximum views for the day rooms, with the disadvantage that the kitchens and bathrooms not receive either natural light or ventilation. Access is via central corridors located on alternate levels. The long balconies on the northwest-facing side act as emergency exits. This is the case of Willoughby House (02).

#### **BLOCKS WITH FRONT-TO-BACK UNITS**

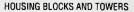
In the blocks with northeast-southwest orientations, most dwellings are front-to-back and span the full width of the building, that is 18.50 metres. The living area is located on the side which receives all the sunlight. The bedrooms face northeast. This is the situation in Speed House (01) Andrewes House (04), Thomas More House (07) and Defoe House (10).

#### **BLOCKS WITH DOUBLE LOADED CORRIDOR**

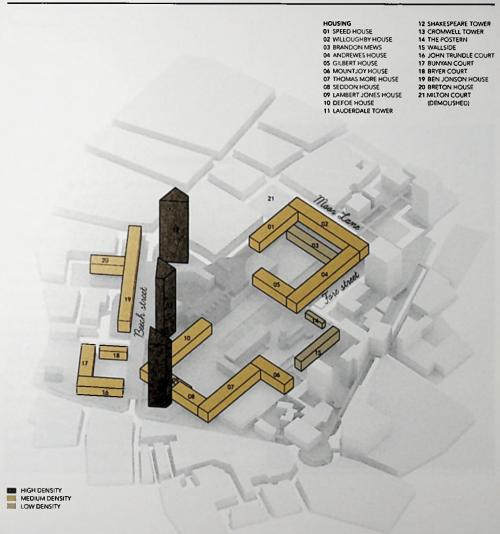
With the exception of Willoughby House, most of the north-south blocks have a central corridor on each floor. In this case there are two dwellings, one to the northwest and the other to the southeast on both sides of a central corridor running through the building. Ben Jonson House, with an orientation which may be assimilated as east-west, also has a central corridor. On the other hand, John Trundle Court (16) and Breton House (20) have small apartments which can be accessed from individual vertical access cores. The central corridor is present in Gilbert House (05), Mountjoy House (06) and Seddon House (08).

#### **ROW HOUSING**

Apart from the aforementioned examples, there are also the so-called garden-flats, located underneath the podium, at lake or garden level. The northeast-southwest facing blocks, such as Speed House (01), Thomas More House (07) or Defoe House (10) have dwellings with private gardens looking onto the interiors of the block and in the case of Andrewes House (04), towards Fore Street.







#### **HIGH-RISE HOUSING**

At the dividing line between the north and south sides of the Barbican, aligned with Beech Street, there are three tower blocks with a polygonal floor plan. Cromwell Tower (13), located further north, is 43 storeys high above the podium. The other two, Shakespeare Tower (12) and Lauderdale Tower (11), are 44 storeys high. The floor plan for each tower comprises three dwellings, each with a different orientation.

## Chapter 6 ACCESS THE ELEVATED STREET

REFERENCES



#### CODAN SHINONOME Tokyo, Japan

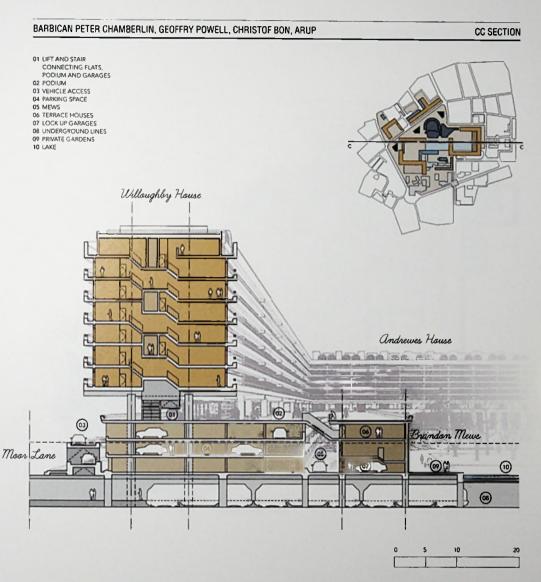
Riken Yamamoto, Kengo Kuma, Toyo Ito et al.

#### 2003

Located on reclaimed land in Tokyo, Shinonome represents a new type of public housing by combining dwellings, commercial facilities, offices (SOHO -Small Offices, Home Offices) and public facilities in one project. In the 20<sup>th</sup> century, Japanese multi-family housing tended to eliminate other functions from the buildings and consequently only contained dwellings. The loss of variety of functions in one location resulted in degradation of the completeness of services needed for a high quality of life. The Codan Shinonome development mixes public housing, to the greatest extent possible, with other functions -childcare, offices and other facilities- in order to stimulate diversity and raise the standard of living.

In order to take advantage of the difference in the land level, a retail street is created underneath the walkway providing access to the dwellings, in a pedestrian-only area.





The plan designed by CP&B for Willoughby House can be seen in this section with the penthouses and three level dwellings, the interior corridors, the mews separating them from Brandon Mews and the open space of Speed Garden. Underneath this programme we can distinguish the parking facilities and the underground lines which run East to West in the direction of the lake.

There is a staggered section in the volume going down towards the West and one can understand how the highwalks which run through the whole estate actually work. The elevated pedestrian street becomes the real reference level and provides access to the vertical circulation cores of the blocks and to the row houses from the stair bridges which overhang the mews.

## Chapter 7 DWELLINGS VERTICAL GROWTH

BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

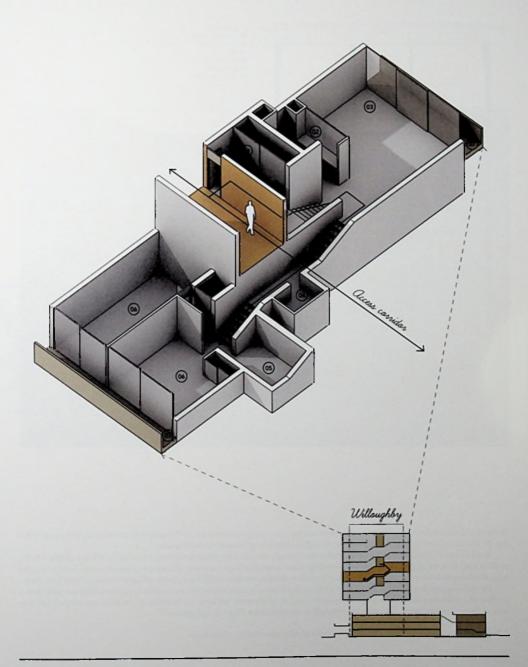


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Willoughby House, located at the eastern end of the site, faces the buildings on the other side of Moor Lane, a narrow street with limited views. There are three components on the same layout: a central body with six residential storeys, penthouses at the top and car parking beneath the podium. Chamberlin, Powell and Bon came up with a special solution for the central body which they called: Scissors or Down and Under (Up and Over in some cases). This means that you enter the dwelling from the interior corridor and then go down half a storey to the living room and go down again two sections more to go, in the first case, under the interior corridor to get to the bedrooms. In other cases the floor plan is the same but going up all the time. The aim is to make the living rooms face West, overlooking the communal garden towards Speed Garden, and the bedrooms look onto the street. For this reason, the dwellings are front-to-back, going from one orientation to another. The toilet and the badroom are interior on the floor plan and receive no natural light. In order to not have too many circulation cores, the corridors are located on intermediate levels in relation to the dwellings. In this block there are three vertical circulation cores, one at the centre and two at each end.

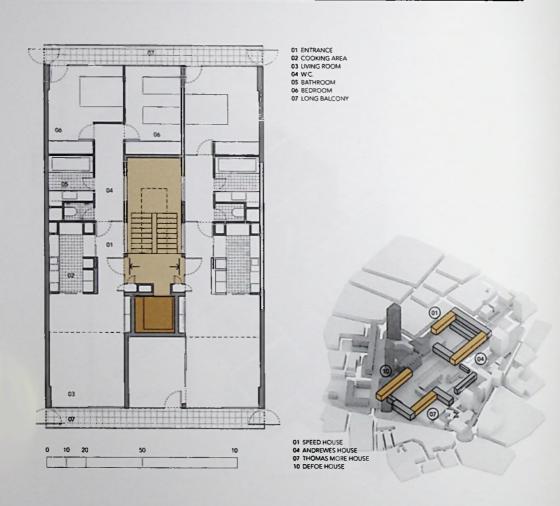
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DOWN-AND-UNDER BLOCK. TYPICAL UNIT



## Chapter 7 DWELLINGS CROSS VENTILATION

BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup



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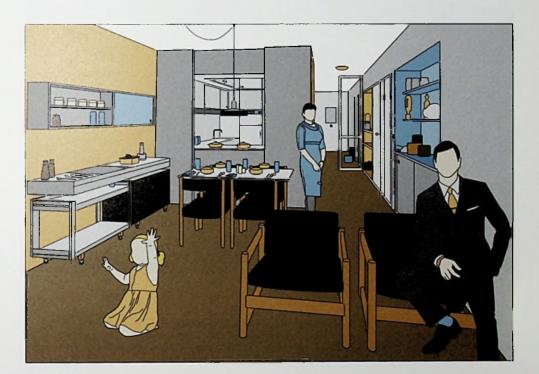
In the case of the blocks with northeast-southwest orientation, the main purpose was for the living areas to receive sunlight for most of the day. In this case a front-to-back housing solution was adopted with long balconies on both facades.

Speed House (01) is six storeys high with garden-flats beneath the pedestrian podium which runs around the whole building. On the podium level there are eight glazed entrances providing access to two dwellings per storey. The service spaces are on the interior without natural lighting with the exception of that coming from the vertical access shaft which has a glazed perimeter and lets in light from above.

The building regulations had to be adapted for these dwellings to be approved by the Authorities as at present kitchens must have a window of a minimum size or have proper ventilation. In place of the term "kitchens" an exception to the norm was adopted and they were renamed "cooking areas". This way they managed to obtain London City Council approval.<sup>9</sup>

9. Barbican living. Barretts Solicitors' Guide to the Barbican Area. www.barbicanliving.co.uk





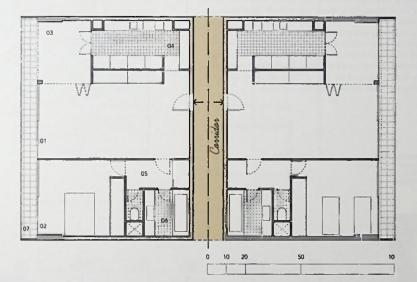
## Chapter 7 DWELLINGS DOUBLE LOAD

BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

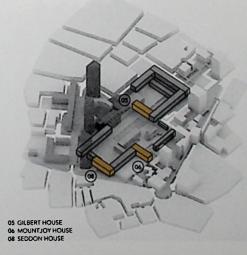


These blocks have a dwelling on either side of the corridor. The vertical lift and stair shafts are located at the ends. Most dwellings are laid out with three bays and an exterior long gallery. Gilbert House (05) stands on twelve large double cylinder-section columns which are supported over the lake to give a continuous view over the water feature. The podium is interrupted and in this case there are no row houses on the lower levels. The penthouses are for larger apartments of up to five bedrooms over two floors.

#### DOUBLE LOADED CORRIDOR BLOCK. TYPICAL UNITS



01 LIVING ROOM 02 BEDROOM 03 EXTRA ROOM 04 KITCHEN 05 W.C 06 BATHROOM 07 LONG BALCONY



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## Chapter 7 DWELLINGS GEORGIAN STYLE

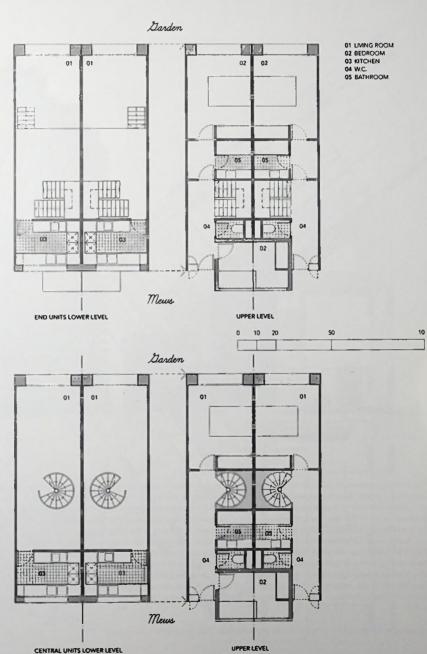
#### BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

The row houses are concentrated in Brandon Mews (03) and Lambert Jones Mews (09). In Wallside (15) and The Postern (14) the sizes of the units are larger and they have the features of a more urban block. Brandon Mews (03) is located to the west of the Willoughby House (02), facing the lake. The layout is a line of twenty-six two-storey row houses. Access is by going down from the public podium, under the Willoughby House (02) block. The interior solution adopted for the end dwellings is a split level living area and a straight two flight staircase. Most of the ground floor is raised in relation to the level of the lake. The twelve dwellings located in the middle do not have this height difference and there is a spiral staircase connecting the two floors. There is car parking at the rear of the dwellings in the Mews between this block and Willoughby House (02).

03 BRANDON MEWS 09 LAMBERT JONES MEWS 14 THE POSTERN 15 WALLSIDE



#### GARDEN-FLATS. TYPICAL UNITS



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## Chapter 7 DWELLINGS THE SKYSCRAPER

BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup

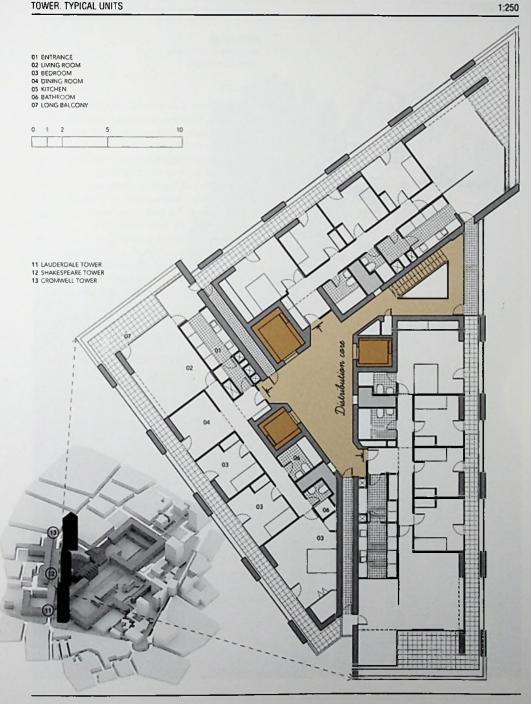


The three high-rise towers are similar in terms of layout. The only variation is the use of the final rooms, in some cases bedrooms, in other cases, living rooms, whereby the orthogonal shape is altered due to the requirements imposed by the triangular geometry of the floor plan. Orientation varies from one tower to another so that all rooms receive sunlight at one point in the day. Access to each tower block is produced in a different way. The service spaces are interior meaning they have no natural light and the main spaces are aligned along the facades behind a continuous gallery which widens out into a terrace-like area in the living room.

Access to the Cromwell tower (13) is from the north podium and from Beech Street or Chiswell Street level. The Shakespeare tower (12) is accessible from the north and south podiums, each at a different level. Lauderdale is a bit more isolated in the west corner and is connected by the south podium. Each tower has a central triangle-shaped lobby with three lifts. The service spaces are interior meaning they have no natural light and the spaces served are aligned along the facades behind a continuous gallery which widens out into a terrace-like area in the living room. The zigzag technical solution for the drainage pipes is also worthy of note, installed to avoid excessive downward flow momentum. There is a small hatch in the lifts so that deliveries can be made from the communal spaces without invading privacy.<sup>10</sup>

10. Barbican living. Barretts Solicitors' Guide to the Barbican Area. www.barbicanliving.co.uk

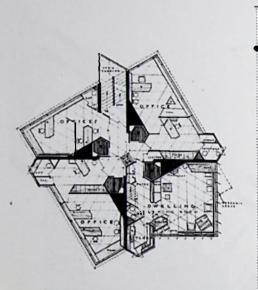
TOWER. TYPICAL UNITS

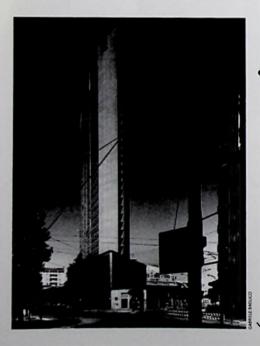


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## Chapter 7 DWELLINGS THE SKYSCRAPER

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PRICE TOWER Bartlesville. United States Frank Lloyd Wright

#### 1953-1955

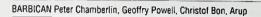
The Price Tower floor plan, like its unbuilt precursor Saint Mark's Towers in New York City (1927-1931) is based on rotating and repeating the corner room four times over. The three Saint Mark's towers laid out in a triangle shaped park, were deliberately separated by Wright from the other buildings in the area and remind us of the three Barbican tower blocks and their location between the north and south areas. In the case of the Price Tower, the double-height residential units are mixed with office units to form a multi-purpose complex. Peter Chamberlin visited this building in the early 1960s and Wright's influence is apparent in the Cromwell, Shakespeare and Lauderdale towers whose floor plans are obtained by the rotation and triple repetition of a large stretched dwelling.

PIRELLI TOWER Milan. Italy Gio Ponti

#### 1956-1960

This was one of the first towers to abandon the geometry of the rectangular block form and adopt a stylish contour with sleek edges and fine details on the curtain wall. Ponti, editor of Domus and product designer for the Italian furniture industry, promised his client, Alberto Pirelli, that he would build a "monument" which "would honour both city and society" and that he would "create an intrinsic dignity, defined by proportions, simplicity, purity and both correct materials and an extreme attention to detail."<sup>11</sup> This refined approach to erecting an urban landmark was taken into consideration by CP&B in the design for the three Barbican towers which due to their height would become true icons for urban redevelopment in the City of London.

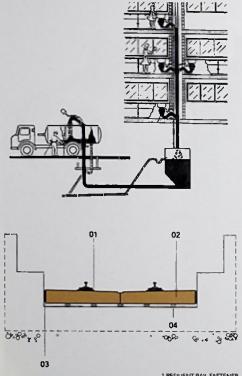
11. Terry Kirk. The Architecture of Modern Italy. Volume 2. Visions of Utopia. Princeton Architectural Press, 2005. P. 167.





## Chapter 7 DWELLINGS TECHNOLOGICAL ADVANCES

#### REFERENCES



1 RESILIENT RAIL FASTENER 2 FLOATING SLAB 3 RESILIENT PERIMETER ISOLATION 4 RESILIENT SUPPORT PADS



#### WASTE DISPOSAL SYSTEM Louis Garchey

#### 1927

This is a mechanism for waste disposal built into kitchen sinks which helps get rid of leftovers, fruit and vegetable peel and other objects such as glass bottles or tin cans. It is not designed to deal with the plastic bottles used nowadays. Garchey initially used it in a Parisian housing block. Below the sink there is a spherical container which receives the waste and flushes it down a pipe running down to the general deposit. There are 150 deposits underneath the Barbican which are emptied every three weeks by a tanker truck which transfers the waste to the refuse dump or the incinerator.

NOISE AND VIBRATION REDUCTION SYSTEM Washington. United States Washington D. C. Metro, (now WMATA)

#### 1969

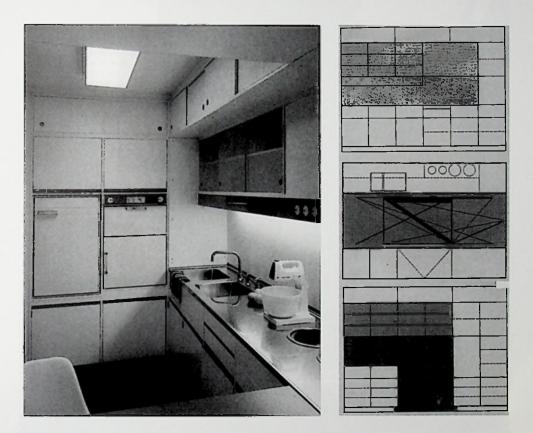
Installing a floating slab on the section of underground running under the Barbican brought a significant reduction in noise levels for the residents of neighbouring buildings and especially for the Concert Hall audiences. A similar solution, which can be seen in the detailed diagram, was later incorporated into the Washington D.C. Metro.

CUSTOM WASHBASINS Barbican. London. United Kingdom Twyfords

#### 1960

The small bathrooms in some of the Barbican dwellings required minimal washbasins in the bathrooms. The standard models did not fit into the planned space and CP&B designed, in partnership with the manufacturers, small washbasins. The fact that the dwellings targeted buyers from medium-high income groups made custom solutions an option and these were meticulously built into the small spaces available for some apartments.

#### BARBICAN Peter Chamberlin, Geoffry Powell, Christof Bon, Arup



Most of the interior elements for the dwellings, ranging from toilets to kitchen furniture to even the locks were purpose built for the Barbican. The waste disposal system, the underfloor heating and the noise insulation on the underground tracks were some of the innovations which the architects incorporated into the final design.

The design for the kitchen formed part of the documentation handed over by CP&B in 1959 to be applied to the majority of the Barbican kitchens. These were jointly designed with the research department of the municipal gas company and reflect the significant desires for rationalization which CP&B wished to apply to all the technical details. Despite the fact that electric kitchen appliances were eventually installed, the layout, heights and dimensions were preserved in the final design. At present, as the building is listed as part of architectural heritage, repairs and replacements are regulated by special guidelines.<sup>12</sup>

12. David Heathcote. Barbican over the city. Wiley, 2004. P.140-141.

## EPILOGUE AN EXQUISITE GHETTO

## A HIGHLY DESIRED ARTEFACT

Forty years on from the arrival of the first residents and thirty years after the complex was completed, the Barbican dwellings have come to be assets commanding prices on the real estate market which are both high and stable. Despite the fact that this increase in property prices in itself would have been enough to demonstrate the success of the project, there remains no doubt that the CP&B proposal would have also achieved this on its own. Yet the increase in property prices is often due to factors such as the local environment, new infrastructures or other twists of fate which have little to do with the merits of the architects. Nevertheless, in the case of the Barbican, the reason for its eventual success was the determination of those who stubbornly believed it was possible to create the complex city with a clear focus on the well-being of its residents.

This great artefact, which has been called by some an Instant City,<sup>13</sup> monolithic and lacking in appeal, by others a fly by night *pied-à-terre* for unfaithful executives and by Reyner Banham himself an experiment in social housing for the wealthy, held within its conception a purpose even more resilient than the concrete used to build it.

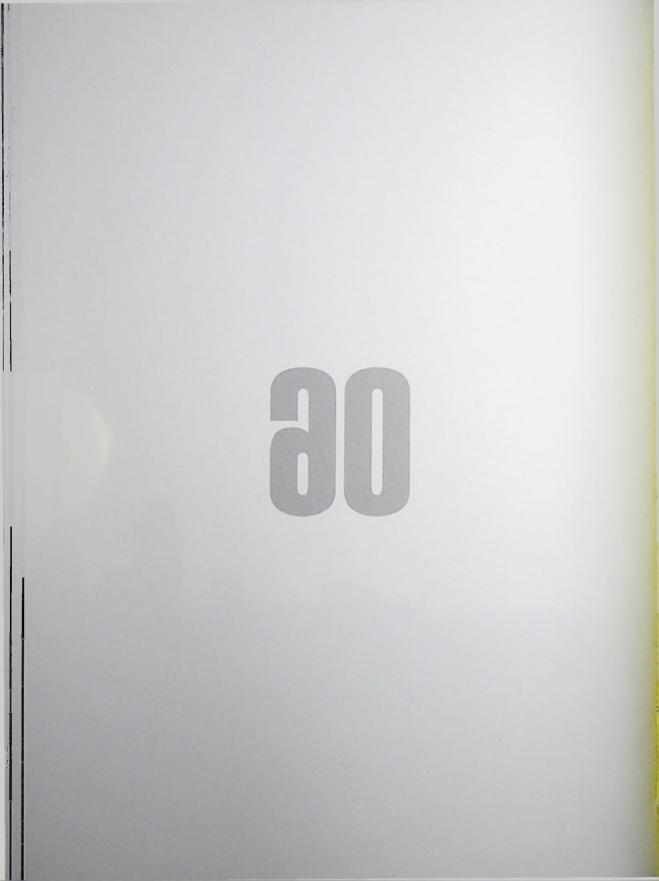
The plan was to buck the trend, to halt the sprawl and to create structures which could assume the complexity of collective living. Basically, they wanted to recreate the solidity of Georgian London, the hustle and bustle of the medieval city and the peace and tranquillity of the suburbs all in one single site and on the scale of a 20<sup>th</sup> Century metropolis. The most astonishing thing is they actually achieved their goal. It has been admitted that there are errors, many errors, at the scale of its size and ambition. It is not, nor does it have the vocation to be, a master work. Its creators are not listed among the great names of the discipline. It is merely an epic project, built by virtually unknown architects, where people want to live.

13. Architectural Review, August 1973. P. 67.











# 07

## **CRISTAL LIQUIDE**

**RÉSIDENCE DU POINT DU JOUR** Fernand Pouillon Boulogne-Billancourt. (Paris. France) 1957-1963 48°49'42.55"N / 2°14'54.50"E

In summer 1959, Fernand Pouillon presented the Point du Jour show flat on the site of the former Salmson factory in Boulogne-Billancourt to one minister and thirty mayors from the metropolitan area. His aim was to build over 2,000 apartments on seventeen acres of land demonstrating his "goodwill towards the socially disadvantaged."<sup>1</sup> It was a house for everyone, affordable for everyone with a floor area ratio below 0.5.

The urban conception of this complex is based on large open spaces, with lakes and vegetation, interconnected in several courtyards. Pouillon often referred to this generic void surrounded by constructions as "cristal liquide" delimited by four planes: "Let's look at this notion of space, this built space which has had such a great influence on humanity. This is not a horizontal space but a space surrounded by constructions which mark out a "void", this liquid crystal, as I have often called it, is in general delimited by four planes, at times by two in the case of the street."<sup>2</sup>

Pouillon also spoke of the "interior landscape" of his urban complexes which one moves around at pedestrian level and which corresponds to a succession of atmospheres of different proportions, which open out or close in the perspective in a visual game which shifts as the viewer moves around.

In this compositional system, once two orthogonal axes and the size of the interior spaces have been chosen, the only decision left to take concerns the proportions of the sides of the void and its distance from the person crossing it. It is a phenomenon related to parallax,<sup>3</sup> in other words to the angular variation of the positions of the volumes according to the selected viewpoint.

2. Fernand Pouillon interviewed by Jean-François Dhuys. "Passions et angoisses d'un créateur". Les Nouvelles Littéraires, 20 April 1978.

3. See the concept Parallax as generator. 05 Corso Italia. P. 182.

<sup>1.</sup> Fernand Pouillon. Mémoires d'un architecte. Éditions du Seuil. P. 359.



"'I would like to state the contrast existing between the 'acceptance of life' of Pouillon and the 'artificiality so as to recognise life' in Nouvel." REM KOOLHAAS, 2009.4



07

4. Rem Koolhaas. Ville d'aujourd'hui, vies de demain. Lecture at Arc en rêve. Bordeaux, 2009.

# **CHARACTERS**



FERNAND POUILLON Architect, 1912-1986



AUGUSTE PERRET Architect, 1874-1954

He was one of the outstanding French architect-builders in the post-Second World War period, having graduated as an architect in 1942. He worked for two years with Eugène Beaudouin, who had been the president of the academic committee for his final degree project. He was a member of the Communist Party until 1946. For the CIAM IX which was held in Aix-en-Provence in 1953, Pouillon organized a parallel event to present his urban analysis of Aix-en-Provence, a sign of how far he had distanced himself from the International Congress and how he had become independent of Modern forms, a standpoint he was to maintain throughout his life.

Between 1951 and 1955 he worked as an assistant to Auguste Perret on the reconstruction of Marseille Port. In 1957, after the death of his mentor, Pouillon moved into Perret's former offices in rue Raynouard, Paris. He inherited from Perret the admiration for the figure of the master builder, whereby the same person took on the role of both architect and builder. His business activity mostly involved building large housing complexes for the middle class.

When CNL (Comptoir National du Logement), his property development-construction company, went bankrupt in 1961 he was imprisoned for embezzlement. Then after leaving prison, he was exiled to Algeria at that time free from French control. He was not to return to France definitively until 1983. In 1984, he was awarded the title of Officer of the Legion of Honour. Perret was a clever interpreter of French Neoclassicism and also recognized the importance of standardization in architecture. He specialized in the novel use of bare reinforced concrete structures for traditional typologies and displayed an impressive attention to detail.

For Le Havre redevelopment, which took place following the Second World War, he used the grid, which was also a basic element in the layouts of Pouillon, as the basis for designing arrangements and perspectives. The new Le Havre by Perret is half-way between the open-block Modern City and the19<sup>th</sup> Century cityblock; between the guidelines of the Athens Charter and the traditional city.

In the mid-20<sup>th</sup> Century, Perret became involved in a heated discussion with his former disciple Le Corbusier about the size of windows. This debate on one single element was to sum up their two opposing views of life and architecture (see p. 165). Auguste Perret believed that the window should not be horizontally long and slender, but vertical as for him the city should not be seen as in a widescreen film but rather as in a painting framed on four sides. The precept of the vertical window was followed unquestioningly by Pouillon.



JACQUES CHEVALLIER Politician, 1911-1971



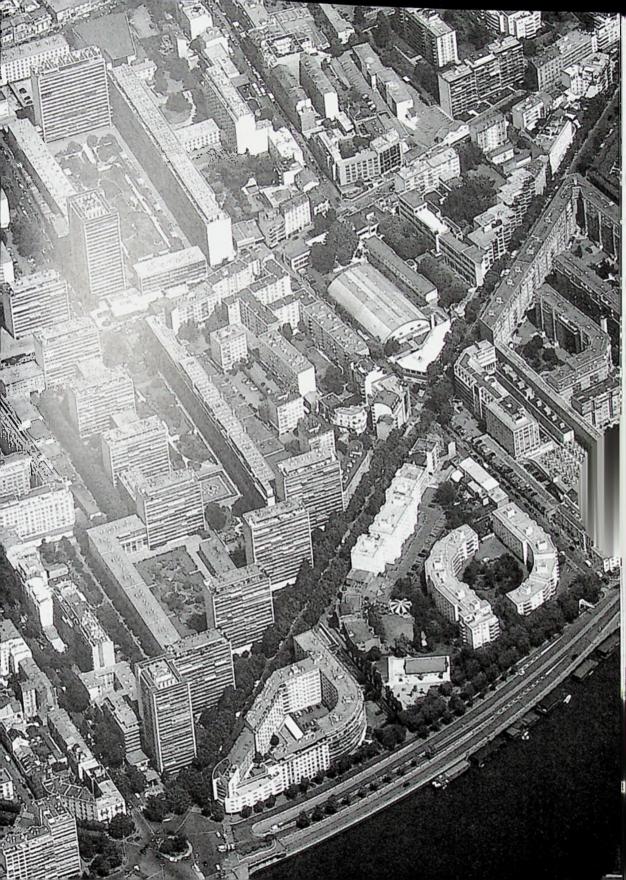
PIERRE SUDREAU Politician, 1923-1984

He descended from a long line of French nobility with business in Algeria and was Secretary of State for War between 1954 and 1955, and later Minister of Defence under Pierre Mendès France. Furthermore, at the same time he was also Mayor of Algiers from 1953 to 1958. In 1962, he mediated between the OAS and the FLN in attempts to bring an end to the violence. Following Algerian independence, he was appointed Director of the Autonomous Port of Algiers and in 1964 became one of the first French citizens to adopt Algerian nationality. In 1965, Jacques Chevallier commissioned several projects to his friend Pouillon to upgrade the house-building programme and the tourist facility infrastructures for the newly independent Algeria. He was a member of the French Resistance and spent six months in Fresnes prison where years later Pouillon would also be imprisoned. He was appointed Minister for Education under Charles de Gaulle in 1958. Later he was to play an essential role in developing the grands ensembles or new cities in the Parisian banlieues, as well as a network of infrastructures around the capital.

Sudreau admired the urban operations in Algeria and considered them to be at the forefront of French contemporary urban planning.

Initially, he was fond of Pouillon and supported the CNL, the property development-construction company set up by Fernand Pouillon in 1955. He was also a keen supporter of the Point du Jour operation until the CNL financial scandal came to light in 1961. It was at this point that Sudreau, then Minister of Construction, blocked the permit for the Point du Jour project and tried to avoid being personally affected by any backlash from the issue. By the time Point du Jour was completed in 1962, Sudreau had already left the Department of Construction and was appointed Minister for Education under Georges Pompidou although he only remained in the post for seven months.



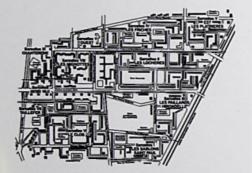


# Chapter 1

# **REAL ESTATE DEVELOPMENT** PRIVATE ALTERNATIVE TO THE GRANDS ENSEMBLES

REFERENCES



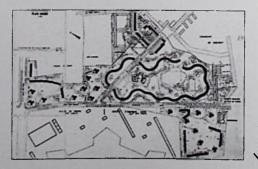


## SARCELLES GRAND ENSEMBLE Sarcelles. France Jacques-Henri Labourdette and Roger Boileau

## 1954-1976

In 1958, Pierre Sudreau, as Minister of Construction, promoted this new *cité* in the outskirts of Paris, amongst others. There are 12,268 dwellings, laid out in horizontal blocks in a straight line. One of the project architects, Jacques-Henri Labourdette, took over from Pouillon on Point du Jour after the property development-construction went bankrupt.





LES COURTILLIÈRES Pantin, Paris, France Émile Aillaud

## 1955-1958

This grand ensemble, comprising almost 1,600 dwellings and also developed by Pierre Sudreau, was to be one of his greatest political success stories. It is characterized by how it eschews straight lines, termed "monotonous and dehumanizing" by Aillaud and uses the curve to convey all the poetry lacking in the collective social housing of the time. However, research commissioned by Sudreau himself on completion of the work was to find serious flaws in the execution which, along with the lack of facilities and infrastructures in the area, led to the Aillaud project becoming one of the first failures of the Social Housing Plan 1954-1964.

#### **RÉSIDENCE DU POINT DU JOUR Fernand Pouillon**



"Everyone was warning me to be cautious. (...) 'Pouillon, do not trust anyone. The architects are frightened of you, you scare them. Watch out, you know people talk everywhere...' " FERNAND POUILLON, 1968.<sup>5</sup>



07

Fernand Pouillon intended to build well, with a low budget and "in harmony with human aspirations". He wanted to be the most competitive property developer and to slash the prices of the new housing developments of 1960s Paris. To do this, he optimized the structure, stand-ardized the building solutions, reduced the interior circulation spaces in the blocks, broke the building work down into as many sub-contracted tasks as possible, negotiated lower prices, cut profit margins and directly intervened in the accounting operations for the construction work. All these factors were enormous innovations in the approach to contracting construction tasks for a residential building. With this in mind, Pouillon created the SET, the Societé d'Études Techniques, in 1948 which was a type of technical research office, over which the architect had complete control. He claimed to be the inventor of this novel concept, Building Technical Control, although the pioneer was actually Veritas, founded in the 19<sup>th</sup> Century as an office for information on maritime insurance.

Pouillon wrote about these years in his memoirs relating that: "Others asked me: 'Why do you insist on selling so cheaply? You are making a lot of enemies. The property developers envy you, you have slashed prices. Why? When you could easily make ten times the amount?' Some were more specific: 'The bankers are concerned. You work with very narrow margins. The banks are starting to take an interest in construction. Your policies go against their interests. They cannot find the depth of field or the profits they want. It is madness to try to fight the financiers. What you are building is worth 150,000 francs per square metre. Selling it for 83,000 francs doesn't make sense.' "5

5. Fernand Pouillon. Op. cit. P. 333.

# Chapter 1

# **REAL ESTATE DEVELOPMENT** PRIVATE ALTERNATIVE TO THE GRANDS ENSEMBLES

#### REFERENCES







RÉSIDENCE LE PARC Meudon-la-Forêt. France Fernand Pouillon

## 1957-1962

Due to its high aspirations and unbeatable prices this is the most ambitious operation conducted by Pouillon and is comparable to the publicly developed grands ensembles being built at the time on the outskirts of Paris. This project was not executed by his company CNL, but by a company created for this specific operation by Jacques Chevallier, who had been Pouillon's client and friend since the early years in Algeria. The 2,635 dwellings and commercial units of the first phase were mostly purchased by local companies to rent out to their employees. Stone, coming from a quarry owned by the property development company, is the differentiating feature unlike the concrete used in the other social complexes.

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**RÉSIDENCE DU POINT DU JOUR Fernand Pouillon** 



Point du Jour is a housing development, complementary to the 1954-1964 Plan which prioritized social housing in France. In this decade, the country lost two of its largest colonies, the former Indochina and Algeria, with the subsequent repatriation of citizens to the metropolis. The housing shortage in late 1950s France stood at over four million units and the industry fully committed itself to building the *grands ensembles*, isolated complexes comprising blocks and towers following the guidelines of the Athens Charter. These were soon to become hotbeds of social conflict and segregation. Point du Jour is a private housing development, with 2,260 dwellings, facilities and commercial units at affordable prices for citizens with an average income. This way, Pouillon and his business partners took some of the burden for public house-building off the State. In Point du Jour, the privileged location, the home ownership-based purchase agreement, the average citizen resident type, the quality of the build and the attention to detail in the open spaces of the blocks have all led to the complex being maintained in acceptable condition.

# Chapter / REAL ESTATE DEVELOPMENT RISKY BUSINESS

## **RÉSIDENCE DU POINT DU JOUR Fernand Pouillon**

"My career as an architect, which started in Marseille in 1935, then moved on to South-East France, Algeria, Iran and finally Paris, has finished here. Twenty-six years of struggle, of worries, of exhausting work, of hope, of pride, have come to an end in Santé prison, Cell 36." FERNAND POUILLON, 1968.<sup>6</sup>





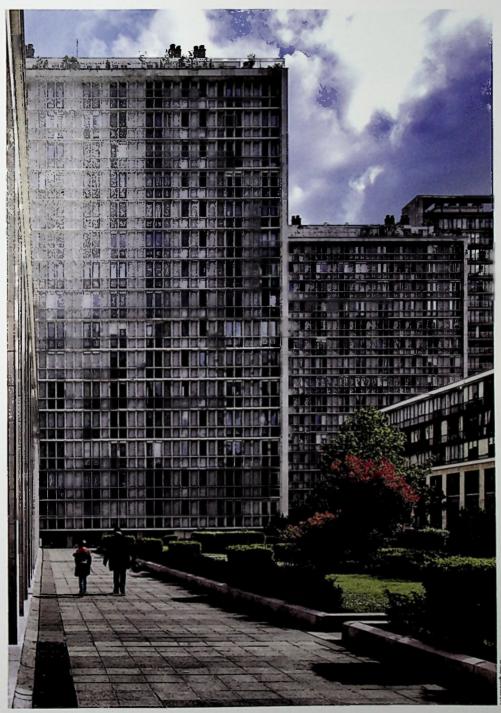
1963, Fernand Pouillon climbs out of the police van to give a statement as the accused in the embezzlement trial for his company, CNL.

Nonetheless, the Point du Jour operation was to cost him dear as it bankrupted CNL, business consortium which carried out the integral management of the building process. Its functions included architectural design, property development, construction work, sub-contracting as well as sales and marketing. Pouillon, through this approach to building which was innovative at the time, managed to reduce both costs and deadlines. Yet by doing so he came up against the entire building sector as he had destroyed the existing corporate status *quo* by becoming the key player in the private property market.

Pouillon's arrogance, in claiming that he could build cheaper, better and faster than any of his peers, led to confrontation with both the *Ordre des Architectes* and businessmen involved in the construction sector as they saw him as a difficult rival. A series of embezzlements by some CNL administrators led the courts to intervene. Pouillon and four other directors were accused of fraudulent accounting and diverting funds.

The Point du Jour complex was not completed by Pouillon owing to CNL's financial issues. It was the entity SCIC, Societé Civile et Immobilière de la Caisse des Dèpôts el Consignations, with Jacques Henri Labourdette as architect, which completed the work.

6. Fernand Pouillon, Op. cit. P. 25.







# Chapter 2 URBAN DESIGN CONNECTED VOIDS

**RÉSIDENCE DU POINT DU JOUR Fernand Pouillon** 



Fernand Pouillon, who had worked alongside Eugène Beaudouin from 1942-1944, learnt from him how to handle the void in the large esplanades and the prismatic volumes of interconnected buildings. The Cours des Longs-Prés at the centre of Point du Jour is 225 by 34 metres. In terms of size it is not comparable to the Maidan of Isfahan which was the public space studied in-depth by Beaudouin, yet in terms of the continuity of the open spaces it is similar.

Pouillon's debt to Beaudouin is having learnt the lesson that "a city is far more interesting for the relationship between the voids, than for the relationship between its built spaces."<sup>7</sup>

7. Ruben Ter-Minassian. Histoire de Eugène Beaudouin, architecte et urbaniste. Vidéothèque de Paris, 1983.



# Chapter 2 URBAN DESIGN CONNECTED VOIDS

#### REFERENCES





### SAINT MARK'S SQUARE Venice. Italy

## 1177-1640

The oblique connection between the Piazza and the Piazzeta with the clock tower acting as the linker is one of the most outstanding urban models due to the precision of its adaptation into the site and to the subtle relationships between the elements. Uniformity is eschewed and each single volume is sized according to its relationship with the whole ensemble. Pouillon highly valued these compositional rules which had been tried and tested throughout the history of architecture.

### FORT Lahore. Pakistan

## 1556-1674

Lahore Fort in Pakistan is made up of a series of courtyards which connect the administration area to the smaller private spaces. Its location in the north of the old city of Lahore on the edge of the city walls and its connection with the mosque and the bazaar establish unexpected relationships between built spaces and voids.



# MAIDAN

# Isfahan. Iran

### 1598-1629

Eugène Beaudouin (biography on page 118) was interested in large urban complex planning. Awarded the Prix de Rome in 1928, he set out to conduct an in-depth study of the Maidan of Isfahan in Iran. In his article *"Ispahan sous les grands Chahs. XVII eme siècle,"*<sup>8</sup> he analyses the voids of the imperial square, the 45° turn of the mosque located to the South and how the square grid of the bazaar dissolves off to the North. The most outstanding thing about the Maidan of Isfahan is how the spaces between the Naqshe Jahan Square measuring 500 by 160 metres, the mosque and the great bazaar are interconnected.

8. Urbanisme 10, 1933. P. 8-42

### SAINT PETER'S SQUARE Rome. Italy

#### 1656-1667

This square was designed by Gian Lorenzo Bernini as the anteroom to Saint Peter's Basilica. It is trapezium-shaped at the centre with colonnades laid out in two semi-circles, a clear example of theatralizing public space and connected voids.

# Chapter 2 URBAN DESIGN CONNECTED VOIDS

"Pouillon's legacy is his capacity to relate urban issues to architectural issues, in other words he has never dissociated construction, architecture and the urban form. Subsequently, his complexes have unquestionable coherence and cohesion." JACOUES LUCAN, 2003.9

avenue Pierre Drenier





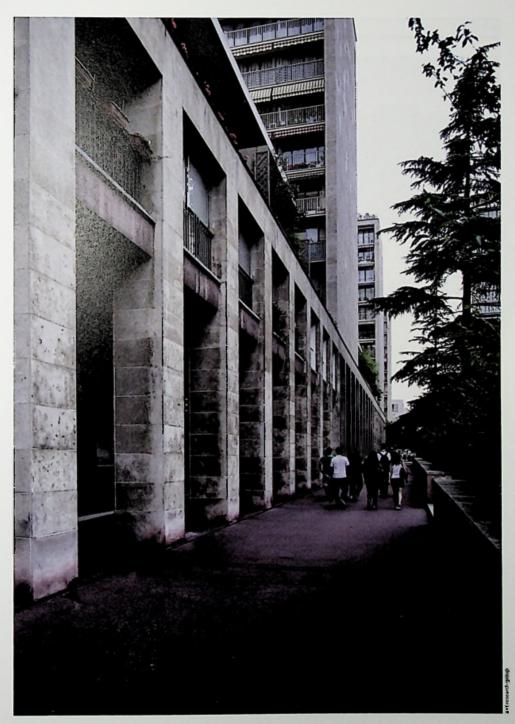
# Chapter 2 URBAN DESIGN THE ANALOGOUS CITY

**RÉSIDENCE DU POINT DU JOUR Fernand Pouillon** 



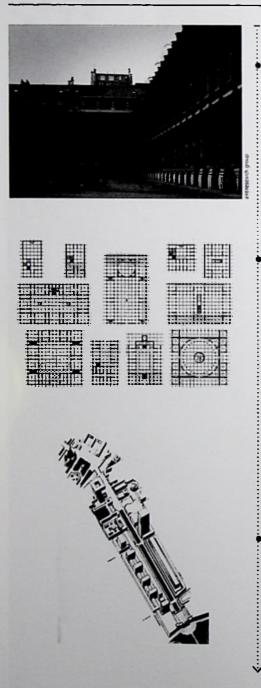
Fernand Pouillon, following in the *Beaux Arts* tradition promoted by Auguste Perret, distanced himself from the open block as a modern paradigm. He was unimpressed by the hygienism and was more in favour of continuity with tradition, a clever combination of towers, blocks and longitudinal elements with large pedestrian-only public spaces to add dignity and integrity to the layout.

Pouillon's Modernism is as such a Modernity with historical references, with a vocation towards analogy in the Aldo Rossi sense of the word, which recreates the urban elements of the collective memory.



# Chapter 2 URBAN DESIGN THE ANALOGOUS CITY

#### REFERENCES



PALAIS ROYAL Paris. France Jacques Lemercier et al.

### 1633

The proportions of the volumes and the pattern of the openings on the interior of the Palais Royal convey a sensation of solidity and balance, something Pouillon aimed to recreate in the open spaces of his large collective housing complexes. Jacques Lucan defines his urban complexes as a type of analogous city, a series of familiar spaces, easily legible to the user.

#### LESSONS IN ARCHITECTURE J L N Durand

#### 1819

Durand established the types of elements which Architecture should be based on. In his sheets titled: porches, vestibules, staircases and courtyards, he provided a complete catalogue of building elements, which were endlessly reproduced until new techniques and industrial imagery put an end to them. Pouillon did not succumb to the technological wave.

UNTER DEN LINDEN Berlin, Germany Cornelis van Eesteren

1925 (competition entry)

Van Eesteren<sup>10</sup> designs this competition with the theme of *Balance*, as he attempts to create a balance between ancient and modern life, between ancient and modern forms, between low- and highrise buildings, and between public space and built space.

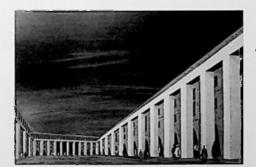
10. Franziska Bollerey. "C. van Eesteren de cerca. Diarios, cartas, notas personales y una entrevista". Urbanismo 8. 1990.



LE HAVRE REDEVELOPMENT Le Havre. France Auguste Perret

## 1945-1964

Le Havre redevelopment carried out by the Auguste Perret team after the Second World War did not make a clean break with the past as was to occur in many new cities planned around that time. Pouillon's mentor, Perret, upheld the unity of the intervention with an iron fist, respected the existing urban layout, used modulation like the French 18<sup>th</sup> century essayists and incorporated prefabrication applied to reinforced concrete as an innovative building solution.





CLIMAT DE FRANCE Algiers. Algeria Fernand Pouillon

## 1954-1957

This is the work which best represents his evocation of the monumental city. The dimensions are similar to those of the Palais Royal despite the fact the building targeted the socially disadvantaged residents of Algiers. The influence of his visit to the Maidan in Isfahan is clear in the proportions and in the axis grid lines.

GALLARATESE BLOCK D Milan. Italy Aldo Rossi, (Carlo Aymonino)

## 1967-1974

Rossi makes the same analogy in his Gallaratese residential block as the monumental city which Pouillon was aiming for, even though the simplicity of the irreducible add-on components used by the Italian seems to suggest different paths.





# Chapter 3 DWELLINGS ARCHITECTURE FOR ORDINARY PEOPLE

REFERENCES



In February 1958, the magazine Paris-Match devoted several pages to the new *Ville-lumière*, City of Light, for 10,000 inhabitants which was under construction in Boulogne-sur-Seine, Paris. The selling points were the resistant materials and the large open spaces. The article announced that a show flat had been set up which could be visited in the coming months.

The types proposed by Pouillon are rational solutions where there is an optimal relationship between the useful floor area and the built floor area. This is one of the other factors which led to the decrease in prices on the property market.

The target buyer for the dwellings was a specific user with clearly defined social characteristics. The show flats were furnished with the exact necessary equipment and "cumbersome furniture" was discarded. Inside the show flat "the neat and tidy wife of a working man, scrupulously going about the household chores" was also on show.<sup>11</sup> The aim was to make the architecture more concrete, less abstract. He wanted to solve the everyday problems of the ordinary person, not to produce new forms. Abstraction clashed with his two main commitments: traditional materials and the urban form with historical references.

11. Fernand Pouillon. Op. cit. P. 359.

**RÉSIDENCE DU POINT DU JOUR Fernand Pouillon** 



"Two famous architects meet in the street: -What are you building these days? -Junk. -And you? -Me too. This is not made up, you hear it everywhere. For those who don't understand, "junk" means houses where you, the good people have to live.

(...)

I wanted to react against this and it was impossible because firstly I would have needed to alter the mindset." FERNAND POUILLON, 1968.<sup>12</sup>



12. Fernand Pouillon. Op. cit. P. 28-29.

# Chapter 3 **DWELLINGS** ARCHITECTURE FOR ORDINARY PEOPLE

### **RÉSIDENCE DU POINT DU JOUR Fernand Pouillon**

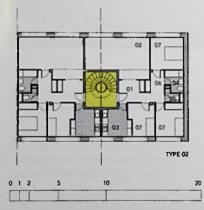
"There will always exist a need to build in order to solve large programmes: palaces, hospitals, but to house humanity in distress is a different problem altogether, both passionate and primordial." FERNAND POUILLON, 1968.13





01 ENTRANCE 02 LIVING ROOM 03 KITCHEN 04 BATHROOM 05 WC 06 HALL 07 BEDROOM 08 LONG BALCONY

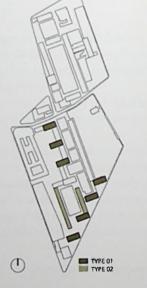




Type 01 of the medium-rise blocks is a succession of two dwellings per storey for each access core. There are interior spiral staircases with wedge-shaped steps permitted under French legislation. The dwellings are front-to-back from north to south, with clear differentiation on the facade. The bathrooms are interior and grouped in twos.

Type 02 is similar to Type 01 but with no lift, as these are dwellings in blocks with fewer storeys.

13. Fernand Pouillon. Op. cit. P. 239.



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1:400



# Chapter 3 DWELLINGS ARCHITECTURE FOR ORDINARY PEOPLE

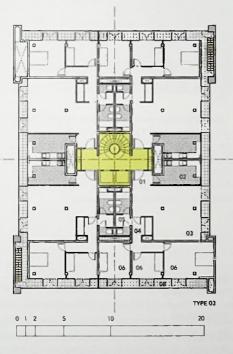


308 / 10STORIES OF COLLECTIVE HOUSING

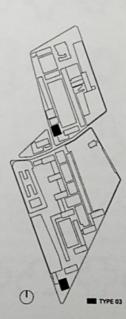
**RÉSIDENCE DU POINT DU JOUR Fernand Pouillon** 

"The construction business has been playing sorcerer's apprentice with people's lives for over a hundred years. Art in general and architecture in particular have been evolving towards increasingly esoteric standpoints. Graphic design and photography have confined dwellings to a universe of abstraction." FERNAND POUILLON, 1968."





01 ENTRANCE 02 KITCHEN 03 LIVING ROOM 04 HALL 05 BATHROOM AREA 06 BEDROOM 07 LONG BALCONY



The layout for the towers contains four dwellings per storey, with the service cores grouped on the axes of the rectangle. Circulation within the flats is through the living rooms. One of Pouillon's concerns was to provide soundproofing for the night area. With this in mind, the bedrooms are grouped together and separated from the living area by a hall which provides sound damping. There is also no contact between the vertical access cores and the night area.

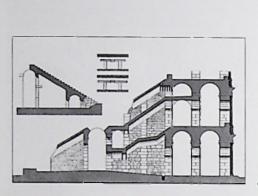
14. Fernand Pouillon, Op. cit. P. 27.

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# Chapter 4 ENVELOPE STONEWORK

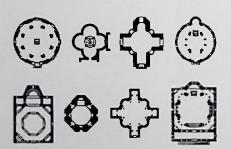
## REFERENCES

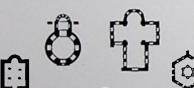


### L'ART DE BÂTIR CHEZ LES ROMAINS Auguste Choisy

## 1873

One of Choisy's main goals when he published the different tomes of his Anatomy of Architecture was to bring ancient monuments and contemporary trends closer together. Pouillon was fond of old books and he collected and republished them. In fact he wrote the preface to a facsimile edition of Auguste Choisy's book on Vitruvius.





## ARCHITECTURAL DICTIONARY Fernand Pouillon

#### Unfinished work

Throughout his life, Pouillon gathered information to publish an Architectural Dictionary which he never actually completed. He left behind some sheets showing floor plans for religious buildings, axonometric diagrams of formwork, brickwork facing over concerted stonework or construction tools.

310 / 10STORIES OF COLLECTIVE HOUSING



Pouillon built with astonishing speed due to iteration, regularity and the experience gained from previous construction work. He had no issues with reusing tried and tested solutions and was against systematically introducing innovation. In Point du Jour, all the buildings have a reinforced concrete structure. The end walls of the medium-rise blocks are concrete walls with stone cladding. There is a clear standardization of the solution and this is one of the reasons for the low budget. Heating is provided by an underfloor system.

Given that it was impossible to emulate Perret's masterwork in the detailing of concrete as a construction material, he opted for natural stone as the main material for the facades. Pouillon wanted a "restrained traditional architecture that was not excessive, with comfortable details, and was luxurious in the Parisian sense of the word; like that inspired by the 17<sup>th</sup> or 18<sup>th</sup> Century districts, like those banal yet charming dwellings in the 4<sup>th</sup> or 5<sup>th</sup> arrondissements, whose value lies in their proportions and their stonework."<sup>15</sup> In Meudon-la-Forêt (1957-1962), the housing complex which was built at the same time as Point du Jour, he used stone as a loadbearing element. In Point du Jour, the structure of the highest buildings is made from reinforced concrete with stone cladding, whereby the latter has no supporting function.

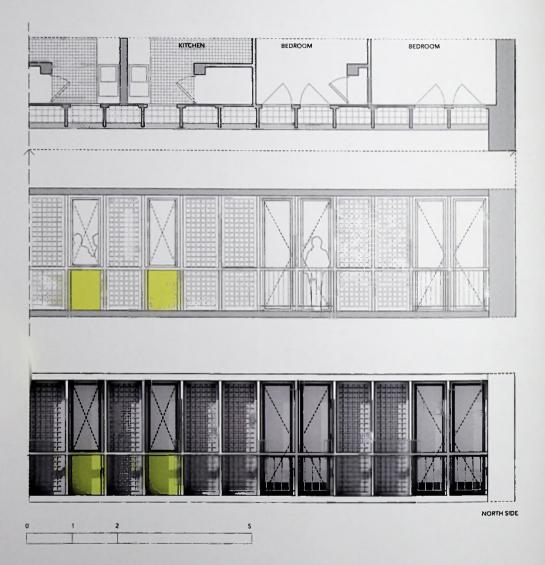
15. Fernand Pouillon. Op. cit. P. 308.





# Chapter 4 ENVELOPE ORIENTATION AND MODULARITY

## **RÉSIDENCE DU POINT DU JOUR FERNAND POUILLON**



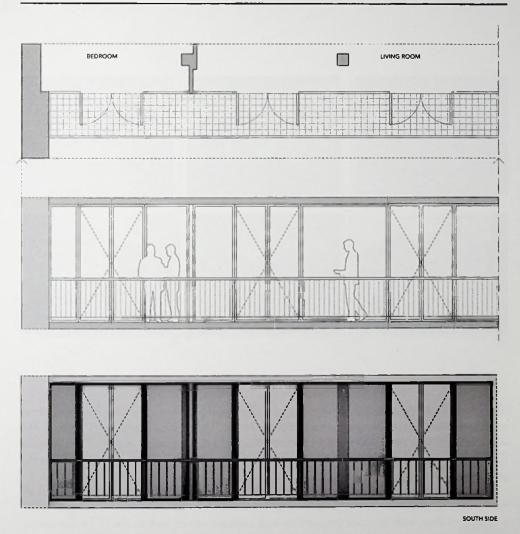
The facade reflects the pragmatism and standardization used for building the type. Modulating and simplifying the enclosure solution does not allow for any concessions to be made.

The north-facing facades are modulated using pre-cast concrete frames filled in with either glazed metal profiles or reinforced concrete lattice panels.

The bedrooms and the kitchens are located on the north facade.

There are three types of openings, one with a French window, another with a railing and another with a pre-cast concrete lattice in the areas where a more opaque enclosure is required.

ELEVATION DETAILS. MEDIUM-RISE BLOCKS



The living rooms and the master bedroom in the case of the three-bedroom apartments are laid out on the south side. All the south modules are glazed and are set back so that the overhang of the slab shelters the interior of the dwelling from excessive sunlight.

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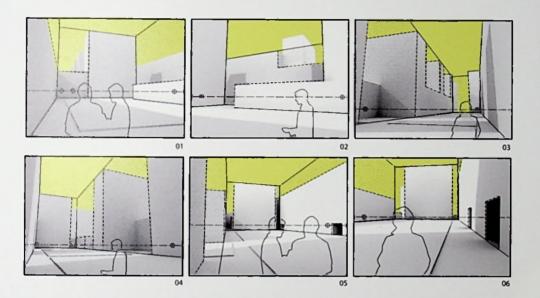
### EPILOGUE CRISTAL LIQUIDE



The Résidence du Point du Jour is a quiet place full of good people, as Pouillon would say, where neighbourhood life goes on free and easy, without fences. Within these monumental voids, traffic is a distant murmur and glimpses of the street appear through transparent vestibules. In the midst of this peace and tranquillity, it is the complex which reveals itself and speaks directly about the architect's intentions.

He was aiming to build on a low budget, to house the middle class, to create dignified affordable housing; he was aiming to recover the harmonious forms of the ancient cities, to create a set of buildings with 'pleasant proportions and a solemn serene look to them'; he was aiming to offer the user recognizable spaces: the square, the gardens, the lake, the avenue, the porticoed pavement ... even a small wooded area, why not?

He had no issues with building twenty storeys, providing there was cross ventilation for all dwellings; or with using concrete latticework opposite plinths with pilasters. He was not bothered about a nice photo which looked good in print or about being criticized. What he really cared about was that neglected part of architecture which his peers called junk, the houses of others.



"I organize my spaces. I work for the pedestrian not for the aviator. I think about the person looking out of their bedroom or living room window. I wander through these imaginary spaces and modify them when I do not get the sensations I want. These spaces are what come to me from the start, along with the different geometric planes: facades, porticoes, without forgetting that other facade made up of the surfacing and the gardens." FERNAND POUILLON, 1992.16

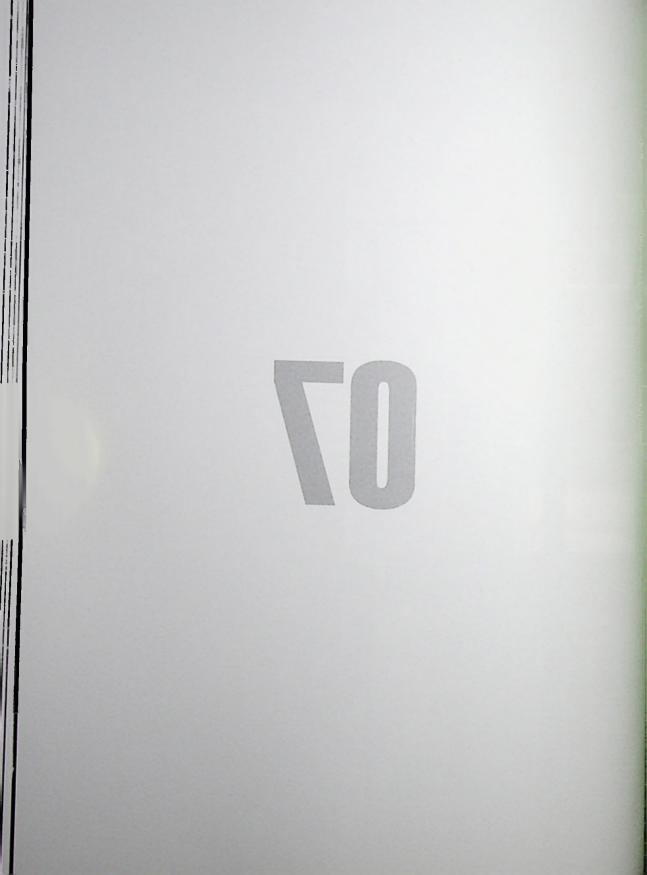


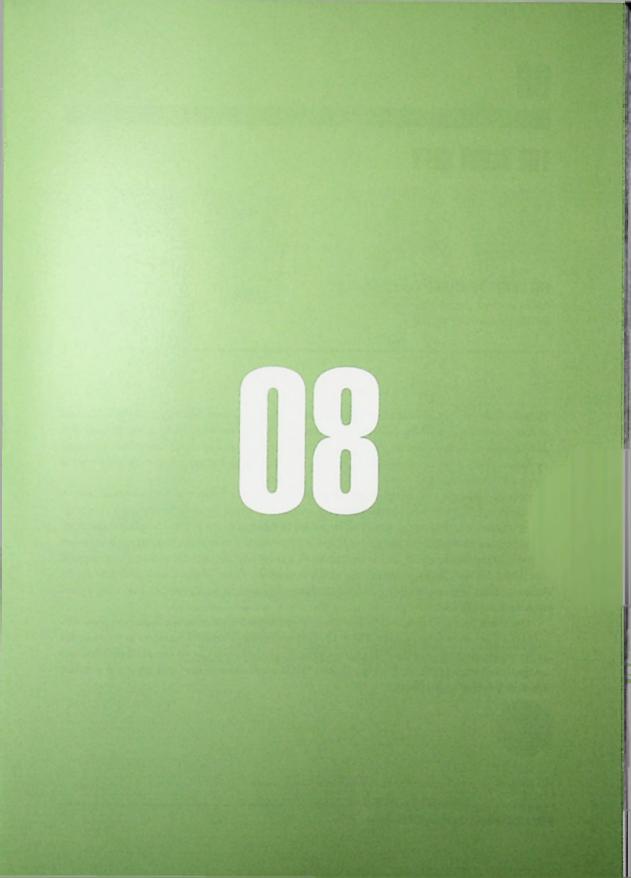
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16. François Robichon. "Pouillon au Point du Jour". D'architectures 28, 1992. P. 46-48.











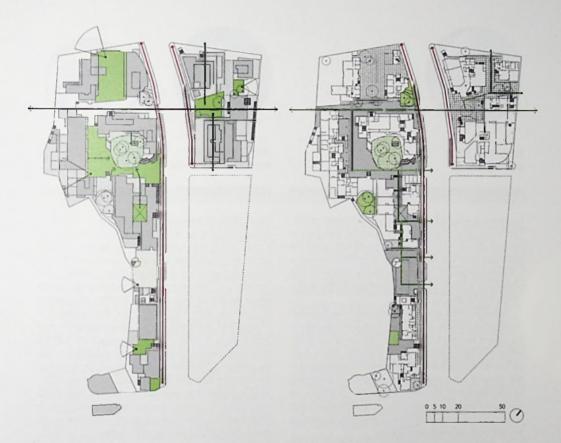
HILLSIDE TERRACE Fumihiko Maki Shibuya (Tokyo, Japan) 1967-1998 35°38'52.57"N / 139°42'2.30"F

Hillside Terrace is a miniature city, built in phases, which took over thirty years to complete and is home to low-rise buildings, interconnected public spaces, low walls, thresholds, passageways and vegetation. Hillside Terrace, in the Daikanyama district, sums up thirty years of urban design in Tokyo, thirty years in the history of modern architecture and thirty years in the professional career of Fumihiko Maki.

Hillside Terrace is a world apart, separated from downtown Tokyo which can be made out in the distance. Maki aimed to build a continuous urban landscape by using a combination of staggered volumes which move forward and backward in relation to the street. The ground floors are in some cases transparent or are set back and lend continuity to spatial elements such as corner accesses or interior staircases in the aim to create a small city atmosphere within a megalopolis. For Maki, Urban Design is something which is tangible, finite, physical and anchored to the location rather than merely being an abstract theory founded on urban policies, planning regulations and social issues.

The chaos and fascination of Tokyo come together in Hillside Terrace based on that slow collective process of creating form which has left outstanding historical examples in its wake due to its unexpected urban relationships, as in the case of the Greek city or the small rural villages of the Mediterranean coast. Hillside Terrace fulfils a collective desire: that universal emotion invoked by small-scale charm.

08



"A house must be like a small city if it's to be a real house -a city like a large house if it's to be a real city. In fact, what is large without being small has no more real size than what is small without being large. If there's no real size, there will be no human size. If a thing is just small or just large we can't cope with it. The same counts for many and few. (...) Think about that and you'll know why the thought process in planning can't be divided on the basis of part-whole, small-large, few-many, i.e. into architecture and urban planning."

ALDO VAN EYCK, 1959.1



1. Aldo van Eyck. "Otterlo Meeting" Team 10 primer. Alison Smithson. MIT Press, 1968. P. 27.

### **CHARACTERS**



FUMIHIKO MAKI Architect, 1928-



JOSÉ LUIS SERT Architect and urban planner, 1902-1983

Fumihiko graduated in 1952 from the University of Tokyo. In his final undergraduate years he took part in Tange Lab, an incubator set up by Kenzo Tange for Japanese post-war reconstruction. In 1953, he made a trip to the United States to finish his education and started up a professional relationship with the States which was to span his whole life.

Between 1958 and 1960, Fumihiko Maki travelled throughout Europe, the Middle East and India where he visited the work of Le Corbusier in Chandigarh, which was being completed at the time. These travels confirmed his interest in grouped buildings and in the city as a collective creation. In spite of belonging to the Metabolist movement from the very start, he was never keen on megaforms or megastructures and continued his path of individual research, distancing himself from technological utopia.

In 1960, he was invited to attend the Team X conference in Bagnols-sur-Cèze, France by the Smithsons. Although he has always seen himself as a modern architect, his strong links to tradition and the vernacular have helped him to understand the subordination existing between constructed individuality and achieving a cohesive urban form. In 1962, Maki returned to Harvard, where at that time José Luis Sert was dean, to work as an associate professor. In 1965, he went back to Tokyo and two years later commenced the first phase of Hillside Terrace. In 1993, he was awarded the Pritzker Architecture Prize.

He studied Architecture in Barcelona. In 1928, he moved to Paris to work with Le Corbusier. He designed, along with Luis Lacasa, the Spanish pavilion for the 1937 Paris International Exposition inside which Picasso's Guernica was put on show. Following the Spanish Civil War he was exiled to the United States where he set up his architectural office and worked as a teacher. From 1947 to 1956 he was the President of the CIAM, the International Congresses of Modern Architecture. In 1953, he was appointed dean of the Harvard University Graduate School of Design, a post he held until 1969. During this period, he served on the Advisory Board of the Graham Foundation of Chicago and Maki was awarded one of their fellowships to conduct his research project on the urban form. In 1955, Sert hired Maki to work together with him on the design for the US Embassy in Baghdad.

The central message transmitted to Maki by Sert, summed up in his 1956 conference What is urban design, was that the main concern of Urban Design should be the human being, that special attention should be paid to the citizen in the street who is the one who observes the buildings and moves among them, rather than aesthetic concerns or strictly functional issues.



METABOLIST GROUP Tokyo, 1960-

To mark the celebration of the World Design Congress in Tokyo in 1960, a group of young architects, designers and critics<sup>2</sup> published a booklet titled Metabolism, The proposals for a New Urbanism which collected together a series of projects and articles calling for a new type of urban planning.<sup>3</sup> Maki coauthored, along with Masato Otaka, an article titled "Group-Form"<sup>4</sup> included in that booklet. In this text he stated that it made no sense to study buildings as isolated entities and that as until then the collective form had not been tackled properly. He defined three different approaches to form: Compositional, Structural and Sequential. The first is two-dimensional, takes place on one plane and is static. The second is the large framework which encompasses all the functions of a complex organism or an urban nucleus. And the third refers to the collective form or shifting group which evolves from a system of spatially interconnected elements

Group Form is the form defined by a group of buildings which share strong physical relationships. It is based on four factors: the basic materials and the construction methods; the intelligent and dramatic use of geography and topography; the human scale and lastly the sequence of the development. Bringing together the basic elements which form part of these aforementioned factors such as the constructions, the open spaces between volumes and the reiterated use of certain visual effects, creates a sensation over time which is perceived as a natural phenomenon of producing form.

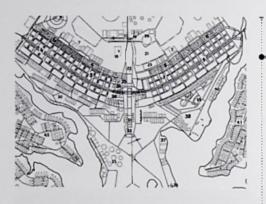
For Maki, the architectural spaces represent the stage, the human beings the actors, and the events of urban life constitute the actual play. Group Form both outlines the essence of collectivity and unites a group of buildings in functional, spatial and social terms. This is something which emerges bottom up, from a specific social group, not top down, from financial or political powers. In this sense, Group Form is a veiled critique by Fumihiko Maki of the Megaform of Metabolism.

 According to Koolhaas/Olbrist, the group members were: Masato Otaka, Noburu Kawazoe, Fumihiko Maki, Kiyonori Kikutake, Kiyoshi Awazu, Kenji Ekuan, Kisho Kurokawa and Arata Isozaki. Project Japan. Metabolism talks...Taschen, 2011.
 Metabolism 1960. The proposals for New Urbanism. Bijutsu Shuppansha, 1960.

4. F. Maki, M. Otaka. "Toward Group Form". Metabolism 1960. The proposals for New Urbanism. Bijutsu Shuppansha, 1960. P. 52-69.

### Chapter / URBAN DESIGN LACK OF COMPOSITION AND GRANDEUR

#### REFERENCES





BRASILIA Compositional Form Lúcio Costa

### 1957

The Brasilia Pilot Scheme, with a cross or plane layout, was planned according to the precepts of Modernism along a large central axis where the public buildings are located. The wings are taken up by the superblocks which house the residential buildings. Vehicle transit forms the basis for a two-dimensional layout which favours the separation of functions outlined in the Athens Charter.

#### TOKYO BAY URBAN PLAN Megaform Tange Lab

#### 1960

Eighty-kilometre long linear city<sup>5</sup> designed for five million new inhabitants which overlays the chaos of the existing city, based on three levels of expressways. The public buildings, the offices, the retail outlets, the leisure facilities, the central station and a new terminal for passenger ferries are all located along the main axis.

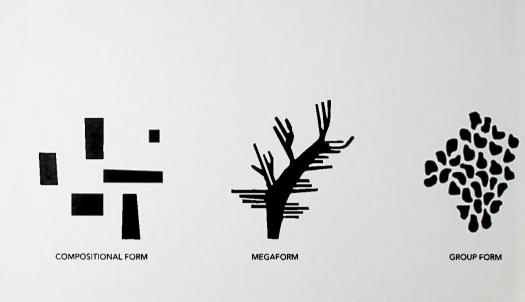
5. Plan for Tokyo. 1960, in *Project Japan. Metabolism Talks...* Rem Koolhaas, Hans Ulrich Obrist. Taschen. 2011. P. 284.

DOGON VILLAGE Group Form Bandiagara, Mali

### 1770

The picturesque stands out far more evidently when one studies the collective scale than when one considers the buildings individually. According to Maki, urban design is about manifesting the relationships between things. He aims to achieve "unforgettable scenes,"<sup>4</sup> favouring the creation of a cityscape linked to popular tradition, to which he adds another layer into which he embeds the transparency and the lightness of Japanese architecture

6. Fumihiko Maki, 1993 Laureate. Biography. The Pritzker Architecture Prize.



This diagram, which appears in later versions of the Maki text, *Collective Form*, *Three Paradigms*, is a schematic representation of three ways of classifying the Collective Form. The first type, Compositional Form,<sup>7</sup> is based on rules of composition and encompassing the cases of planned cities such as Chandigarh or Brasilia. The second, the Megaform<sup>8</sup> is present in Metabolist projects such as the Agricultural City by Kurowaka or the Tokyo Bay development by Tange Lab. Lastly, the Group Form pertains to, for instance, the stepped villages of the Greek islands or the Dogon villages where time is the key player. Hillside Terrace could be identified with the third diagram as its formal resolution is far removed from any composition or style by the author and yet at the same time it eschews this idea of *grandeur* which is often associated with megastructures.

7 Résidence Point du Jour by Fernand Pouillon, (P. 278-319) may likewise be considered an example of Compositional Form. 8. The Jeanne Hachette complex by Jean Renaudie, (P. 422-480) has several features in common with the Megastructures.

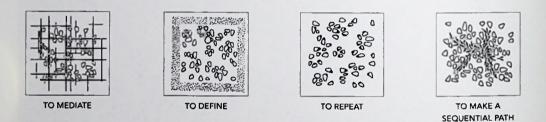
## Chapter 1 URBAN DESIGN LACK OF COMPOSITION AND GRANDEUR



328 / 10STORIES OF COLLECTIVE HOUSING

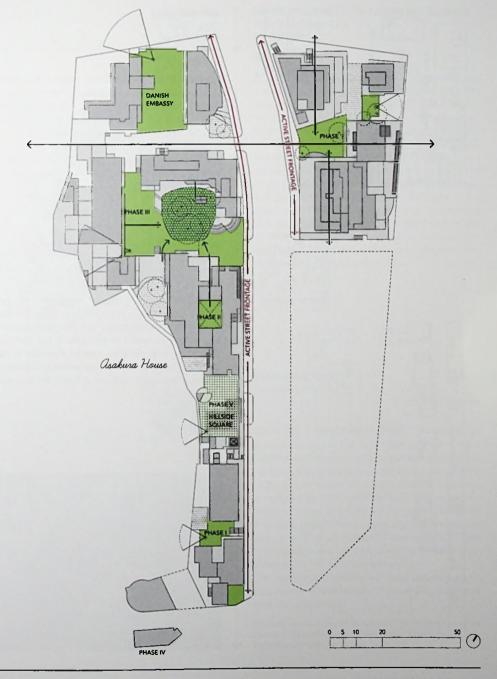


### Chapter 1 URBAN DESIGN RECOGNIZING MEANINGS



The priority for urban design, according to Maki, is to recognize meaning. What is the planner's goal when working on a specific site? What are they aiming to express? These reflections are often lost due to the difficulty in managing an overly ambitious programme in the aim for its implementation to create a controlled environment. The next step would involve working on and attempting to humanize this meaning. In Hillside Terrace, the attempt is to artificially recreate in one part of Tokyo the complex mechanisms and connections which arise spontaneously in the historic city. The approach involved selecting a model or motif, a pattern, which could undergo formal and spatial operations and have the sufficient capacity to generate variations.

The main issue when working on the city is to understand these links in order to assign to each element defining the urban scene a role in its relationship with the collective form. Fumihiko Maki understands the city as a set of events where the links between them are the glue, the cohesive element which holds them together. The approach which he applied to Hillside Terrace is based on the five categories he outlined in his article "Group-Form" and which are summed up in the following actions for intervening on the city: MEDIATING between interior and exterior, or between public and private; DEFINING to mark a differentiation with the surrounding environment; REPEATING and underlining the group character; MAKING SEQUENTIAL PATHS and carefully SELECTING the location.



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### Chapter 1 URBAN DESIGN RECOGNIZING MEANINGS

### REFERENCES





MORIYAMA HOUSE Tokyo, Japan Ryue Nishizawa

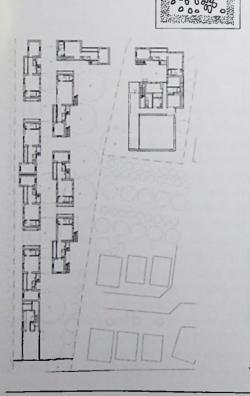
### 2005

TO MEDIATE. These six units, located in a district still permeated by the traditional atmosphere of the small Japanese cities, were laid out separately with open space between them to avoid the single volume. The project manages to perforate a very compact urban layout where there are scarce concessions to public space. The negotiation between solids-voids and between public-private makes it difficult to set the limits.



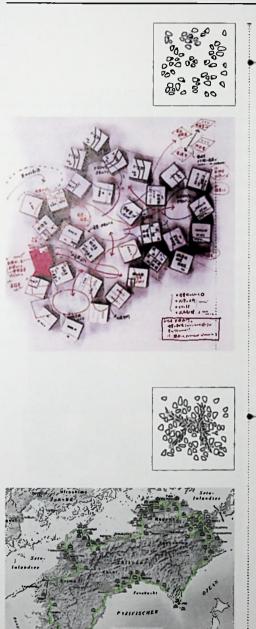
### 2009

TO DEFINE. The two strips of dwellings in this project define an interior street with a semi-private character -with three courtyards- which conveys a special atmosphere to twelve of the units in this complex. The intimate relationship created manages to isolate them from the low-rise residential townscape of houses where many plots are still used for farming.



332 / 10STORIES OF COLLECTIVE HOUSING





CHILDREN'S CENTRE FOR PSYCHIATRIC REHABILITATION Date-shi, Hokkaido, Japan Sou Fujimoto

#### 2006

TO REPEAT. This project is both a large house and a small city. Sou Fujimoto's aim to spread out the spaces over the site and to create an ambiguity between separation and connection by the lack of definition in a random floor plan was understood better after the work by Fumihiko Maki in Hillside Terrace. The themes treated by Maki, such as the lack of a centre, the interaction of the volumes or the use of an architectural theory with no rigid structure may find continuity in the work of Sou Fujimoto. If this diagram for the Children's Centre might be identical to that of Maki's Group Form, it is also true that with each new generation there appear evolved concepts based on previous work and the clear diagrams may correspond to the spirit of our time.

SHIKOKU PILGRIMAGE Shikoku Island, Japan

TO MAKE A SEQUENTIAL PATH. The pilgrimage around Shikoku Island is a ritual path of roughly 1,200 kilometres around 88 Buddhist temples which has been taking place since the Heian period (794-1185). It need not be done in any order and it is even considered good practice for each pilgrim to plan their own route. This type of pilgrimage is based on a dynamic system of self-organization which changes over time. The adjustment of this sequential path over the centuries is a sign of the "remarkable morphing ability" of Japanese society.<sup>9</sup>

The freedom of movement a visitor assumes in Hillside Terrace is another way of perceiving space as a symbolic experience.

9. Hiroshi Tanaka Shimazaki. Adjustment Within a Representative Japanese Pilgrimage System. International Seminar on Pilgrimage and Complexity. New Delhi, 1999.

### Chapter / URBAN DESIGN SEQUENTIAL PATH

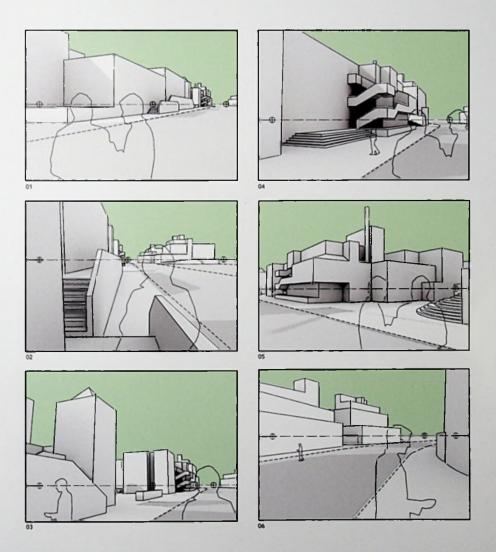
HILLSIDE TERRACE Fumihiko Maki

In Hillside Terrace, Maki applies a certain sense of depth to his physically compact spaces, modulated by a graduation between activity and privacy, between public and private, between the street and the interior. The depth of space is based on the layout of the transparent entrance halls which allow for interconnections between them and give the impression that there exists an inbuilt spaciousness to the project which extends out throughout the location.

The space allows for different loops in the paths. The views towards the green spaces are as significant for an interesting route as the completely transparent views through the ground floors of the buildings. The views overcome the different physical obstacles. For this reason, space in Hillside Terrace cannot be experienced top down and in this sense, this concept is also related to the work of Moretti and Pouillon (see pp. 176-213 and 278-319).

The importance of public space in this complex is evident as it is based on three premises: public space has to allow people to enjoy their solitude, public space will be enhanced by the more layers and more meanings integrated and public space has to become a catalyst for human interaction. The key lies in this complex inverse play on activity and privacy and it is this which makes this work an exemplary model in its articulation of several layers of threshold spaces, between the lively border with the street and the more spiritual interior of the block.









### Chapter 2 URBAN FORM ADD-ON DEVELOPMENT

HILLSIDE TERRACE Fumihiko Maki

Hillside Terrace is the result of varied aims yet the key to why this complex has come to be so diverse and exemplary was the express desire of the Asakura family, the longstanding land-owners, to build in a calm manner according to their requirements. They wished to remain on the site for generations. They were rice dealers who changed business activities and moved into real estate. In 1994, more than 12 members of this family were still residing in the Hillside Terrace area.

The starting point for this operation lies on the south side of some 250-metre strips of land which had belonged to the family for many years. The development spreads out horizontally along Kiu Yamate Dori with clearly defined volumes comprising stores, low-level gardens, elevated walkways for pedestrians and two-storey dwellings.

Maki's main concern has focussed on the Programme rather than the Plan. The programme is more involved in the passage of time than the plan, which targets that ideal form which is complete in itself and is only suitable for a specific moment. Likewise, he is more interested in Master Forms than Buildings, as the former respond better to the diktats of time and are more flexible and adaptable.

The fact that Maki is Japanese allowed him to understand two things: the slow rhythm identified with the life cycle of the buildings and the inexorable hand of fate which replaces old structures with new ones. Maki understands that he cannot build the city hastily and he sees the time factor as an element of urban design.

Maki defines the concept *Landscape of Time* as the deliberate aim to create continuous sequences free of folds in space and time by taking advantage of the options offered by the natural orographical features and reinforcing them with subtle changes in the architectural plane of the ground floor.

He conceives architecture as a nexus between human beings and a constantly changing environment whereby Architecture is to interpret human activity from the view point of History, Ecology and current trends.

The flow of time, in the thirty years the Hillside Terrace process was ongoing, produced countless changes in Tokyo, in the formal expression of the architecture and in Maki's personal mindset.

Qualina Hause

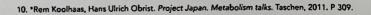
#### GENERAL VIEW

"FM -When I visited villages and small towns in the Middle East -from Isfahan to hill towns in the Greek Islands- I began to recognize certain genetic forms. RK -Patterns.

FM -Yes, patterns manifested in space or in the use of materials, interconnecting with other elements, whether in brick or mud or whatever. I see this as a way to structure a certain order, even in the future city."

FUMIHIKO MAKI IN CONVERSATION WITH REM KOOLHAAS, 2008.10





### Chapter 2 URBAN FORM ADD-ON DEVELOPMENT

### REFERENCES



MARTIN LUTHER KING SCHOOL Cambridge, United States Sert, Jackson and Associates

#### 1968-1972

This school, which was designed by José Luis Sert in the 1960s and commenced around the same time as Hillside Terrace, presents a facade looking to the sports field which has some similarities with the main elevation designed by Maki for Phase I. The relationship between the voids and solids and the staggered deck on the ground level resolves the same issues, that of protecting the envelope and of relating the ground floor with the geometry of the site.



BRIDGEHAMPTON RESIDENCES New York. United States Charles Gwathmey

### 1970

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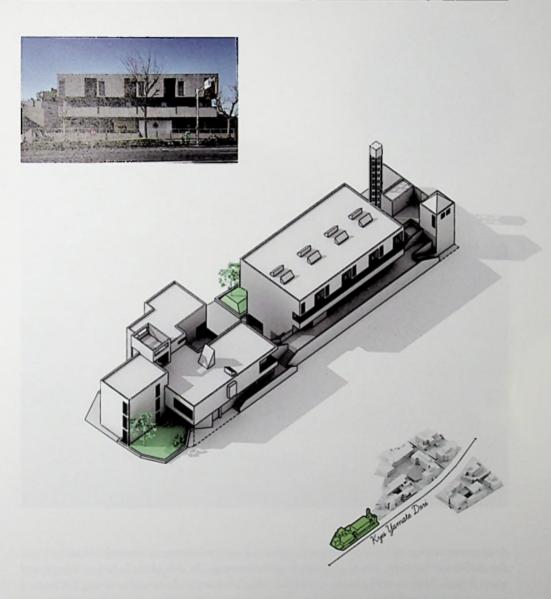
This house, on the south coast of Long Island, is one of the two residences planned for the same family with different programmes. According to Colin Rowe," the buildings erected by Five Architects were at that time, if analysed in terms of the theoretical orthodox tenets of Modern architecture, heretic in that despite the fact they continued in the legacy of 1930s European Rationalism, they paid no heed to the social concerns raised in those years. The work of the Five Architects opened up a universe of possibilities to Maki, based on manipulating the formal elements of Modernism which in his early career in Japan had held him back from immersing himself in the integrating aesthetics of Japanese culture.

11. Colin Rowe. Introduction in Eisenman, Graves, Gwathmey Hejduk, Meier. Five Architects. Oxford University Press, 1975.



PHASE I: 1967-1969

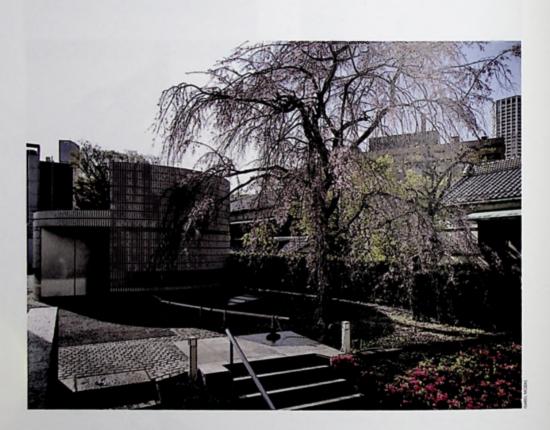
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The starting point for this operation lies on the south side of some 250-metre strips of land which had belonged to the family for many years. The development spreads out horizontally along Kiu Yamate Dori with clearly defined volumes comprising stores, sunken gardens, elevated walkways for pedestrians and two-storey dwellings.

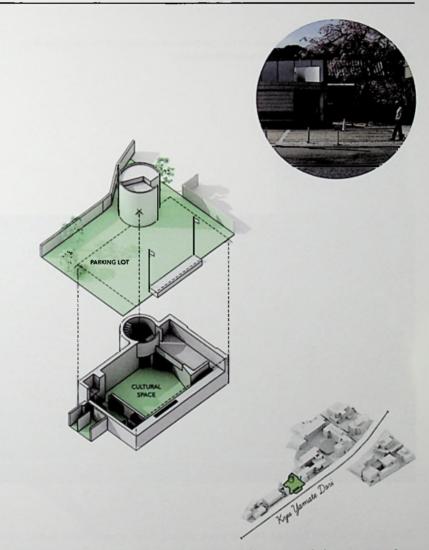
### Chapter 2 URBAN FORM ADD-ON DEVELOPMENT

HILLSIDE TERRACE Fumihiko Maki



As the construction of Hillside Terrace progresses, a synthesis between modern architecture and the traditional Japanese urban strategies begins to emerge. In this phase, a large underground space is built below a void known as Hillside Plaza. It is set aside for cultural use, for musical events and also for exhibitions. This phase focuses on maintaining the scale and flow of the spaces from the previous phases.

### **PHASE V: 1978**



Maki positions the programme underground so as not to upset the existing balance. Access from the plaza is provided through a concrete cylinder which rises up from floor level on the west corner. There exists a first mezzanine-type floor which does not occupy the whole floor plan and provides access to the main space. On the opposite side, there is a strip with services and fire stairs located below the Phase I building.

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### Chapter 2 URBAN FORM SPATIAL DEPTH

#### HILLSIDE TERRACE Fumihiko Maki

"But for the time being, enthusiasm for foreign taste will be followed by corresponding reactions in the direction of an uninspired Nipponism." BRUND TAUT, 1936.<sup>13</sup>



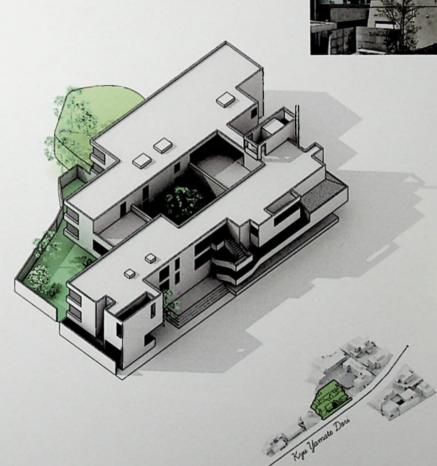


This is architecture focused on the main avenue with a small semi-public open space in the interior flanked by stores on all four sides. This is the most privacy-centred phase due to the desire to close off the traffic in the avenue. In this case, activity is focused on the interior spaces. Maki experiments with the concept of spatial depth in these volumes to which he applies the gradual shift from public to private. Maki's background in European rationalism was starting to break down and his architecture begins to mutate away from the strict approach of Modernism towards the Eastern lack of definition: layers, filters, edges...

13. Bruno Taut. Houses and People of Japan. Sanseido Company, 1958. P. 265.



08

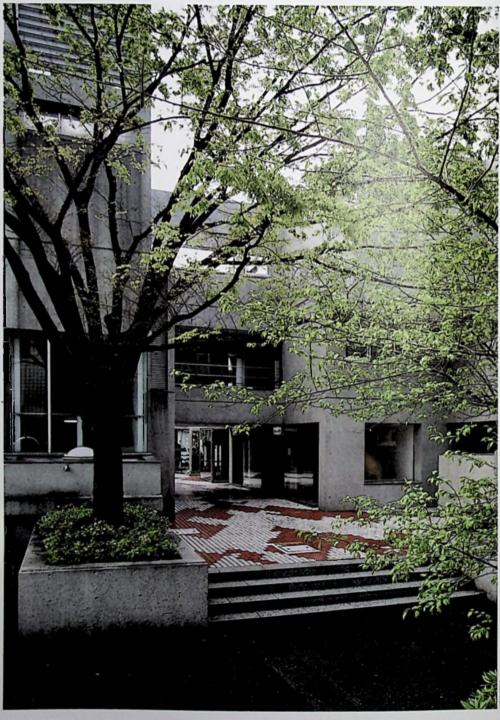


This was built four years later and is separated from Phase I by an open space for vehicle parking which would later be converted to the excavated square called Phase V.

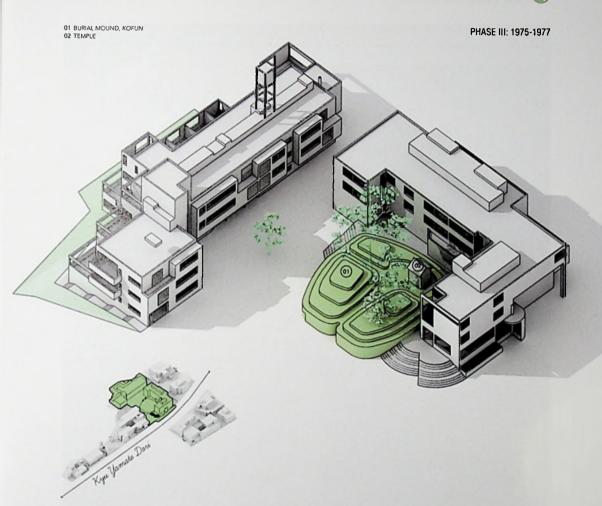




Chapter 2 URBAN FORM NIPPONISM



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This third phase is located in the part of the complex which goes furthest back. Maki halts certain work so as to mark the passage of time. He preserves an ancient burial mound, a *kofun*, which gives this phase a more heterogeneous character. He creates a symbolic space with a small temple and a larger courtyard around the mound. He avoids incorporating street level height dwellings and on this ground floor only builds commercial spaces around an interior courtyard including vegetation. This approach gives him greater flexibility in the event of future alterations.

The facades are more abstract with a greater variety of materials than in other phases. He uses a modulated geometry based on 15 cm squares. This phase is a condensed summary of the history of the Japanese city, as the character of the architecture and the space changes from one end of the plot to the other in a game of subtle hues, changes of level and cut-out corners. The Japanese culture, -Nipponism described by Bruno Taut- starts to become increasingly important in Maki's approach to form.

### Chapter 2 URBAN FORM NIPPONISM

#### REFERENCES







MUSEUM OF MODERN ART Gunma, Japan Arata Isozaki

### 1971-1974

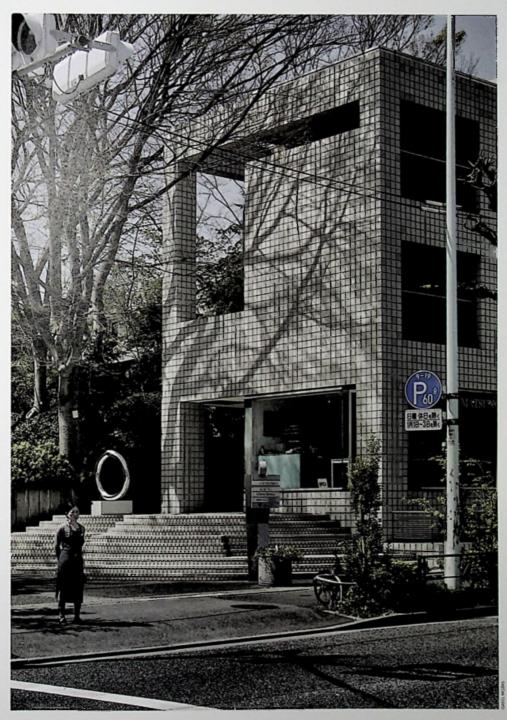
The concrete structure of this museum repeats a cube model which symbolizes the first direct struggle for Japanese architecture to distance itself from the tenets of orthodox Modernism. Things were coming together for Japan-ness, -as Arata Isozaki calls it-,<sup>12</sup> to begin taking shape. Maki, with his *Group* Form, was one of the main movers in this direction following his attendance of a Team 10 meeting in France. The importance of the module and the meaning given to the shell are both present in this Isozaki museum and in the buildings pertaining to Hillside Terrace Phase III.

12. Rem Koolhaas, Hans Ulrich Obrist. Taschen. Project Japan. Metabolism Talks... 2011. P. 31.

HILLSIDE TERRACE PHASE IV Tokyo, Japan Makoto Motokura

#### 1985

Motokura worked with Maki in the 1960s. This phase somewhat differs from the other Hillside Terrace phases. The geometry is more precise and it has a more closed character. The programme comprises workshop-type offices in two volumes separated by a small public road.



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正常空中日日

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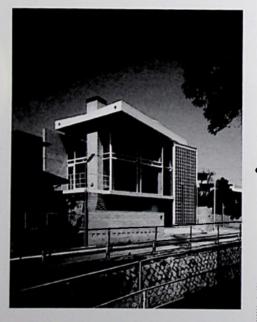
## Chapter 2 URBAN FORM ESTABLISHING RELATIONSHIPS



ASAKURA HOUSE Tokyo, Japan Torajiro Asakura

#### 1919

The old house of the Asakura family is located just on the other side of Hillside Plaza, amidst a landscaped wooded area. The retail activity of this area of Tokyo fades away a scarce fifty metres from the main road and a calm space full of vegetation appears, reinforcing that idea of collective form at different speeds which characterizes Hillside Terrace.

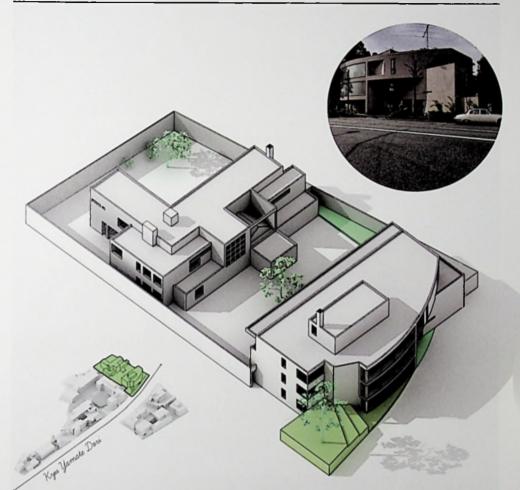


MURAMATSU RESIDENCE Tokyo. Japan Shigeru Ban

#### 1989

Shigeru Ban also had a US college education at the Cooper Union School of Architecture. His mentor, in this case, was John Hedjuk, another representative of Five Architects from whom he learnt to work freely with three-dimensional pure geometric forms for which he also established poetic relationships. In this house on a triangular plot, the geometric conditions are transferred to the structure with the ultimate aim to create beauty and enjoyment for the residents. In Hillside Terrace Phase VI, Maki also makes the geometry work for the structure and the final product is a tidy architecture which is integrated into a collective form that precedes it and is designed for the well-being of users and residents.

#### DANISH EMBASSY: 1979



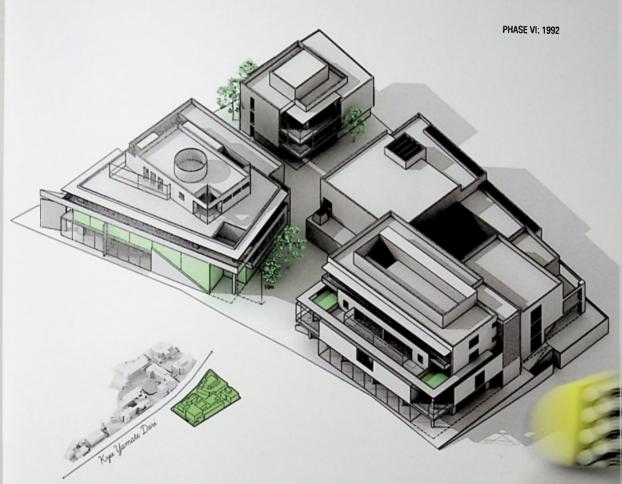
The Asakura family, when they sold the land for the embassy, imposed the condition that Maki be the architect for the work. In a way, the programme for an embassy goes against that idea of openness to the street and interconnected courtyards. Nevertheless, Maki managed to integrate the embassy into the setting of the Daikanyama district. The first of these two buildings concentrates the representative functions and looks onto the main road from the recessed facade which is both convex and glazed. A ground floor passageway crosses the Chancery providing access to a representative courtyard with a large tree standing in a prominent position. In a more set back location is the ambassador's residence, with an L-shaped floor plan which embraces the stepped garden and hence serves to frame the perspective. The closed site of the embassy is integrated into the Hillside Terrace complex due to the treatment of the volumes and the relationships between them. On the other hand, it is distanced by the colour of the terracotta facades.

## Chapter 2 URBAN FORM LIGHTNESS



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In this phase the regulations stipulating a 10 metre maximum build height are removed and the floor area ratio rises from  $1.5 \text{ m}^2/\text{m}^2$  to  $2.0 \text{ m}^2/\text{m}^2$ . The resource used by Maki to mark the maximum build height of the previous phases and hence create a subtle relationship between the different parts involves building prominent eaves protruding out from the facade at a height of exactly ten metres. At the same time, Maki strives to preserve the initial idea of clearly-defined volumes enclosed by vegetation. The original landscape of this Tokyo district had been altered and when construction commenced there were no trees left. Nevertheless all the paths and spaces within the plot have been replanted with large tree species in order to produce the integration between architecture and vegetation. In this phase, the materials attempt to create the sensation of lightness, in contrast with the previous phases which had a heavier character. In this case, lines of contact between glass and aluminium, a material used in opaque or perforated trays, sharpen the corners of the buildings and result in an architecture which somehow responds to the mobile ephemeral character of traditional Japanese architecture.

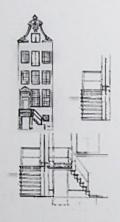




## Chapter 3 USES ACTIVE STREET FRONTAGE

#### REFERENCES







#### 1964

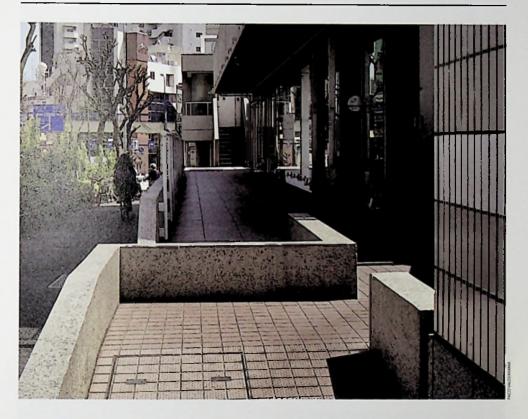
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Fumihiko Maki has always been fascinated by concepts regarding intermediate spaces such as the stoep.<sup>16</sup> It is a Dutch word, which Steen Eiler Rasmussen has described in his publications, related to the entrance threshold to a dwelling. It is very common in Amsterdam and this exterior part of the house is conferred a social function where neighbours can chat and children can play. The stoep tends to have several steps going up to the main floor of the dwelling which increases the privacy of the interior in relation to the ground floor. Maki sees continuity in this whole series of spaces in the Dutch house, going from the canal, the row of trees, the cobbled road, the stoep, the large first floor windows, the dwelling and the back gardens. Stoep is a space which mediates between the street and the dwelling and which makes the transition feel less evident. Hillside Terrace in specific instances takes up this idea so as to provoke a controlled mediation between interior and exterior.

16. Maki, Fumihiko. "Investigations in Collective Form." Washington University. St. Louis, 1964. P. 18.



#### **HILLSIDE TERRACE Furnihiko Maki**

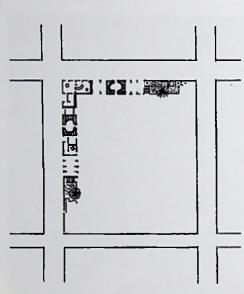


In Hillside Terrace, Maki understands both that a shopping area breathes life into an urban setting but also that to avoid conflicts traffic flow must be separated from retail activity. He states that one can work on the facades by creating an active street frontage with trees and shops, locating the dwellings on a different level. Two parallel facades may form the shell of a shopping area. Pedestrian flow may be raised half a storey to create better protected access to the premises above or below this platform. The relationship between the facade and the street space has to be intense and the pavement or strip connecting them is an appropriate place for retail activity and can be graduated using different elements: paths, walkways, stairs... The street is a space which has to be considered from the view point of its three-dimensional reality. It is an open section within the city. It is a screen showing the events taking place. There is a need for a dialogue between the skin of the buildings and the plane of the street. In some cases, the only element separating the interior and the exterior is 12 mm single-glazing. Pedestrian areas in the small interior patios of Hillside Terrace act as transition spaces for the shops grouped around them.

## Chapter 3

## **USES** ACTIVE STREET FRONTAGE

REFERENCES



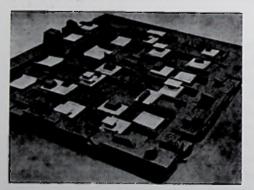
### COMMUNITY WALL

Fumihiko Maki, Masato Otaka

#### 1964

"This is a device to obtain a transition space between the intensity of the street and the quieter residential areas. This community wall is formed by a series of parking areas, small neighbourhood stores, entrances, playgrounds... It is an environmental wall which adapts itself to activities inside and outside the community."<sup>14</sup> This theoretical concept is put into practice in Hillside Terrace in a subtle way by creating a protective barrier containing specific uses in the two active fronts of Kiu Yamate Dori.

14. Fumihiko Maki. Investigations in Collective Form. N. 2 Prototype Investigation of Urban Shopping and Housing Elements. Washington University, 1964. P. 67.



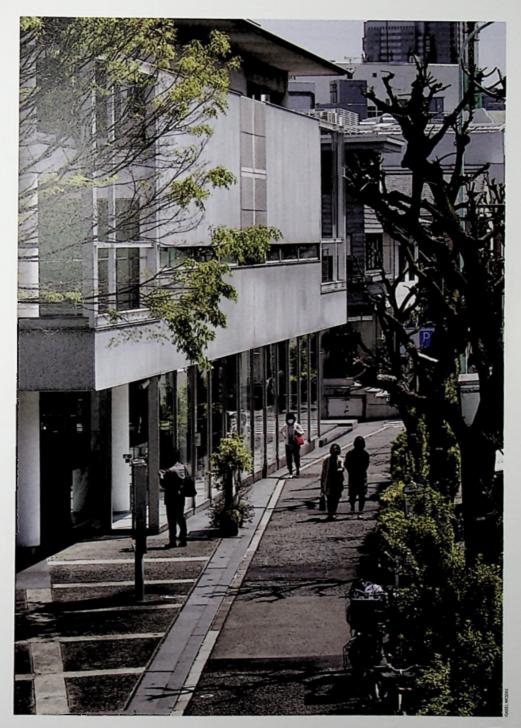
HOUSING WITH WALLS Research prototype. Fumihiko Maki, Masato Otaka

#### 1964

The walls of this example<sup>15</sup> protect the dwellings and define the separation between private and public. They establish mediation and reinforce the diversity of the elements which make up the city. In the traditional historic city, the dwellings related to specific artisan tasks were frequently occupied by the owners of these premises or they came together to form groups such that the whole street was devoted to one single trade. In Hillside Terrace, small shops are mixed in with department stores, restaurants -mostly one- or two-storey- and small work spaces within a continuous fabric which extends out onto those streets which have public transport links. This urban complex aims to be a contemporary replica of the historic city.

15. Op. cit. P. 68.

#### THE SLOW CITY



## Chapter 3 USES ACTIVE STREET FRONTAGE

#### HILLSIDE TERRACE Fumihiko Maki



In Phases V and VI there is a substantial shift in the programme and there is greater emphasis on the cultural content in order to firstly redress the commercial intensity of the first actions and secondly to satisfy the desires for public service in the area. Maki plans different axes, transparency and level changes on the slabs with transition spaces between the street and the interior of the buildings. The two main volumes, Buildings F and G, have commercial space on ground floor and basement level. The offices are located on the first floor of Building G. The programme also includes a multi-purpose room, a sunken gallery and a café. The smallest block of the three, N Residence, is exclusively for residential use and is located in a position set back from the main road. The degree of privacy increases towards the interior of the plot as one moves up. If the concrete and steel structure was to be replaced for a wooden structure, one would notice the high degree of identification of this creative moment of Maki with traditional historic examples from the Edo period.

#### PHASE VI: FLOOR PLANS



FIRST FLOOR PLAN

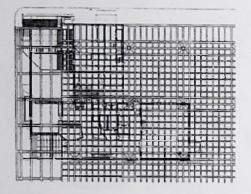
SECOND FLOOR PLAN



68

## Chapter 4 FLOOR PLANS THE LAYERS

REFERENCES



YERBA BUENA CENTER FOR THE ARTS San Francisco, United States Fumihiko Maki

#### 1993

The Galleries and Forum stood on a platform which corresponded to the grid structure of a Congress Centre previously built underneath and Maki had to respect the structural module. The foundations were not dug into the earth but were constrained by the load points of the basement. For Fumihiko Maki this was not an issue as he was used to working with changing circumstances. In this case it was compulsory to base the load bearing structure on the column and beam modulation. Following his experiences in Japan, this first work built by Maki in the US meant discarding regularity and symmetry<sup>17</sup> and opting for depth of space and the multiple layers which coexist as part of the urban phenomenon.

17. Paolo Polledri. "A Modern Building for Postmodern Art." The Japan Architect 16, 1994. P. 9.

ORPHANAGE Amsterdam. The Netherlands Aldo van Eyck

#### 1958-1960

This building was constructed by repeating a module with 3.6 m by 3.6 m domes. In the common spaces the domes are larger, 10.8 m across. Aldo van Eyck wrote: "I am concerned about a two-sided phenomenon: unity and diversity, the part and the whole, the small and the large, the many and the few, simplicity and complexity, change and permanence, order and chaos, individual and collective."<sup>18</sup>

Fumihiko took part in the Team 10 meetings and in his text, *Linkage in Collective Form*,<sup>19</sup> Maki uses the diagram of the Orphanage as an example of adapting space to each human activity.

18. Aldo van Eyck. Team 10 primer. Alison Smithson. MIT Press, 1968. P. 27.

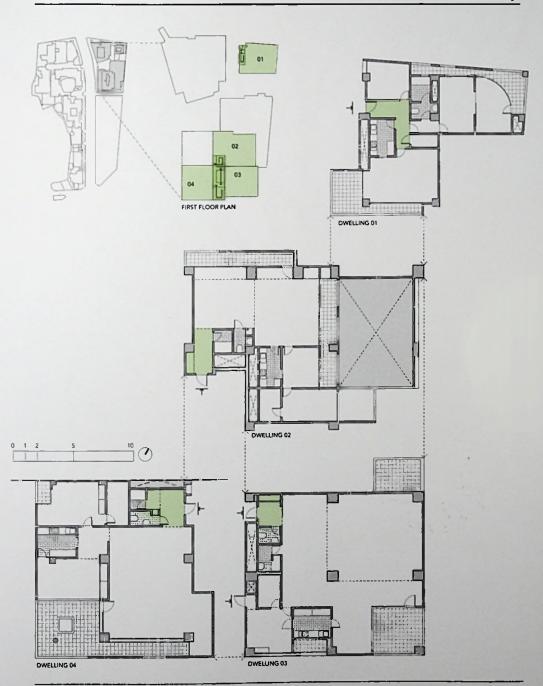
19. Fumihiko Maki. Investigations in Collective Form. Operational Categories. Washington University, 1964. P. 47.

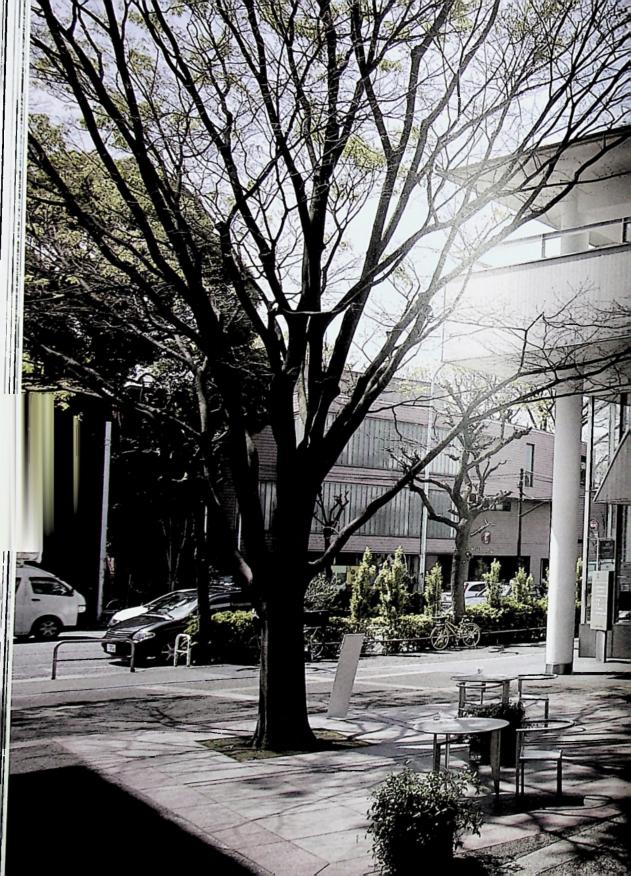
#### THE SLOW CITY

HILLSIDE TERRACE Fumihiko Maki

PHASE VI: Dwellings

08







## Chapter 4 FLOOR PLANS UNCERTAINTY

REFERENCES



KATSURA PALACE Kyoto. Japan Prince Toshihito

#### 1620-1663

When Walter Gropius visited Katsura he remarked upon the way to access the palace: "Many of the characteristics of the design spirit are in the path leading up to the palace which conforms to the Zen way which is often neither direct nor axial nor symmetric. There exists an energetic aversion towards adopting a straight avenue, on the other hand, there is a preference for the casual approach albeit carefully planned. This way, surprises appear at each turn and one arrives at the final destination in a natural human way with little impact."<sup>20</sup>

20. Walter Gropius. Apollo in Democracy-The Cultural Obligation of the Architect. McGraw-Hill, 1968. P. 126.



HOUSES FOR THE TEA CEREMONY Toyota City, Aichi, Japan Yoshio Taniguchi

#### 1995

In an article on Yoshio Taniguchi, Fumihiko Maki wrote: "Sometimes I have heard young European architects say that they found nothing of interest in the ideas and designs of Le Corbusier or Mies. Actually, being avant-garde means rejecting the past. However, architectural culture as a whole is not a missile launched into the future with the avant-garde as the warhead. Indeed, architectural culture can be compared to the movement of waves in the ocean. (...) I consider the architecture of Yoshio Taniguchi to be capable of being seen as an attempt to reconsider, from a Japanese view point, one of those major waves and to create the best possible work from this position.

21. Fumihiko Maki. "Stillness and Plenitude -The Architecture of Yoshio Taniguchi". The Japan Architect 21, 1996-1. P. 15.

PHASE VI



The Sukiya style, of which the Katsura Palace is one of the best exponents, is related to the tea ceremony and has been praised by Western architects such as Frank Lloyd Wright or Bruno Taut. Fumihiko Maki's path in Hillside Terrace, from the 1960s up to the last phase represents a discovery similar to the Western recognition of traditional Japanese architecture. The use of transparent layers, the paths through a series of inner courtyards amidst vegetation, connected by passageways which are not fully evident, the subtle adaptation to the topographical features and the interior spaces, which one only comes across following suggestive views from the street, are the mechanisms from traditional architecture which Maki establishes as the basis for his work.

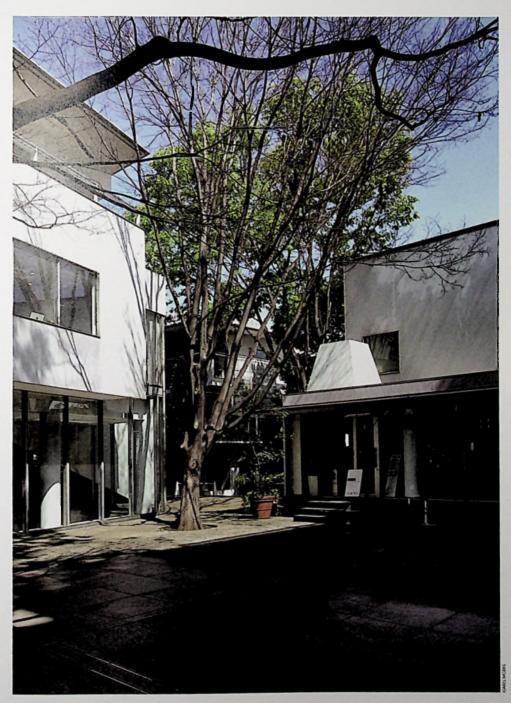
## EPILOGUE THE SLOW CITY

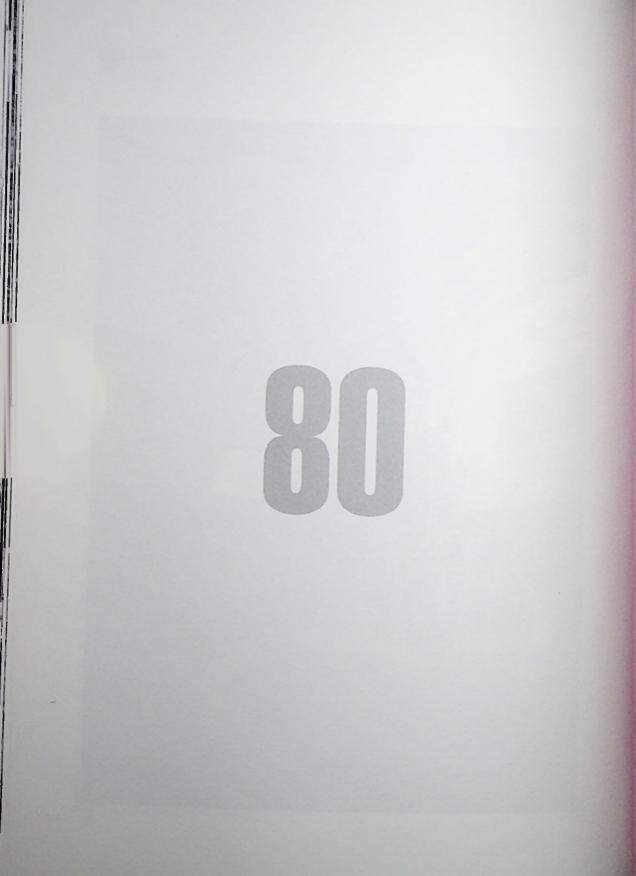
## THE INCOMPLETE, THE UNPREDICTABLE, THE FLEETING

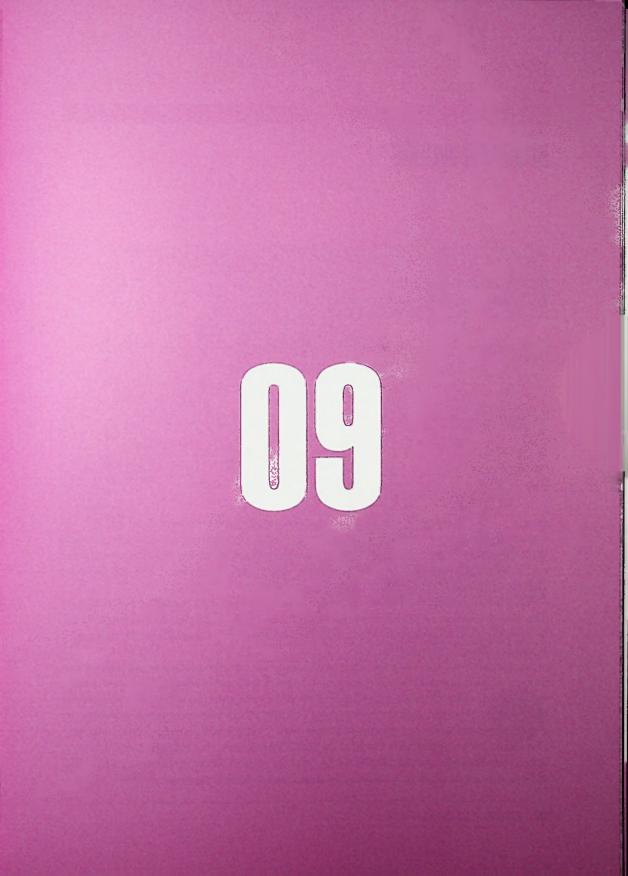
Le Corbusier once said that air and sun are the basic requirements for any work space in an urban setting.<sup>22</sup> Maki believed that in the 1960s, with air conditioning and fluorescent lighting, the essential issues for a well-lit ventilated environment had been solved and that something else was needed, such as visual connections between elements or linkage between parts.

In Hillside Terrace, the composition is based on more than just hygienist urbanism. It is about a fragmentary urbanism with a flowing shifting concept of what public space is. This partial way of conceiving urban design can be summed up in four concepts: the importance of the module, the standardization of components, the adaptability to change and the adoption of a pragmatic approach to resolving urban issues. Hillside Terrace is an amalgamation of loose elements with a shifting ambiguity which draws indiscriminate attention from the whole to the part and from the part to the whole, which preserves great conceptual openness with multiple interconnections and which has a deep acceptance of uncertainty. This fragment of city can only be understood as a symbiotic relationship between the whole and the parts.

22. Furnihiko Maki. Investigations in Collective Form. An appendix. Shinjuku Redevelopment Project. Washington University, 1964. P. 58.









## **BUILDING MOODS**

## BYKER REGENERATION Ralph Erskine

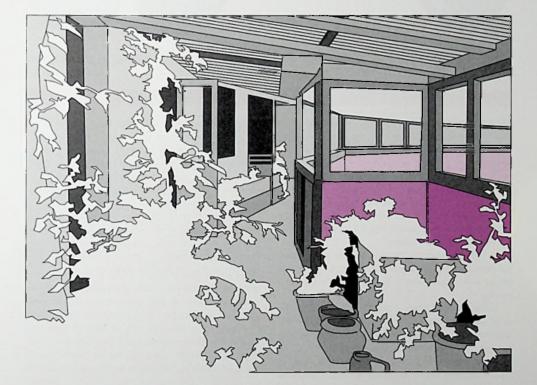
Byker (Newcastle-upon-Tyne, United Kingdom) 1969-1982 54°58'28.86" N / -1°34'40.80" W

In late Sixties Newcastle, there was sufficient political consensus between local Labour and Conservative politicians to allow for a certain degree of public participation in urban design. With the decline of heavy industry, the city was seeing its conversion into an urban centre based on the service industry. The political leaders of the time aimed to turn Newcastle into the main administrative centre in North East England.

The commission for the Byker urban redevelopment project was awarded to Ralph Erskine who took the work as a personal issue and focused mainly on the social content and the participation process itself. The initial aim was to find out the "mood of the people" in order to regard it as another element in the project.

Confronted with this challenge, there were clearly no pre-tested solutions available, which meant a radically new method and approach were needed. Instead of a Master Plan, a new concept was invented, a Plan of Intent -approved in 1970- as the most appropriate vehicle to navigate the rough waters of participative decision-making. Initially, all the interested parties embarked on a learning process as they progressed with their work. The lack of knowledge limited dialogue. Discussion, with no prior basis, hindered the search for solutions. The following conclusion was drawn from the entire process: despite the fact that the initial informative tasks took a great deal of time, later on these efforts to educate the participants were to bring great rewards.

(09)



"At Byker outside Newcastle, [Erskine] has built a community of housing which will probably rank with the Weissenhof Settlement, Stuttgart, 1927, in establishing the paradigm to follow." CHARLES JENCKS, 1977.<sup>1</sup>



1. Charles Jencks. The language of post-Modern Architecture. Academy Editions, 1977. P. 104.

### **CHARACTERS**



RALPH ERSKINE Architect, 1914-2005

Ralph Erskine was born in London. He was educated at a Quaker school. At the time, his family were followers of the ideas of the Fabian Society which nonrevolutionary socialist intellectuals such as George Bernard Shaw belonged to. He studied at the Regent Street Polytechnic School of Architecture. At the start of his career, Ralph Erskine as an employee in the offices of Louis de Soissons worked on the design of Welwyn, the second garden city in England, founded in 1920 by Ebenezer Howard.

In 1939 he moved to Sweden, a country which better identified with his social ideals than England and whose architecture worked for the good of the community.

Following the Otterlo CIAM Congress in 1959, Erskine attended the Team 10 meetings, albeit on the sidelines. His pragmatic mindset did not fit in well with the group's theoretical discussions. At that time he was interested in high-latitude construction, such as that in Lapland, and in adopting vernacular solutions to apply to the habitat in extreme climatic conditions. In 1963, he decided to set up his studio on the island of Drottningholm, near Stockholm, a place where it was not easy to obtain a permit, as the 16<sup>th</sup> Century palace which was the summer residence of the Swedish royal family was also located there. However, his characteristic stubbornness prevailed and he eventually achieved his objective.

The Erskine spirit coincides with that of the Utopian humanists as in his architecture he managed to combine environmental constraints and social concerns, while constantly maintaining a long-term commitment to the needs of the community.

#### **BUILDING MOODS**



THOMAS DANIEL SMITH Politician, 1915-1993

Leader of Newcastle City Council between 1959 and 1965. Known as Mr. Newcastle, he was the man behind the drive for the "modernization" of the city which he attempted to detach from its industrial past. He was both a radical left-winger and a modern thinker whose aim was to turn Newcastle into the Brasilia of the North. His main objective was for urban renovation even at the expense of demolishing important old buildings. In 1973, late in his career, he was involved in a corruption trial and his fall brought an end to the tabula rasa policy for city development in Newcastle.

Smith represents the changing face of the postwar British Labour Party which took advantage of the times of speculative urban land development driven by ambition and the lack of prejudice of the party members. In 1987 he played a role in the movie T Dan Smith. A Funny Thing Happened on the Way to Utopia,<sup>2</sup> based on the corruption trial which brought an end to his political career and in which he plays himself.

With Smith, Newcastle became the first English city to have a city Planning Department, with Wilfred Burns in charge. He invited Le Corbusier and Arne Jacobsen to Newcastle to build what would have been their first buildings in Great Britain.

2. T Dan Smith. A Funny Thing Happened on the Way to Utopia. Amber Films, 1987



WILFRED BURNS Urban Planner, 1923-1984

In charge of town planning in Newcastle. He drew up a plan to demolish a quarter of the slum housing in the city. He was the Chief Planning Officer until 1968. He wrote "Newcastle: a study in re-planning at Newcastle upon Tyne" and "Traffic and transportation in Newcastle upon Tyne: a report" published in 1967.





# Chapter / REGENERATION DEMOLITION AND TABULA RASA

ORTHOPHOTO FROM 1945



In 1911, some 50,000 people came to the old Byker -a working-class area in Newcastle-upon-Tyne, North East England, close to the border with Scotland- to work in the coal mines and the ship yards. This heavy influx led to development where quantity rather than quality drove housing. In the aerial photo from 1945, we can see the monotonous layout of single-family houses built in the late 19<sup>th</sup> Century which climb the hill in a repetitive image of dividing walls, chimney stacks and stepped roofs. The rough mineral character of the area made few concessions to the growth of vegetation. This was back to back terraced housing where only a back alley separated the houses. The fabric of the houses decayed due to years of prevarication and neglect.



#### **BYKER REGENERATION Ralph Erskine**

**ORTHOPHOTO FROM 2012** 



In 1966, some voices said that it was impossible to refurbish the old Byker, but in fact some of the most deteriorated housing on the outskirts was successfully renovated. Wilfred Burns, the Newcastle Chief Planning Officer, proposed a redevelopment scheme involving the demolition of the existing dwellings and the building of a motorway. Initially a survey of the residents showed 80% support for the plan, but this was on the back of the promise that residents could move directly into a new house from their old one. The regeneration plan drafted by Burns in 1968 had already suggested the need to build a barrier-element to protect the low-rise housing from the noise impact of the planned motorway and to create higher housing density.

The choice of Ralph Erskine as the architect was prompted by his success in the neighbouring town, Killingworth, where he had recently completed a small housing estate.

## Chapter / REGENERATION DEMOLITION AND TABULA RASA

#### REFERENCIAS



#### BYKER Sirkka-Liisa Konttinen

#### c. 1969

Sirkka-Liisa Konttinen is a founder member of the Amber Collective of film makers and photographers, based in the North East of England since 1969. The group's aim is to give voice to working class and marginalized communities. Konttinen lived in Byker for seven years and photographed it for a further five after her house was demolished to make way for the redevelopment process.

In 1983, she published her most important work, Byker, where she portrays the Byker community before and during its dispersal. In 2005 she returned to the rebuilt Byker Estate and created portraits of its new residents, published in her book Byker Revisited.<sup>3</sup>

3. Sirkka-Liisa Konttinen. Byker. Jonathan Cape, 1983 Byker Revisited, Northumbria Press, 2009 www.amber-online.com



#### REAPPRAISING THE REDEVELOPMENT Peter Malpass

#### 1979

Three years before the entire redevelopment of the area had been completed, the expert in housing policy Peter Malpass published a review of the results, based on information from street surveys with new residents and illustrated with photos by Sirkka-Liisa Konttinen.<sup>4</sup>

It is a report which is highly critical both of the degree of accomplishment of the initial project goals – re-housing and maintaining social links between the residents of the old Byker– and of the significance which the public institutions gave to the participation of the users, trapped like the architects between their own desires and the final decision of the political overseers.

4. Peter Malpass. "Reappraising the Byker Wall redevelopment." Architect's Journal, May, 1979.

#### **BUILDING MOODS**



The slogan for the area redevelopment was "Byker for the Byker people", making it clear that most residents wanted to stay on the estate and that eighty per cent of the residents were in favour of a complete overhaul. In 1966, when demolition work started, 16,000 people were living in Byker.

But, as Sarah Glynn has pointed out, according to the research by Peter Malpass: "of the 12,000 people still living in old Byker in 1968, only a minority were rehoused in the new scheme, which had fewer homes than before and was almost half occupied by people from elsewhere. This was partly the result of major delays in the building process; but Malpass put the blame firmly on the council, for whom the commitment to retain the community, despite its high public profile, remained a relatively low priority."<sup>5</sup>

5. Sarah Glynn. "Good Homes: lessons in successful public housing from Newcastle's Byker Estate". P. 2. This paper was given at a colloquium on The Housing Crisis: Experience, Analysis and Response, in Birkbeck Institute for Social Research, London, 2011. Citations: Peter Malpass. "Rebuilding Byker: Twenty years hard labour". Report on a research project carried out in the Department of Architecture Edinburgh University, typescript in Newcastle City Library, 1976. And Peter Malpass and Alan Murie. "Housing Policy and Practice". Macmillan, 1999. P. 213-214. www.sarahgiynn.net

## Chapter 2 PARTICIPATORY DESIGN THE ARCHITECT AS A BUFFER

BYKER REGENERATION Ralph Erskine

Ralph Erskine set up an office in the area for permanent enquiries with long opening hours and an open-door policy. It was located in the south-east corner of Kendal and was easily accessible from all points in Byker. It had an odd name: The Architect's Shop, stating that it was just another local shop where a product -the new dwelling- could be negotiated over with the help of a service-based craftsman, the architect, hereby debunking the role of the technical expert in an ivory tower. A "liaison committee" was formed which softened the forced imposition of the design, common in architecture at the time, and managed to attend to certain social needs.

During the participation process the architects were used as buffers between the community and the administration. However, the actual City Council was disappointed with the stance taken by those responsible for the architectural design and who fully supported variations to the model, putting forward tailor-made solutions. This meant building customized dwellings for each user and made the standardized process much more complex. The architects got so involved in the participation process that the design guidelines took a background role and it was indeed the attitude towards serving the community which prevailed over defending deadlines and costs.

> "From the Architects' Shop user consultations started in an unpretentious way, with an open-door policy inviting people to a dialogue about their hopes and worries for the future, vandalism, leaking radiators, play facilities and sometimes even about their new houses." MATS EGELIUS, 1980.<sup>6</sup>





6. Mats Egelius. "Byker". Global Architecture, 55. 1980.

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#### **BUILDING MOODS**

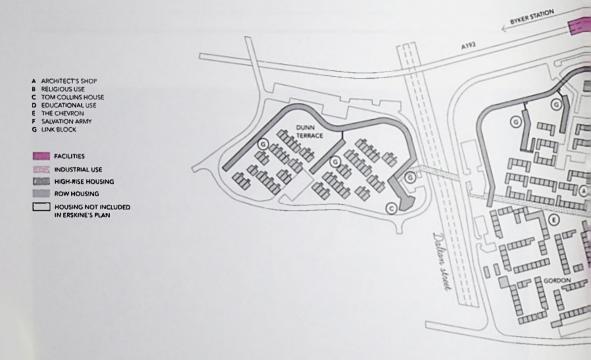


The guy who made the Byker Wall. Graffiti.

The local authority perceived that a loss of public control over the process was taking place and adopted a cynical stance, allowing for participation while at the same time wanting to take over the decision-making process. The general feeling was that the architects were paying more attention to requests from the users than to those from the people actually funding the whole operation.

Furthermore, the user participation process failed owing to a never-ending search for consensusbuilding between the parties involved, according to the Peter Malpass study published on completion of the work.

# Chapter 2 PARTICIPATORY DESIGN TENDING TO PEOPLE'S WISHES



The Byker process was complicated. The architects were responsible for both the management and the promotion processes. An initial test, which involved 47 families, took place in the area named Pilot Scheme. A survey was carried out among the people selected and the findings surprised the architects. Resident demands referred to innovative issues, such as open plan and flexible floor plans, a new look with bright colours, and a rejection of the dark brickwork of the old Byker. However, the residents also called for the preservation of some of the old buildings which formed part of their memories of the area such as churches, pubs, launderettes and some old bath-houses which had initially been scheduled for demolition. The pace of the area redevelopment was very slow. Between 1971 and 1973, 2,350 dwellings were pulled down and only 500 put up.

One of the design conditions was to maintain the social relationships in place in the area and to try to group the shared dwellings accorded to residents' wishes and preferences. Originally, the intention was family re-grouping by allocating, during re-housing, dwellings near to those family members with close emotional ties. Elderly residents preferred to be grouped together in the highrise buildings, which had deck access, pleasant views and were better suited for socializing. Unfortunately, these objectives were not accomplished entirely in reality.

The common spaces, meeting areas and "hobby rooms" were laid out in different locations, scattered around the area to enhance the shared living experience. At present, most of these are vacant, except for the Chevron, used by the "Byker Forum", which is an "umbrella group of Tenant Residents Associations for community activities."<sup>7</sup>

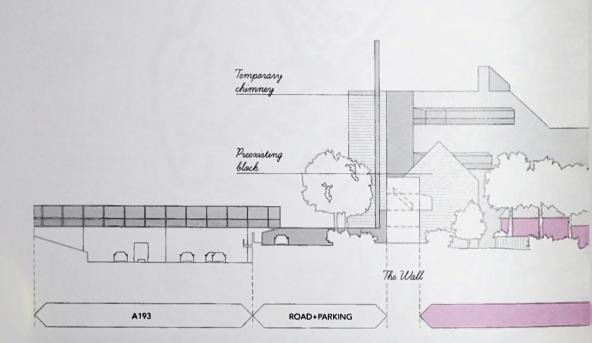
7. Future Communities http://www.futurecommunities.net/case-studies/byker-estate-newcastle-1967-present

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# Chapter 3 URBAN DESIGN MOBILITY

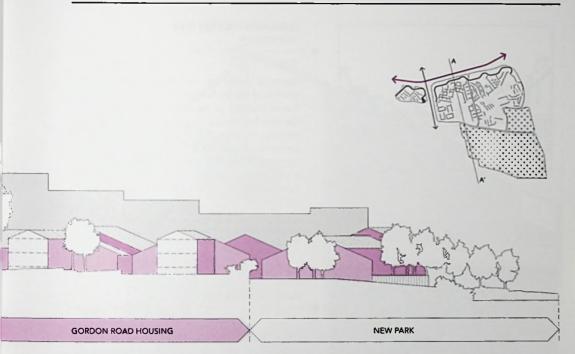
**BYKER REGENERATION Ralph Erskine** 



In 1961, the Newcastle Development Plan centred all its efforts on solving city mobility issues and local politicians became obsessed with importing certain ideas which had been put into practice some years before in Brasilia, based on separating traffic and pedestrians and on city centre accessibility. A new network of motorways was planned, branching out to the East and to the West, with no thought for the visual presence of these infrastructures. This became an orgy of elevated and underground walkways which were eventually either never built or later demolished.

In Byker, the design of the Wall was not to be questioned and this remained, from the very start, off limits in the debate. It was a design solution adopted, for technical reasons, as noise protection against the planned motorway. It was a supra-municipal decision which was excluded from the participation process. The planned motorway was never built and from the initial plan all that remains is a dual carriageway which was built at a lower level than the Byker Wall ground floor dwellings. This is the A193.





The biggest discussions among the residents concerned traffic, private vehicle use and the relationship between the latter and the dwelling. The architects planned a scheme with large residential islands, criss-crossed by an integrated pedestrian zone. Each cluster of low-rise dwellings was laid out around landscaped communal spaces with slow lanes for cars and *cul de sacs*.

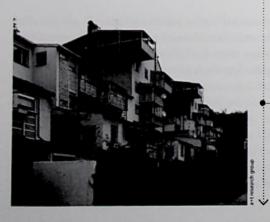
On-street car parking was organized into small lots concealed by vegetation and the low walls of the planters. The northern undulating sections of the Wall also have parking spaces out of view of the lower rise single-family dwellings.

## Chapter 3 URBAN DESIGN PICTURESQUE FUNCTIONALISM

#### REFERENCES







#### AN IMAGINARY IRREGULAR TOWN Raymond Unwin

#### 1919

Raymond Unwin<sup>8</sup> was rediscovered after the Second World War by Nikolaus Pevsner and Hubert de Cronin Hastings as the British continuation of the German Picturesque movement. For Pevsner and Hastings, this new trend *Visual Planning*, which they aimed to promote, was based on irregularity, variety, contrast and the lack of decorum. Erskine was influenced by these sources and it is easy to recognize in Byker details which could almost have been done by Unwin himself.

8. Raymond Unwin. Town Planning in Practice; an Introduction to the Art of Designing Cities and Suburbs. London, 1919. Illustration 98.

THE TOWN WALL Civilia Hubert de Cronin Hastings

#### 1971

In the Seventies, Ivor de Wolfe, the pseudonym of Hubert de Cronin Hastings owner of the *The Architectural Review*, coined terms such as *Townscape*, or *Subtopia*. In his publication: *Civilia, The End of the Suburban Man. A Challenge to Semidetsia*,<sup>9</sup> he promoted a picturesque movement which incorporated modern buildings into his collages. Erskine's designs were closer to this concept of the picturesque than to the brutalist derivations of Modernism.

9. Ivor de Wolfe. Civilia, The End of the Suburban Man. A Challenge to Semidetsia. The Architectural Press. London, 1971.

HOUSING IN WIENERBERGER Graz. Austria Ralph Erskine, Hubert Riess

#### 1987

For this project on the outskirts of Graz, Erskine uses elements similar to those he had used twenty years previously in Byker: exterior access, volumes designed at different heights and lower floors shielded by screens of vegetation. The result, as with Byker, reduces the visual impact of the large built volume.

#### BYKER REGENERATION Ralph Erskine



01 PRIVATE ENTRANCE 02 WOOD CLADDING 03 LIMIT BETWEEN PUBLIC AND PRIVATE 04 SIMPLE DIVIDING ELEMENT

The new Byker layout, implemented over 13 years, pointed from the very start to three aims which did not fully coincide with the spirit of the time. Firstly, to adapt to the characteristics of the location. Secondly, to preserve existing social bonds and thirdly, to convert the whole complex into a set of small communities each with their own identity. British Brutalism of the time, which forcefully imposed its striking forms, had no concerns about all this.

The final result creates a pleasant atmosphere with an informal look which does not overwhelm its environment. The private gardens on the south side of the Wall delimit the larger communal public spaces which serve to separate the Wall from the low-rise housing units. These gardens, each with its own layout and type of vegetation, break with the uniformity of the ground floor.

# Chapter 3 URBAN DESIGN PICTURESQUE FUNCTIONALISM

BYKER REGENERATION Ralph Erskine



In Byker, most of the layout is based on residential units grouped together in low density clusters around small squares, with a character to them very like that of traditional historic walled towns. The succession of urban voids is linked to a network of pedestrian routes, fitted with urban furniture and overgrown with trees and plants, which makes the scale vary as the observer moves around. "At Byker it looks as if a tidal wave of sheddery and pergolation had broken over the lower terraces and splashed as far up over the Wall as it could reach, leaving balconies and flower boxes and pigeon lofts clinging insecurely all over the facade." REYNER BANHAM, 1977.10



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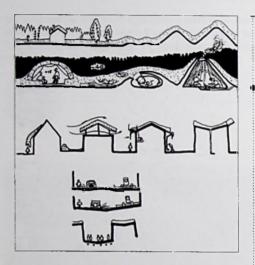
Nevertheless, the Wall, which shelters the community from the main road to the north, is a residential wall over six hundred metres long with heights ranging from five to eight storeys. This wall functions as a barrier against the North wind and aims to afford a micro-climate to the entire south side of the location running down to the River Tyne.

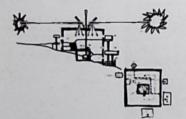
Apart from the Pilot Scheme, which was the basis for testing the participation system, the areas known as Dunn Terrace, Kendal and Grace Lee best represent the original spirit. Byker is a village within the city, as it maintains its specificity.

10. Reyner Banham. Architectural Design 11-12, 1977.

# Chapter 4 CONSTRUCTION SYSTEM CLIMATE AND ENVIRONMENT

#### REFERENCES





#### A CITY IN THE ARCTIC Ralph Erskine

#### 1959

Drawings of the presentation made by Ralph Erskine at the International Congresses of Modern Architecture (CIAM), Otterlo, 1959, where he outlined the energy efficient solutions for a city located below the Arctic Circle.

#### VILLA GADELIUS Lidngö, Sweden Ralph Erskine

#### 1961

This house built with an exposed concrete exterior on an escarpment has a green landscaped roof. Two screens reflect natural light into the house. This shows Erskine's concerns to adapt architecture to the environment.

HOTEL JOCHBERG Jochberg, Austria Ralph Erskine

## 1979

For this unbuilt resort complex, with volumes of different heights, Erskine designed a roof which was separated from the envelope and which he had already used in his own house in Drottningholm. This mix of tower blocks and low-rise buildings helped to integrate the architecture into the rural landscape of the Austrian Tyrol.



#### BYKER REGENERATION Ralph Erskine



For the Byker regeneration he made use of the sloping land such that the high-rise dwellings could have breathtaking views over central Newcastle. He also took orientation into consideration, putting the openings on the south-facing side and closing the openings on the north-facing side, where there is no sunlight and where traffic noise makes the living space less comfortable. This integrated environment had to be built on a low budget which despite not taking advantage of standardization managed to incorporate simple easily-replaced materials. Some of the representative buildings of the old Byker, such as the existing churches, schools or pubs, were preserved in their original locations for them to serve as an anchor to the new physical reality being created.

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# Chapter 4 CONSTRUCTION SYSTEM DO IT YOURSELF SOLUTIONS

#### REFERENCES



FACULTY OF MEDICINE Lucien Kroll Leuven, Belgium

#### 1969-1974

Student participation in constructing Leuven University buildings was creative and intense. Lucien Kroll directed the process using work groups which produced foam models as design tools. Once they had all accepted one design solution, they would go on to draw the respective architectural plans. An arbitrary criterion was established to compose the facades, which stood out for their ability to absorb new elements, with a kind of spontaneous growth.





WALTER'S WAY Walter Segal London, united Kingdom

## 1970-1975

The Segal method is a dry construction method which uses components currently on the market. Starting from a base slab, a timber frame and the installed drainage channels, users can build their own dwelling by following the instruction manual. The system's inherent flexibility favours actual resident control over the dwelling and any future upkeep.

EDEN BIO Edouard François Paris. France

#### 2008

François' strategy to rebuild the interior of the Parisian block is similar to that used for Byker. He tries to preserve the relative scale typical to the neighbourhood and uses materials which can be both easily maintained and replaced.

#### BYKER REGENERATION Ralph Erskine

"In the 1970s, architects were looking for a way out of Modernism. For half a century, their predecessors had been obsessed with the figure of the engineer. Hence it is not difficult to understand why the text by Lévi-Strauss proved so enticing. *Bricolage* seemed to offer an alternative vision of that of Modernism. It was the perfect riposte to the doctrine of functionalism, to the excesses of rationality and to the worship of science. *Bricolage* signified improvisation, freedom, and populism." IRÉNÉE SCALBERT. 2011."



During the participation process, the residents rejected everything that had anything to do with the old brickwork Byker buildings and opted for clear levels and brightly-coloured painted wood for the protruding elements on the facade. This abundant use of wood was to cause maintenance problems in later years.

Northumberland is not a county with a long tradition of using timber for building purposes. Rather, the craftsmen belong to sectors related to heavy industry and in the 1970s did not pay sufficient attention to the finer points of the construction process and to the choice of timber for the latticework, handrails and safety elements for these to be guaranteed a long life.

Many of the original items have been replaced by lacquered metal elements requiring less maintenance but which distort the original idea. The same has occurred with the grey fibre cement roofs which have been replaced after repeated repair work.

The structure is made from on-site cast concrete. The transverse walls and the structural slabs were also built using the same material. The decks of the south area of the perimeter building are supported by concrete corbels which come out from the transverse walls. The deck structure is made of wood as they support a light load, only holding up the translucent corrugated roof.

The advantages of the ideas which the architects came up with were that any repair work did not require any specialist skills and the residents themselves could replace or paint over the deteriorated elements using basic DIY skills. This could be possible in the low-density areas of single-family dwelling types, but Sirkka-Liisa Konttinen thinks that Byker has "crippling high cost maintenance requirements, by comparison with other housing estates in Newcastle, due to its particular materials and design features used."<sup>12</sup>

<sup>11.</sup> Irénée Scalbert. "The architect as bricoleur". Candide 4, Actar, 2011. P. 73.

Claude Lévi-Strauss. The savage mind. University of Chicago Press, 1966.

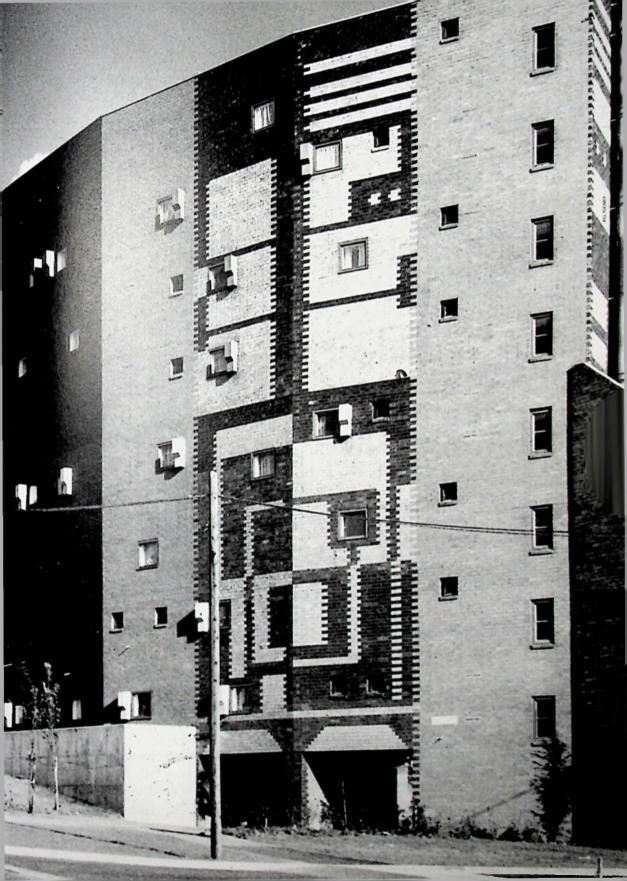
<sup>12.</sup> Sirkka-Liisa Konttinen. Personal correspondence with a+t research group, 2013.



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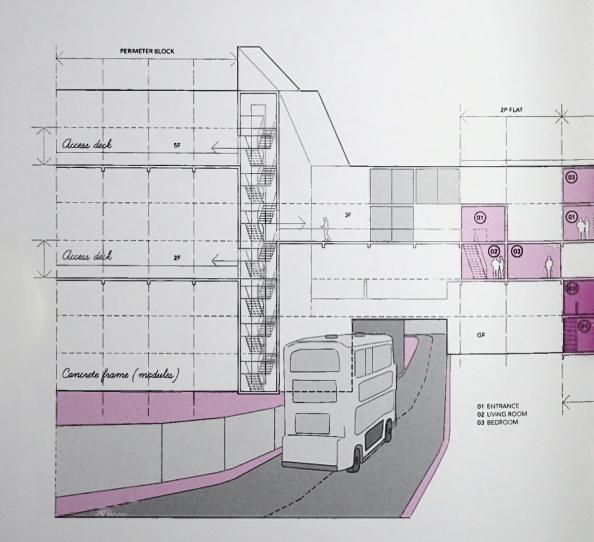






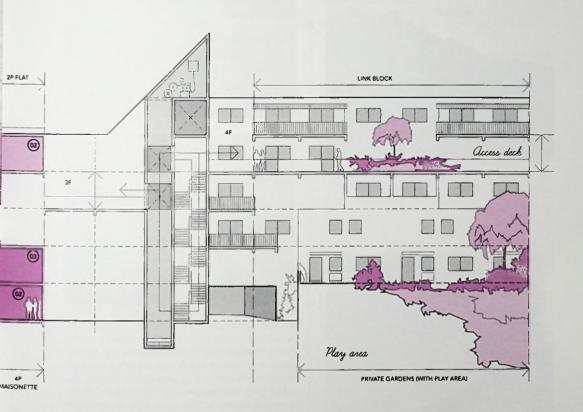
# Chapter 5 URBAN FORM THE LIVABLE WALL

## BYKER REGENERATION Ralph Erskine



Throughout the time it was being implemented, the Erskine Scheme underwent alterations which increased the further south the works went. The iconic power of the serpentine wall absorbed all the force of the design. The attempts to diminish its visual impact and soften the image of the defensive medieval wall in the interior areas gave rise to the creation of those Link Blocks which hang as add-ons to the huge undulating structure and which graduate the scale from a great height down to a low density fabric.

#### DETAIL OF THE SECTION-INTERIOR ELEVATION OF THE WALL



In the Wall -seemingly an imposing construction due to its length and enormity-, five resources are employed to soften its impact: the curved floor, the pointed profile, divided and with different heights, the connection to the link blocks, the remarkable material and colour variation and the greenery which envelops the ground floors.

The north facade of the Wall, in terms of its volume and openings, allows for changes in the colour of the brickwork and incrustation with small pieces of coloured concrete, which remind us of the battlements of defensive walls and which are in fact the kitchen extractor ducts.

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# Chapter 5 URBAN FORM THE LIVABLE WALL

#### REFERENCES







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IVIRON MONASTERY Mount Athos. Greece Ioannis, Efthymios

#### 980-983

The use of the defensive wall as a living space has been a common occurrence ever since the first urban settlements were founded. The addition of light-weight elements to the stone fabric is similar to that used for Byker.

#### PLAN OBUS

Algiers. Algeria Le Corbusier

#### 1933

This urban project, which was not actually commissioned and took Le Corbusier eleven years, stands out against the landscape due to the curvilinear form of the great residential viaduct which was aimed to connect, via a motorway running over the roofs of the housing, downtown Algiers with its suburban environment. In this case the mega-structure aimed to impose itself by passing over history, the urban grid, and the customs and traditions of the Kasbah residents. In Newcastle, Erskine's approach was to look at on the problem from the other side of the wall.

#### PEDREGULHO RESIDENTIAL COMPLEX Rio de Janeiro. Brazil Affonso Eduardo Reidy

#### 1947-1952

The difference between this residential block by Reidy and the Byker Wall is mainly the autonomy of the building in relation to its location. Its uniform height, seven storeys throughout its length, and the fact it stood on *pilotis* shows the arrogant relationship between the Modern architecture and the surrounding landscape, far from Erskine's conciliatory spirit.









PARK HILL Sheffield. United Kingdom Jack Lynn, Ivor Smith, Lewis Womersley

#### 1959-1961

The Park Hill complex in Sheffield, built ten years before Byker, contains maisonettes which are accessible from a covered gallery which is approximately three metres wide. In this case, the stairs for each dwelling form an H shaft in the interior of the blocks and comprise three flights. In Park Hill, the degree of prefabrication led to fully standardized solutions. The social customs of the residents of this Sheffield neighbourhood were taken into consideration when designing the polygonal blocks. However, the architecture imposed its conditions far more radically than in Newcastle.

#### FORTE QUEZZI Genoa. Italy Daneri, Fuselli

#### 1958-1962

Building 870 social housing units on the Quezzi hillside was an operation which was more about adapting to the terrain than providing shelter with dwellings at human scale. Traffic and pedestrian circulation was organized on different levels and, unlike Byker, more orthodox criteria were adopted in terms of unit and building systematization.

SVAPPAVAARA Svappavaara. Sweden Ralph Erskine

#### 1961-1963

The Svappavaara project is the direct precursor of the Byker project. In this Lapland mining town, Erskine performed his first experiments for the wallbuilding, on a hillside, facing south and sheltered from the Arctic wind.

# Chapter 5 URBAN FORM CONCENTRATION OF SITUATIONS

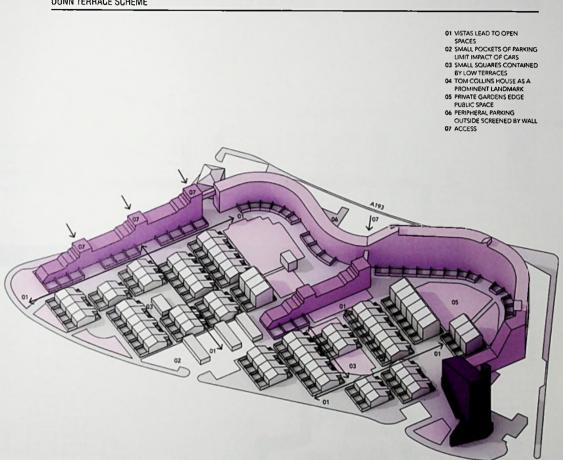
BYKER REGENERATION Ralph Erskine



Dunn Terrace brings together all the elements which are repeated in the rest of the complex: undulating perimeter wall with the pointed landmark of the Tom Collins House tower at one end, three stepped link blocks and semi-detached single-family dwellings, laid out in two groups with a free square space in the middle. Density reaches 117 people per acre which is quite high compared to the standard densities proposed for the new towns of the time.

#### DUNN TERRACE SCHEME

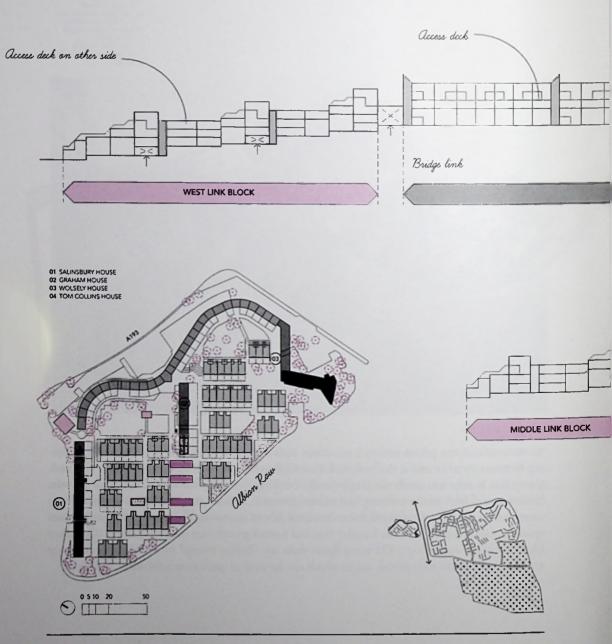




At the west end, the perimeter block continues with a Link Block. At the east end, the undulating form comes to an end at the landmark Tom Collins House point block. It is oriented in such a way that it does not shade the single-family dwellings located close to its base. This way the shade created, both in the morning and in the afternoon, is not cast onto the living spaces in its surrounding area. On the ground floor, the south side of the tower block houses the communal spaces: social lounge, TV room, laundry area and a small greenhouse near the garden. The tower block is twelve storeys high. On some floors there are "hobby rooms" or activity spaces. There are also guest rooms with private access which can be used as spare rooms for some dwellings.

# Chapter 5 URBAN FORM CONCENTRATION OF SITUATIONS

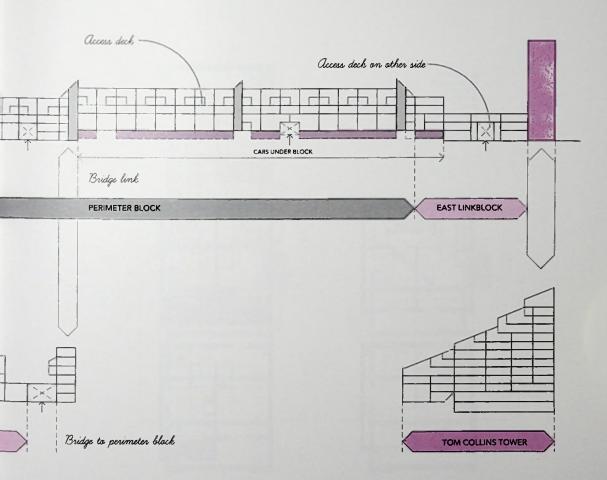
BYKER REGENERATION Ralph Erskine



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#### INTERIOR ELEVATION AND GENERAL FLOOR PLAN OF DUNN TERRACE



The perimeter block follows the Wall design and is five storeys high. The first two storeys are two-bedroom maisonettes with direct ground floor access. The top three storeys have deck access on the fourth floor. The number of storeys, the maisonette layout and the two super-imposed semi-maisonettes are similar to the design used by Moisei Ginzburg for the Narkomfin Dom-Kommuna (see pp. 66-113).

The single-family dwelling type is two-storey with three bedrooms and three levels. They all have an exterior private garden and a balcony on the rear facade. They are grouped in two clusters, with a public open square area and a communal space in the middle.

# Chapter 6 DWELLINGS LIVING DECKS

#### **BYKER REGENERATION Ralph Erskine**



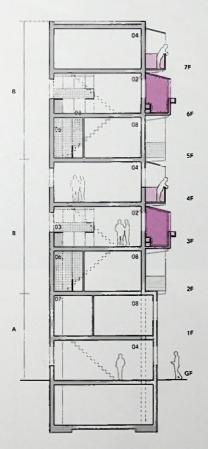
The Wall repeats a section design which is reiterated both in the five-storey block and in the eight-storey block. This comprises: maisonette with lower floor access, occupying the two lower storeys, for families with children or mobility issues and a central deck which serves both top and bottom floors, in a three-storey design, superimposed onto the previous one, once or twice, according to the height of the block.

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TYPICAL FLOOR PLANS AND SECTIONS OF THE WALL



EIGHT STOREY SECTION FIVE STOREY SECTION 04

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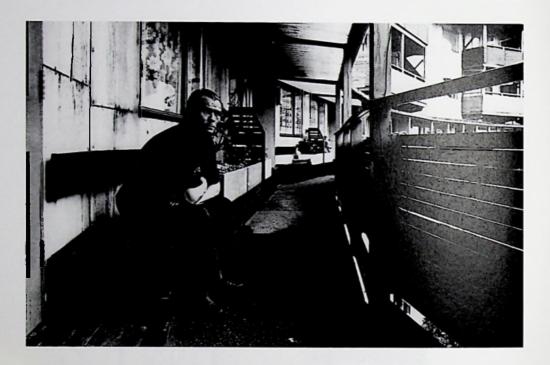
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The Byker estate, despite the presence of the Wall, has a layout comprising 80% low-rise housing.

# Chapter 6 DWELLINGS THE WALL LIVING DECKS

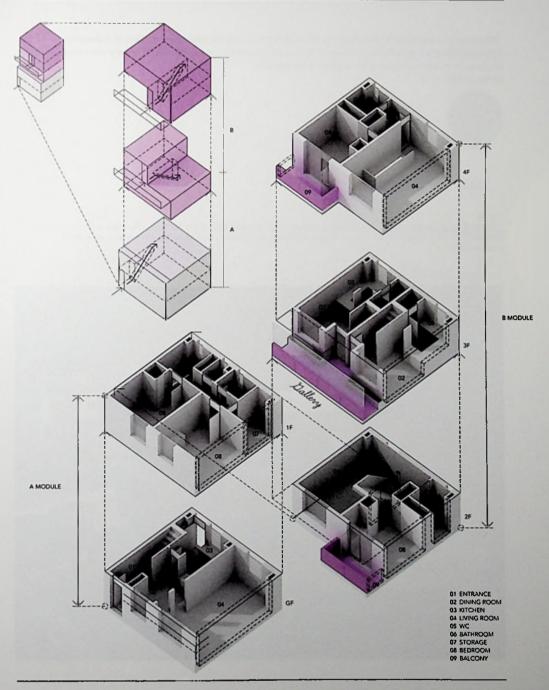
#### BYKER REGENERATION Ralph Erskine



The maisonettes have the living areas downstairs and the sleeping areas upstairs. All the living areas are south-facing and the service and storage areas face the north side, which is the noisiest area due to traffic from the main road. In contrast, the flats with deck access have the kitchen and the dining room on the same floor as the entrance. The decks are located on the fourth floor, in the case of the five-storey blocks; or on the seventh floor, in the case of the eight-storey blocks. The decks are spaces for circulating, resting and socializing.

They are seen as an extension to the maisonette living areas, as well as being access routes. The linear corridor design also includes planters and benches, installed at waiting points at the end of the decks, near to the lift and stair shafts. The roofing for the decks, on the south-facing side, comprises transparent corrugated sheets designed to maximize natural light in the access corridors.

#### TYPE-UNITS OF THE WALL



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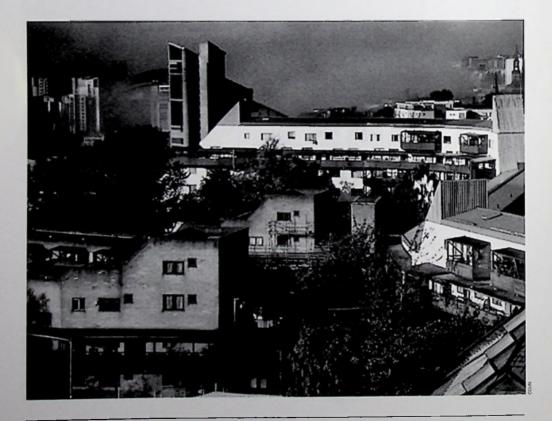
# Chapter 6 **DWELLINGS** THE SPREADING ROW

#### BYKER REGENERATION Ralph Erskine

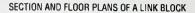
"Whatever the quality of Erskine's Byker, it is difficult to justify the violent disruption of redevelopment. Besides effecting a significant break-up of the existing community, the demolitions were the cause of years of gross discomfort and worry for a great many people." SARAH GLYNN, 2011.<sup>13</sup>



13. Sarah Glynn. Good Homes: lessons in successful public housing from Newcastle's Byker Estate. P. 2. This paper was given at a colloquium on The Housing Crisis: Experience, Analysis and Response in Birkbeck. Institute for Social Research, London, 2011. www.sarahglynn.net



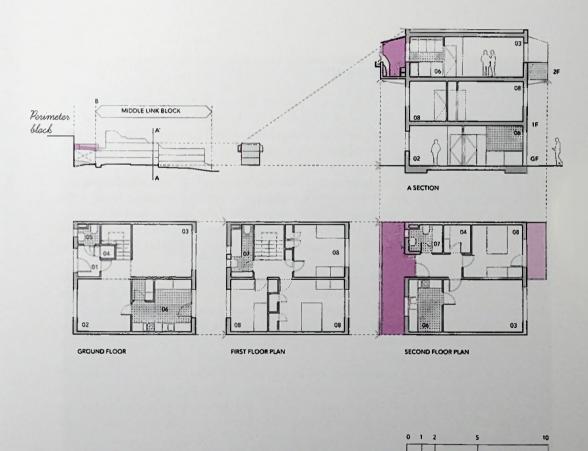
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There also exist the Link Blocks which soften the transition between the built volumes, ranging from the semi-detached single-family homes to the massive undulating structure of the Wall. Their characteristic feature is their stepped sections. The central sector type comprises a three-bedroom maisonette with lower floor access and another flat above with deck access. On the ground floor, the dwellings have private gardens which have become overgrown with plants and which make us completely forget the mineral characteristics of the old Byker.

## EPILOGUE BUILDING MOODS

## MANAGEMENT AND COMMITMENT

In terms of activity, the Modern segregation of uses was to some extent a burden for the Byker mono-theme concept. The lack of an alternative use to the residential programme and the insufficient integration with the road links in the area favoured the decay of the estate. In Byker, housing is virtually a monoculture and the few commercial uses existing have not been able to provide either intensity or variety.

As far as maintenance and management are concerned, the communal area-wide heating system has never worked properly. It was virtually impossible to control the heating levels in the individual dwellings and the combined heat and power (CHP) plant, with a built-in incinerator, caused health problems derived from burning household waste. The pump rooms were not properly sound-proofed and the pipes had constant leaks and bursts. (See Byker in Future Communities)

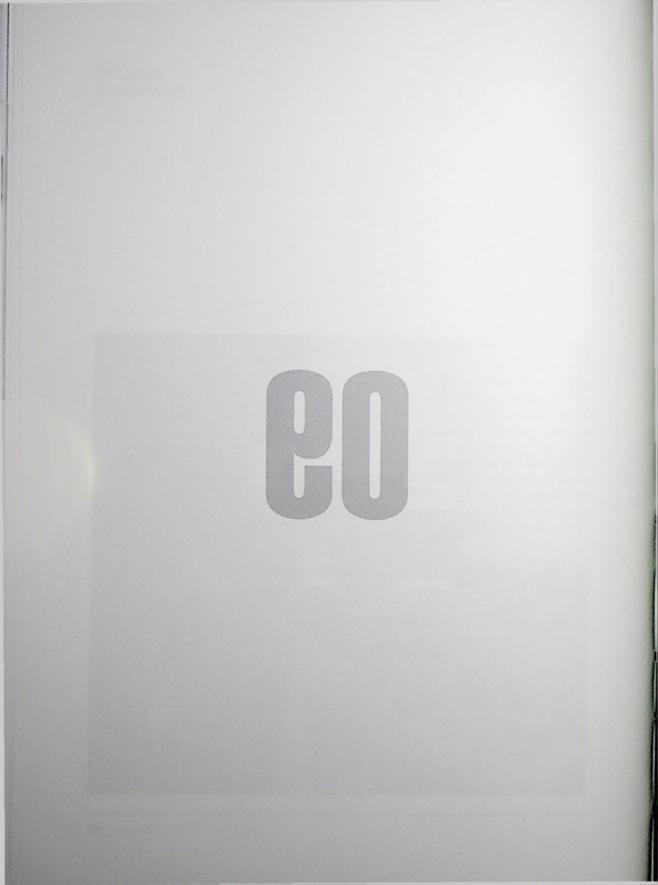
Throughout the years, the Byker estate has gone through different phases, with the most negative phase being that following the industrial crisis which began in the 1980s and which had a dramatic effect on both families and the way the Council managed the estate. In the late 1990s, 10% of the 1,800 dwellings were vacant and the green spaces, designed to supply the rest of the city with fully-grown trees, fell into neglect. Complaints about anti-social behaviour were three times the national average and Byker gained a reputation as a place where nobody wanted to live.

After 1997, the arrival of a new councillor in the area helped refocus the council's attention on the estate and a plan outlining strategic measures was drawn up to bring social cohesion back to the area. Between 1997 and 2006, crime was cut by 40% and the percentage of vacant dwellings to 2%. In 2006, the Byker estate was given Grade II listed building status which made it easier to raise funds for maintenance.<sup>14</sup>

In 2012, council management of the estate was transferred to the Byker Community Trust. This new non-profit body aims to improve management and the physical state of the housing and the common spaces by closely involving the residents of the estate.

14. http://www.futurecommunities.net/case-studies/byker-estate-newcastle-1967-present







# **MY TERRACE, IN FRONT OF MY HOUSE, OVER YOURS**

## **JEANNE HACHETTE COMPLEX** Jean Renaudie

Avenue Georges Gosnat. Ivry-sur-Seine (Paris-France) 1970-1975 48°48'42.91"N / 2°23'8.01"E

The Jeanne Hachette mixed-use complex sums up all Jean Renaudie's concerns on the issue of diversity in social housing. With this hybrid as a model, he fought against the division of functions and launched a manifesto in which he converted the city into a living organism whose parts were all closely related. Renaudie never understood the logic behind the *grands ensembles*. He believed that the standardized construction system crushed the individual and created massive containers for a simplified human being who did not actually exist.

In his view, buildings should grow formally and organically with vegetation as a necessary condition in the liveable environment. He believed that the right to enjoy a unique dwelling was as important as the right to own a portion of natural space, not just a balcony but a real terrace where trees could grow. The outdoor space added privacy to the act of living there and made it possible to observe the actual dwelling from outside, from an atypical view point, experiencing a sensation of near yet far. Standing in your garden in a collective housing building and being able to look inside your own house was for Jean Renaudie a magical experience.



"It is marvellous when it rains to stand inside your house and watch the rain fall on your terrace... It is one of those things which are not essential yet really matter in everyday life." JEAN RENAUDIE, 1980<sup>1</sup>



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1. Jean Renaudie. "La terrace", 1980, in: Irénée Scalbert. A right to difference. The Architecture of Jean Renaudie. A A, 2004. P. 145.

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# **CHARACTERS**



JEAN RENAUDIE Architect, 1925-1981

He was a disciple of Auguste Perret and Marcel Lods. In Lods' atelier he showed great talent as a draughtsman. In 1956, he was employed at Philippe Ecochard's office where he worked alongside Pierre Riboulet, Gérard Turnhauer and Jean-Louis Véret, with whom he co-founded the Atelier de Montrouge in 1958. In the mid 1960s, he participated in the Cercle d'Études Architecturales set up by, amongst others, Auguste Perret and Eugène Beaudouin to counterbalance the work of the Institute of Architects. In 1968, he left the Atelier de Montrouge to work with Renée Gailhoustet, whom he had met in the Lods atelier, on the lvrysur-Seine city centre redevelopment.

A Marxist, he was a member of the French Communist Party for most of his life and one of his greatest concerns was to build dignified collective housing for all. He moved away from the repetitive monotony imposed by the grands ensembles and his construction system employed exposed concrete which was, however, not treated using heavy industrialized systems. He was always against architectural standardization and he favoured the uniqueness of the living unit within a complex structure, similar to the relationship of cells with biological phenomena. He was inspired both by the Structuralism of Claude Lévi Strauss and the work of the Nobel Prize-winning biologist, François Jacob. In 1978 he was awarded the National Architecture Prize by the French Minister for Culture in recognition for his professional career.



RENÉE GAILHOUSTET Architect and urban planner 1929-

In 1952, she commenced her studies at the School of Fine Arts where she worked for Marcel Lods. There she met Jean Renaudie with whom she was to form a partnership until 1968 when Renaudie left the Atelier de Montrouge. In 1969, she took over the post of Chief Architect of Ivry-sur-Seine, a post passed down to her from Roland Dubrulle, the former municipal architect. She invited Renaudie to work with her on the project to redevelop downtown Ivry. As municipal architect she worked with several Communist-led councils on collective housing projects in the outskirts of Paris.

The forty years of Gailhoustet's professional career spanned from the early years focused on the legacy of the Soviet proposals of the 1920s to the later complete acceptance of Renaudie's Biological Structuralism. With the support of Raymonde Laluque, who was at the time the young director of the lvry Office of Public Housing, and with the creative energy of Renaudie, she managed to evolve away from the rigid geometry which had imposed the bars and towers of his Soviet period towards a freer approach with fractal-based geometric forms surrounded by greenery, closer to her childhood experiences in the popular dwellings of Algeria.



ATELIER DE MONTROUGE Architecture workshop, 1958-1981

N. 4. 12



Architecture and planning workshop where Jean Renaudie worked, along with Pierre Riboulet, Gérard Thurnauer and Jean-Louis Véret, from its launch until 1968.

This first period (1958-1968) until Renaudie left, was called ATM1. It was named after Montrouge, a district located in the south of Paris, just on the other side of the Boulevard Périphérique. Before this team came into being, its members had been working alongside people such as Le Corbusier or Jean Prouvé. Véret oversaw the works by Le Corbusier in Ahmedabad, India, (1952-1955) and in the 1980s took part in the restoration of the Villa Savoye. Riboulet and Thurnauer set up the Atelier d'Industrialisation de la Construction with the help of Jean Prouvé.

The workshop functioned according to the principles of the associative movement, sharing resources and constantly initiating debates aimed at social reflection on collective housing.

Janina Schuch co-designed, with Jean Renaudie, residential complexes and facilities in lvry-sur-Seine and Givors and public facilities in Le-Petit-Clamart and in Cergy-Pontoise. She worked as a draughtswoman at the Atelier de Montrouge, where she worked intensively with Renaudie on Le Vaudreuil project, (1967-1968). Years later she would become chief architect at Renaudie's studio. She was also his life partner and the mother of his son Serge. After the death of Jean Renaudie in 1981, she set up, along with two other colleagues from the studio, the office Atelier Jean Renaudie, which worked for five years to complete the outstanding projects. It was Nina who gave Renaudie a book on fractals by Benoît Mandelbrot, a book he never actually read, as she recalled in the interview which she gave years later to Irénée Scalbert for the monograph: A right to difference. The architecture of Jean Renaudie, published by the Architectural Association in 2004.

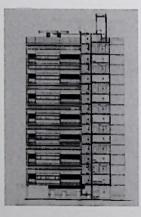


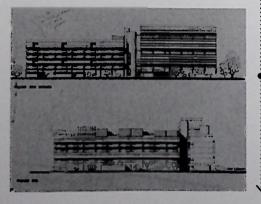


# Chapter / URBAN DESIGN IVRY, THE SOVIET LEGACY

# REFERENCES







MAURICE THOREZ SOCIAL HOUSING Ivry-sur-Seine. France Henri Chevallier, Robert Chevallier

### 1952-1953

The Soviet model of overlapping orthogonal blocks was the formal precursor used to solve the problem of the housing shortage in Ivry. This complex was the first municipal collective housing operation in Ivry city centre. It is a stepped T-shaped building between 9 and 14 storeys high. After this project, brickwork facing was no longer used by the municipal office run by Gailhoustet and Renaudie due to their preference for exposed concrete as a means to flee from modular rigidity and to the lack of identification of this ceramic material with the avant-garde architecture of the time.

RASPAIL TOWER Ivry-sur-Seine. France Renée Gailhoustet

#### 1966-1968

This tower adds communal services on different floors, following the programme for the Soviet Dom-Kommuna (see previous page 98). In this case, this 18-storey tower has superimposed apartments which interplay with the difference in levels like a semi-maisonette. The stepped form adds complexity to the section. Five double towers like this were built in central lvry and they were to stand alongside the more broken invasive geometric forms which Renaudie incorporated.

SPINOZA COMPLEX Ivry-sur-Seine. France Renée Gailhoustet

#### 1966-1973

In 1962, following the Maurice Thorez model, Gailhoustet drew up a plan for Ivry city centre redevelopment based mainly on geometry of bars and towers. This complex takes on board the lessons learnt from Le Corbusier's Unité d'Habitation with concrete as the main material and with facilities in modular hexagonal constructions located on the ground floor.



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In recent history, social housing in Ivry-sur-Seine has seemingly been overhauled every ten years. In the 1950s, the model was an adaptation of the compact Soviet collective block, of which the Maurice Thorez social housing (see p. 428) is one of the best examples. In the 1960s, it was the H-shaped towers designed by Renée Gailhoustet when she was still at the offices of Roland Dubrulle where the main focus was on building *grands ensembles*. This stage of modern towers, of which five were built, died a death in May '68. From this point on, around the crossroads between rue Lénin (now avenue Georges Gosnat) and rue Danielle Casanova, the team of Renaudie and Gailhoustet, at the time municipal architects, built drama, variety, movement and vegetation into the rigid structure of contemporary French planning.

In 1968, Jean Renaudie set off on a new path, both in his professional and private life. The hardships he had to endure to defend his ideas on complex structures in the Atelier de Montrouge had provoked a malaise deep within him and it was these hardships which were to lead him to eventually reject the more Corbusierian line taken by the other three team members. The ideas developed by Renaudie for Le Vaudreuil new town (an unbuilt project) were useful in that he adapted them into later urban developments. Ivry-sur-Seine was, in the aftermath of the May 1968 protests, one of the communes in the outskirts of Paris which decided to completely overhaul the city centre. In 1970, Renaudie was put forward by Renée Gailhoustet as assistant architect for the Ivry-sur-Seine downtown redevelopment and from that point on they were to work together on many projects.

The Danielle Casanova, Jeanne Hachette and Jean-Baptiste Clément complexes mix in with their counterparts Spinoza, Le Liégat, Cité du Parc, Marat and Voltaire, occupying roughly 37 acres of downtown Ivry-sur-Seine. The council made an effort to reclaim the heart of the city with a new urban planning programme comprising 1,700 dwellings, two-thirds of which were social housing, and an intense array of facilities and public services.

# Chapter 1 URBAN DESIGN IVRY, THE CONTINUOUS FABRIC

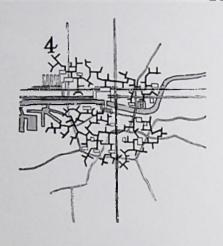


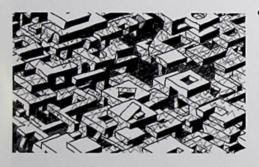
430 / 10STORIES OF COLLECTIVE HOUSING



# Chapter / URBAN DESIGN CONTINUOUS FABRIC

#### REFERENCES







FIRST CLUSTER CITY Diagram Peter Smithson

# 1952

The cluster city shown in this diagram by Peter Smithson extends out through the centre of a generic city in the same way that the Gailhoustet and Renaudie plan invaded lvry-sur-Seine city centre. The Jeanne Hachette bridge which crosses over the avenue Georges Gosnat and links up with the Voltaire complex seeks to separate vehicle and pedestrian transit in accordance with the principles regarding mobility formulated by Team 10.

# SPATIAL CITY

Yona Friedman

#### 1959-1960 (Unbuilt project)

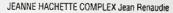
Yona Friedman provides continuity to the Team 10 idea and suggests this spatial city as a structure upon *pilotis* over the existing city. This is a manmade landscape which allows for endless growth supported by the undefined fabric of a megastructure. The Jeanne Hachette complex is criss-crossed by interior streets which aid pedestrian mobility at a neighbourhood level, while residential use floats overhead.

CHEMICAL ARCHITECTURE Organics Manifesto William Katavolos

#### 1961

In his manifesto, Katavolos stated that a new architecture founded on chemical patterns, an architecture freer than that produced until then, model-independent and far more organic, was possible. His manifesto titled "Organics" was vital in sustaining the theory of an architecture founded on the chemistry of polymer, fluid and malleable materials. This notion, which was applied to urban growth, aroused some interest in several 1960s proposals.

2. William Katavolos. Organics. Steendrukkerij de Jong & Co. Hilversum, 1961.





This nine-storey complex comprising 40 dwellings, commercial premises, offices, cinemas, stores and car parking is split into two independent volumes which coincide with the two stages of construction. The second comprises the volume on the north-east corner and the bridge over avenue Georges Gosnat.

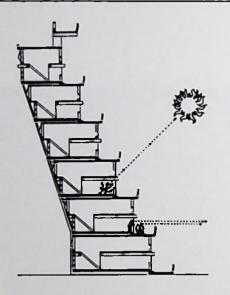
Jeanne Hachette merges at one end with another ten-dwelling development, whose works were commenced three years later and which was also designed by Renaudie and Gailhoustet, named Jean-Baptiste Clément, after the road it is in. The Jean-Baptiste Clément building seems to be a part of Jeanne Hachette due to its proximity, its formal resemblance and finish yet actually contains less interior complexity.

The general floor plan for Jeanne Hachette is conceived as a continuous fabric which spreads out beyond the borders of the plot, invades public space and establishes relations with neighbouring organisms. It knows no physical limits and can establish bridges linking to buildings on the other side of the street or make specific contact with towers in the local environment.

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# Chapter / URBAN DESIGN CONTINUOUS FABRIC

REFERENCES



CRESCENT HOUSES Proposal for the CIAM X Mars Group, Alison and Peter Smithson

### 1956

Ever since the CIAM IX, Aix-en-Provence (1953) indeed even following the previous Sigtuna Congress (1952), young participants led by Candilis and Alison and Peter Smithson, had had their sights set on the principles of the Athens Charter. They questioned the validity of the segregations of functions and were getting interested in the city as a complex organism. The concept of habitat and the theories of Patrick Geddes on the city as a whole became the centre of the discussions. The Charter of Habitat which Candilis sought to draw up, but which never actually materialized, was to be the guide for future urban planning. The machine for living was being discarded in favour of the dwelling designed for a specific resident in an identified setting.

POLYVALENT BUILDING Montecarlo. Monaco. Competition. Fernando Higueras

#### 1969

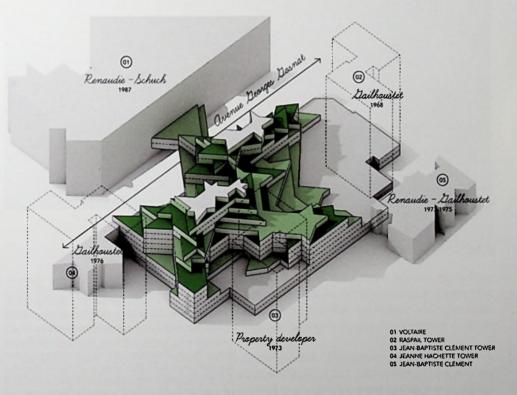
The aim of this project was to construct a building-city within Monaco; a living organism functioning 24/7; a green building due to its structure and its ability to accommodate vegetation. There is a clear association with the shapes of sea creatures such as sea urchins or molluscs. JEANNE HACHETTE COMPLEX Jean Renaudie

"Diversity is found at the very roots of biology. The genes, which constitute the heritage of the species, join and separate with the passing of generations, forming the ever different, ever transitory combinations that are individuals. It is this infinite combinatorial system of genes that makes each of us unique. It gives the species its richness and its variety."

FRANÇOIS JACOB, 1997.3



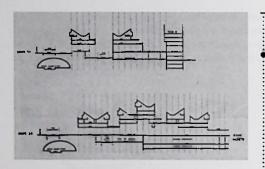
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3. François Jacob. Of flies, mice, and men. Harvard University Press, 1998. P. 104.

# Chapter 2 USES INTEGRATING FUNCTIONS

# REFERENCES



MARAT COMPLEX Ivry-sur-Seine. France Renée Gailhoustet

#### 1971-1986

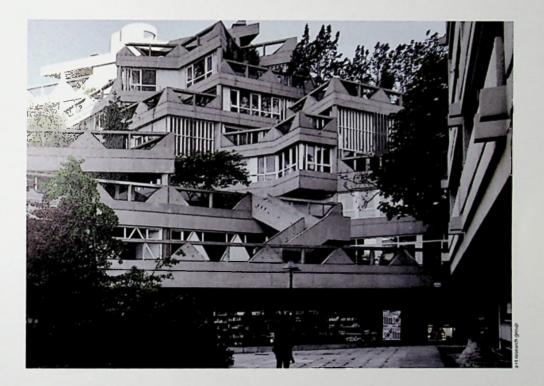
This complex which was conceived roughly the same time as Jeanne Hachette does not experience the 45° geometry which characterizes the work of Jean Renaudie but rather still preserves an orthogonal structure. In this case, the triangle appears on the roof, on the crowns of the volumes. In one of the sections shown here, there appears an open space under the building with a similar purpose to Jeanne Hachette's gallery which connects pedestrian access to different levels. Both projects incorporate a pyramid structure, have concrete as the only material and aim for city activity to spread out over the lower floors of the building. In Marat, underground communication links to the public transport network are also proposed.

VITROLLES NEW TOWN Les Gorges de Cabriès. France Jean Renaudie

### 1974

This new city for 600 dwellings, whose aspirations can be seen in a large number of drawings made using felt-tip pens, underwent different adaptations in circular and triangular geometric forms which co-existed on one single floor. In this partial frame, one of the most detailed of those produced, we can see the street level floor plan of a fragment of the complex adapted into a perforated grid of horizontal and vertical axes. The public space becomes a path around the interior of the building adopting a similar solution to that which had been proposed for Jeanne Hachette.





The segregation of functions (living, working, recreation and circulation) became discredited when the new schemes, due to their inherent doctrine, did not reach the complexity required for urban life to develop. Renaudie believed that the city was a complex mechanism which, in order for it to preserve its own structure, should periodically assume both the disappearance of some functions and the appearance of new ones.

Renaudie spoke out against zoning in an article entitled "Lurbanisme est architecture: trois architects répondent" published in Architecture d'Aujourd'hui in 1968. Like other architects of his generation disillusioned with Modernism, he realized that segregation was not able to maintain real social contact, the real raison d'être of a city. He proclaimed the unification of disciplines: architecture, urban planning and all the social sciences towards a successful combination of all types of techniques and materials, blended with citizens' desires and dreams.





# Chapter 3 URBAN FORM THE INHABITED HILL

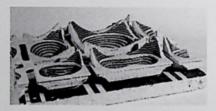
#### REFERENCES

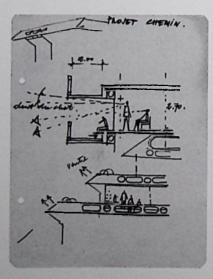


CASA DEL SOLE Rome, Italy Innocenzo Sabbatini

### 1926-1929

The terraced urban dwelling became increasingly relevant following the example by Hans Poelzig in the House of Friendship, Constantinople (1916). In this case built in Rome, the vegetation plays a background role and he just incorporates small perimeter borders with planters and shrubs in order to evade the construction issue of the landscaped roof.





VILLES CRATÈRES Chanéac (Jean-Louis Rey)

#### 1963-1969 (Unbuilt project)

The disappearance of the street and the neighbourhood, endless green spaces, the blurring of the limit between the urban and the rural. Chanéac was aiming for all of the above with his Crater Cities, where the collective dwellings occupy the terraced interior of these man-made hills and the rest of the uses -offices, stores and workshops- are located on the exterior of each block. The method of growth is that of a megastructure which extends ad infinitum out into the city, like Friedman's Spatial City. The particufar solution for the section is less clearly defined yet even in the sketches there appears the latent issue of how to ventilate the dwellings, whereby it is necessary to connect the ventilation shafts to the exterior using the most unlikely places with an uneven path given the impossibility of a vertical solution.







#### NEW TOWN Le Vaudreuil. France Atelier de Montrouge

#### 1967-1968 Unbuilt project

This project was the reason for Jean Renaudie's break with the Atelier de Montrouge. As many as three proposals were presented for this new city for 100,000 inhabitants in the Seine valley and Renaudie's stubbornness was to lead to none of them going ahead. The last of the three focused its efforts on the stepped section with underground roads which followed the curved levels at different heights. The theme of the inhabited hill would reappear in many Renaudie projects. Abstraction and topography are the elements which intervene in the composition and his projects apart from the more pragmatic layout of the English new towns.

#### HILL CITY Justus Dahinden

#### 1968-1972 (Unbuilt project)

Dahinden was both a Utopian and a pragmatist. His theoretical side led him to formulate this Hill City with pre-fabricated units which recall Far Eastern settlements with their complicated orography. Here technology blends in with anthropology bringing more humane solutions than those provided by Functionalism. His 1972 book: Urban Structures for the Future helped to define the common interests of a generation which in order to be realistic had to aspire to the impossible.

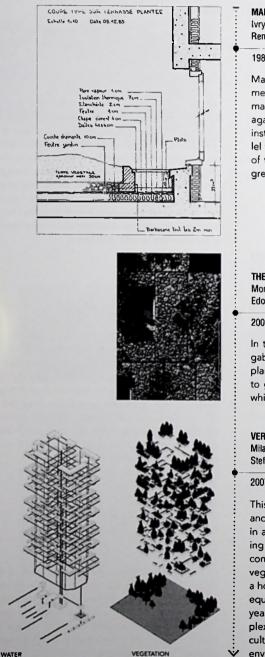
MOUNTAIN DWELLINGS Orestad. Copenhagen. Denmark BIG+JDS

### 2008

In this case the mineral substrate is a parking area externally clad with perforated plates showing an image of Mount Everest. The regularity of the composition prevents the lack of privacy present in Jeanne Hachette. Contact between residents is kept to a bare minimum and visitor access is controlled by constant security measures.

# Chapter 4 **ENVELOPE** THE GROWING BUILDING

### REFERENCES



442 / 10STORIES OF COLLECTIVE HOUSING

MABAT COMPLEX Ivry-sur-Seine. France Renée Gailhoustet

#### 1983

Marat complex roof detail, lvry. Load constraints meant the soil layer had to be kept to a 30 cm maximum. The 7 cm thick insulation was ineffective against thermal bridges. A pedestrian walkway was installed using 40 cm concrete paving stones parallel to the facade as serviceable guttering. Solutions of this type were common at the time for building green roofs.

THE BUILDING THAT GROWS Montpellier, France **Edouard François** 

#### 2000

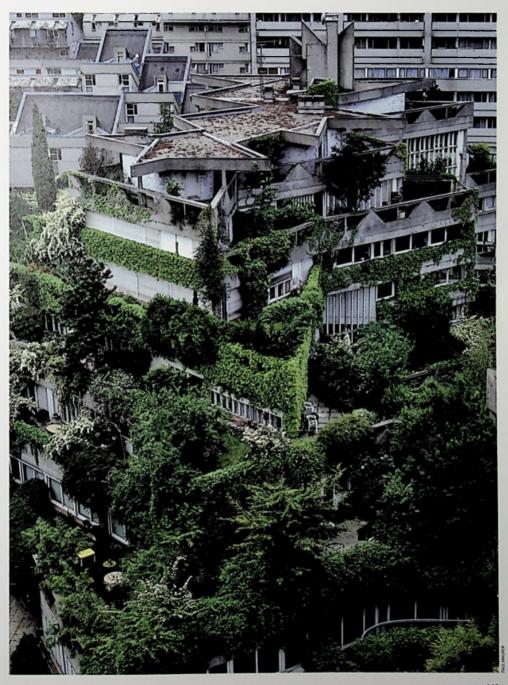
In this building the facade is made up of a skin of gabions which filters the water and allows the seeds, planted in the fertilized earth bags behind them, to germinate. The original moss creates a biotope which is capable of generating green matter.

VERTICAL FOREST	
Milan. Italy	
Stefano Boeri	

### 2007-2013

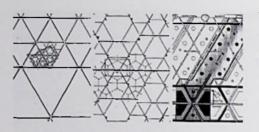
This first example of a Vertical Forest, these two 76and 110-metre residential towers, contains 900 trees, in addition to a great variety of shrubs and flowering plants. The idea is to reforest the outskirts of the consolidated city, providing both higher density and vegetation thus increasing the urban biodiversity. In a horizontal area, this level of planting would be the equivalent of one 2.5 acres of woodland. Thirty eight years after completion, the Jeanne Hachette complex is completely covered in vegetation. It is difficult to distinguish between the built and the natural environment.

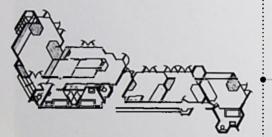
# JEANNE HACHETTE COMPLEX Jean Renaudie



# Chapter 5 FLOOR PLANS THE OBLIQUE AXIS

#### REFERENCES





### PROGRESSIVE HEXAGONAL CITY Theoretical study Arthur Comey

### 1923

Comey proposed an alternative to the land occupancy produced in the English Garden City which used up vast quantities of farmland.<sup>4</sup> He drew a triangular network with diagonal communication links which could extend out on a nationwide scale.

4. Regional Planning Theory A Replay to the British Challenge. C.E. Nash & Son, 1923

### HANNA RESIDENCE

Palo Alto. California. United States Frank Lloyd Wright

### 1934-1936

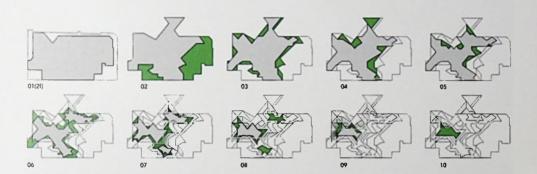
Frank Lloyd Wright first used the hexagon and 120° angles in this residence in order to attain greater flow and spatial flexibility.

MEDICAL, PSYCHOLOGICAL AND LEARNING CENTRE Spinoza Complex Ivry-sur-Seine. France Renée Gailhoustet

# 1969

This T-shaped composition in Spinoza reminds us of the Maurice Thorez building, the first lvry city centre redevelopment project to incorporate collective housing. In this case, three bodies are raised up on supports to leave the ground floor free for collective facilities. These facilities, inspired by Renaudie, take on organic forms with curves and hexagons which filter in between the columns and take over the public space. The transition seen in this floor plan away from the grid structure of the block towards the curved cubicles of this Centre and finally towards the hexagonal office modules signalled the start of a new French approach to public architecture.





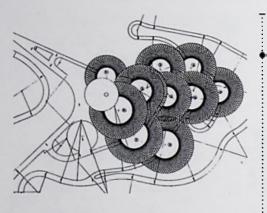
Renaudie considered that urban life could not be activated unilaterally by urban planning unless an act of citizen appropriation also took place. This meant the existence of a complex structure which makes the design for each dwelling affect also the relationships between adjoining units in terms of privacy and access.

Renaudie was a great draughtsman who worked tirelessly, superimposing layers of paper. He used curved or 45° angle geometric forms as generator meshes with which the growth of the city was planned. The drawing was the independent structure onto which the imagined building was mounted.

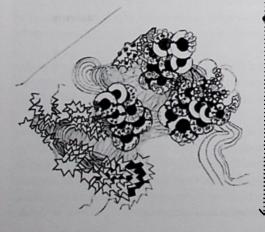
In the Renaudie collective housing complexes, it was an extremely arduous task both to meet all requirements and to conform to planning regulations. There were times during the design process when his assistants would not be able to find the appropriate solution and would start to think that the work was becoming overly complicated. The basic aim of imitating the complex organization of living beings meant that the structure and the spatial layout were incompatible unless a minimum process of dwelling standardization was to take place.

# Chapter 5 FLOOR PLANS STARS AND CIRCLES

### REFERENCES







RESORT COMPLEX SEGREGATION Gigaro. France Atelier de Montrouge

### 1963 Unbuilt project

The Atelier de Montrouge also planned luxury complexes. The site, in this case close to Saint Tropez on the Côte d'Azur, was modified so as to enable the sea views to be enjoyed to a maximum. Here, Renaudie adapted the design using overlaid discs within which independent triangular forms started to emerge.

### LE LIÉGAT Ivry-sur-Seine. France Renée Gailhoustet

### 1971-1986

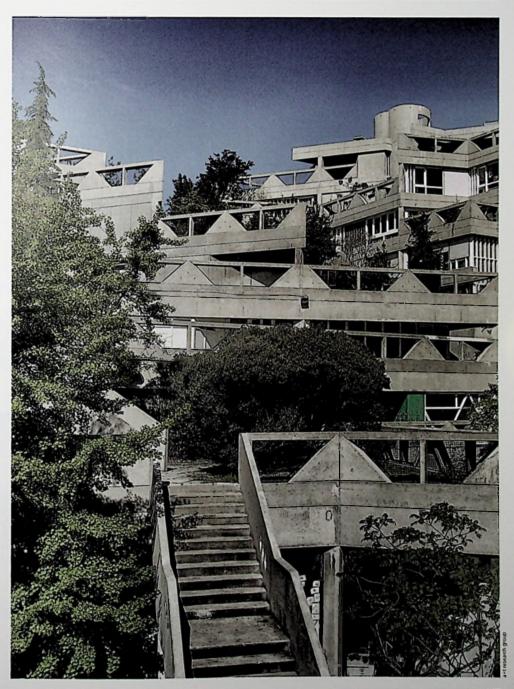
This complex was conceived by Gailhoustet as part of the downtown lvry redevelopment plan which took place in the 1970s, along with Jean Renaudie. In this case, there is a circular geometry and 140 dwellings are laid out around a primary school. Here, the terraces contain vegetation and the residential units encircle landscaped courtyards. As in the case of Jeanne Hachette, the exterior image of the complex resembles a green inhabited hill.

VITROLLES NEW TOWN Les Gorges de Cabriès. France Jean Renaudie

#### 1974

The complicated topographical features of this enclave in Provence, France, lead to Renaudie implementing a geometrically complex adaptation. The access and the slope of the land became constraints which led to the residential units being fragmented and superimposed. In Les Gorges de Cabriès the hillside is natural whereas in Jeanne Hachette it is man-made. Here, the circular geometry and the triangle-based star geometry co-exist. If in Gigaro the triangular layout crossed over into the rings, in this case the star becomes independent and co-exists alongside the rings, showing itself off to the exterior as an independent system.

# JEANNE HACHETTE COMPLEX Jean Renaudie



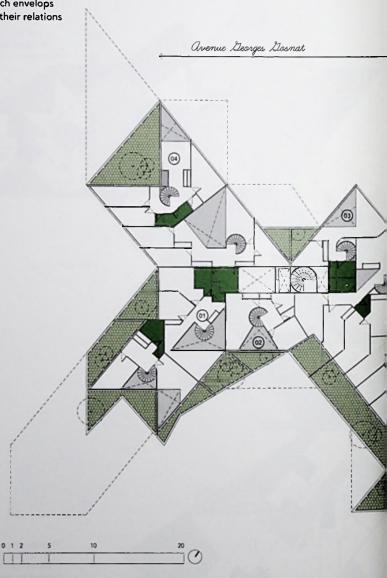
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# Chapter 5 FLOOR PLANS COMPLEXITY OR COMPLICATION

JEANNE HACHETTE COMPLEX Jean Renaudie

"Architecture is the physical form which envelops people's lives in all the complexity of their relations with their environment." JEAN RENAUDIE, 1968.<sup>6</sup>



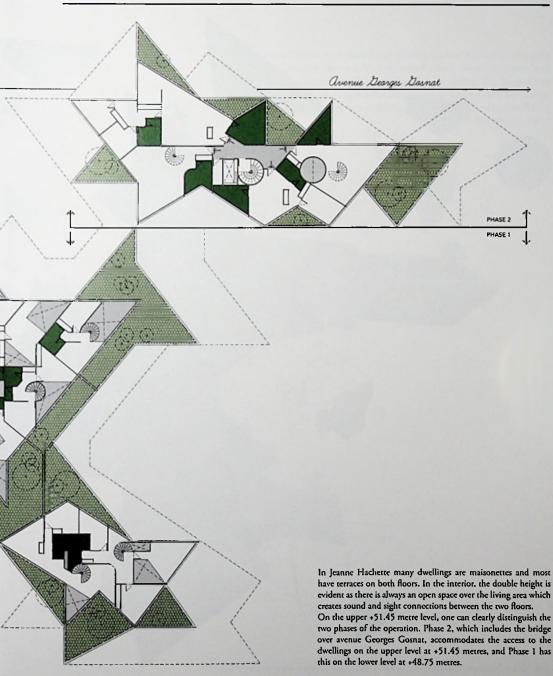


6. Jean Renaudie. "L'Urbanisme est architecture". L'Architecture d'aujourd'hui 146. 1969.

450 / 10STORIES OF COLLECTIVE HOUSING

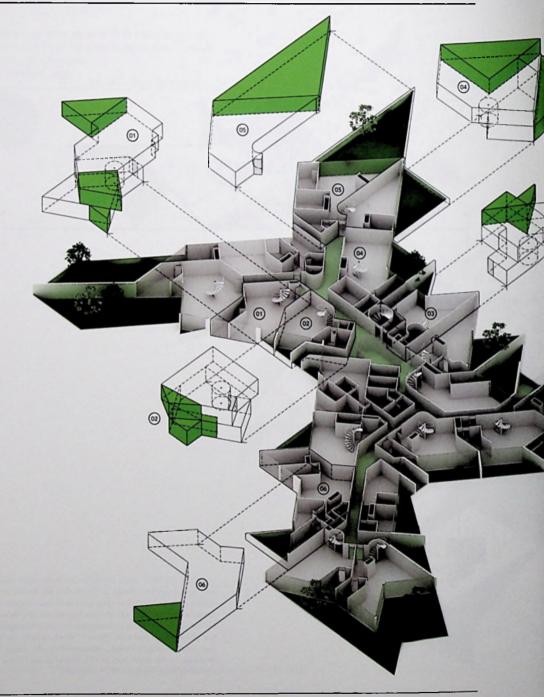
#### MY TERRACE, IN FRONT OF MY HOUSE, OVER YOURS





# Chapter 5 FLOOR PLANS TO GIVE VOICE TO THAT WHICH WAS SILENT

JEANNE HACHETTE COMPLEX Jean Renaudie



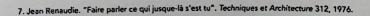
#### MY TERRACE, IN FRONT OF MY HOUSE, OVER YOURS

#### LEVEL 48.75 m

6

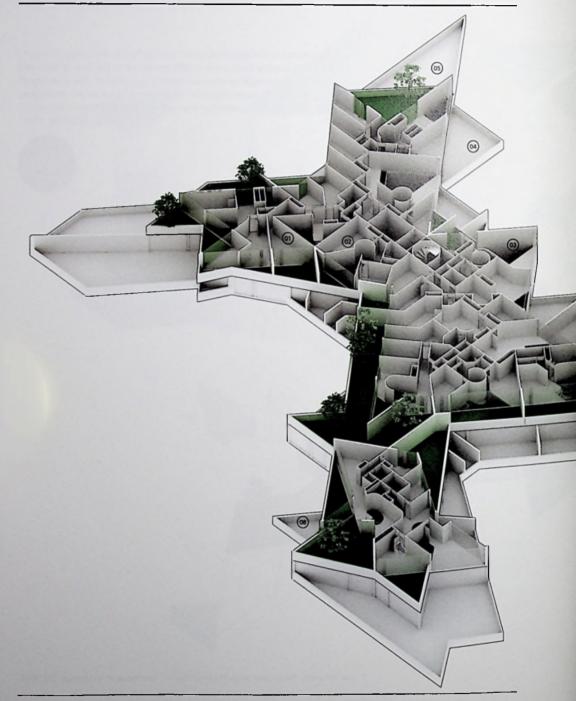
"The unexpected in the organization of housing forms -discovery, diversity, complexity- all provide favourable conditions for us to become actors, and there can be no perception of space other than in action. The diversity of the interior, which encourages the inhabitant to appropriate the space, becomes all the more important in the case of large apartments blocks..." JEAN RENAUDIE, 1976.<sup>7</sup>





# Chapter 5 FLOOR PLANS TO GIVE VOICE TO THAT WHICH WAS SILENT

JEANNE HACHETTE COMPLEX Jean Renaudie



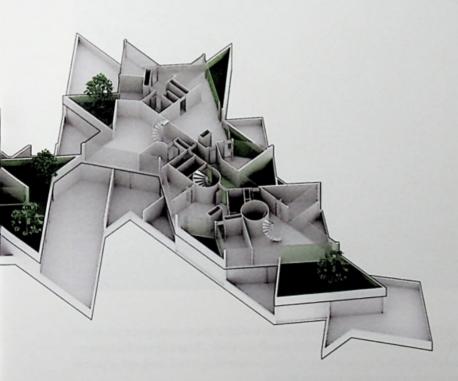
# MY TERRACE, IN FRONT OF MY HOUSE, OVER YOURS

# LEVEL 51.45 m

"For these dreams to flourish in reality, we must recognise that there can be no ready-made solutions in housing, no recipes or established norms". JEAN RENAUDIE, 1976.\*



10



8. Jean Renaudie. "Faire parler ce qui jusque-là s'est tu". Techniques et Architecture 312,1976.

# Chapter 6 ACCESS PATH VERSUS GALLERY

JEANNE HACHETTE COMPLEX Jean Renaudie



In Jeanne Hachette, the spatial richness which permits the walkable continuous green exterior is a world away from the narrow dark corridors of the *grands ensembles*. Renaudie tried to create a feeling of freedom and of individual appropriation of space, something which does not appear in the one-way corridors of the conventional housing blocks.



In the Ivry case, one can climb from street level to the terraces on the upper storeys, following an exterior landscaped route. Paths replace galleries, the vertical cores assist the small paths which meander up the artificial hill.

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# Chapter 6 ACCESS THE INCLINED PLANE

### REFERENCES



INCLIPAN New architectural programme Claude Parent

#### 1974

This unbuilt project bases itself on the residential cell to create artificial hills which can be adapted to each different site. It is founded on the concept of the Oblique Function,<sup>9</sup> a movement created by Parent and Paul Virilio in 1964, which calls for: "the end of the vertical direction as the elevation axis and the end of the horizontal surface as the permanent plane, to the benefit of the oblique axis and the inclined plane". Circulation, be it collective or private, is on ramps which are the real elements which create the rhythm of this architecture. Conquering the inclined plane is something Renaudie calls for in many of his projects.

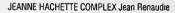
9. Anthony Elliott, Bryan S. Turner. Profiles in Contemporary Social Theory. SAGE Publications Ltd. 2001. P. 218.

KUNSTHAL ROTTERDAM Rotterdam. The Netherlands Rem Koolhaas/OMA

#### 1988-1992

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After having tried out the inclined plane in the Dance Theatre, The Hague (1987) Koolhaas takes advantage of its possibilities to establish the circulation flows in this Rotterdam museum making it into a continuous circuit where vertical references give way to oblique references.





Aiming to intensify urban life, Renaudic reinforces the interior pedestrian paths with civic activities. The retail area which perforates and spreads out over the lower floors of the complex is an alternative to the street, sheltered from bad weather and linked on different levels to the public spaces between the adjacent towers and blocks.

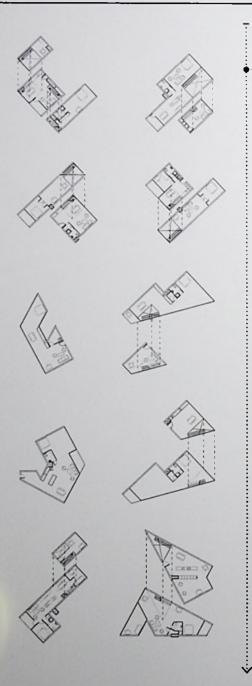
Access from the street is on an inclined plane which runs from the middle of the retail area, located on a higher level. This ramp, similar to that used by Koolhaas years later in many of his projects, establishes relations between the different floors and discovers the spatial resources which Renaudie employed and which in this case enable the pedestrian circulation paths to become a route teeming with events.





## Chapter 7 DWELLINGS THE ABSENCE OF TYPE

#### REFERENCES



VM HOUSING Copenhagen. Denmark PLOT=BIG+JDS

### 2002-2004

The different typologies are developed from those of Le Corbusier's Unité d'Habitation. They are based on a simple system comprising three interconnected units which interchange double height spaces and large living rooms. Each dwelling, made from a base module, appropriates areas from other dwellings. Instead of choosing a perfect typology and repeating this ad infinitum, it proposes three basic types which based on the same principles vary in size, space and use.

All the dwellings can be accessed from a central corridor which pierces the volume providing views and light from both ends. The different types criss-cross above and below the central access space.

In the VM dwellings, all the apartments have a double-height space facing North. The panoramic views are on the side facing South. There are more than 80 different flexible solutions on offer to accommodate changing lifestyles. This specificity of solutions in collective housing is what Renaudie was seeking with a customized response for each resident.

### JEANNE HACHETTE COMPLEX Jean Renaudie



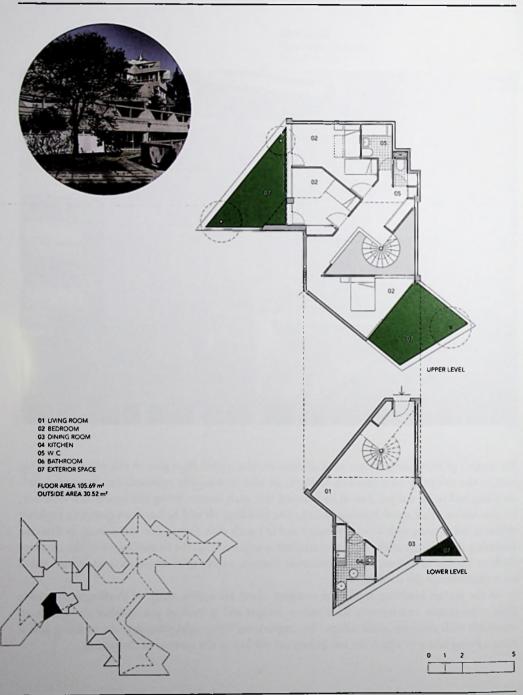
Renaudie's primary concern was to at all costs avoid a typical floor plan as this would inevitably lead to the invention of a standard resident, an idea he rotundly opposed. For Renaudie, each dwelling had to be unique. Just as he believed that each human being was specifically different, he also realized that social housing in collective buildings should be based on grouping together different units, each with its own identity and in touch with nature. For this reason, in this case analysing the concept of the typical apartment is impossible as the formalization of the complex leads to specific solutions, with no common features, unlike other more rational layouts based on repetition and the module.

In the Jeanne Hachette residential complex, there are a wide range of dwellings of variable sizes, orientations and layouts. Each unit is unique and is built as just another element in an ensemble with complex relationships. The importance lies in understanding the building as if it were a living being in which the cell linkers are the key to the survival of the system.

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## Chapter 7 DWELLINGS THE ABSENCE OF TYPE

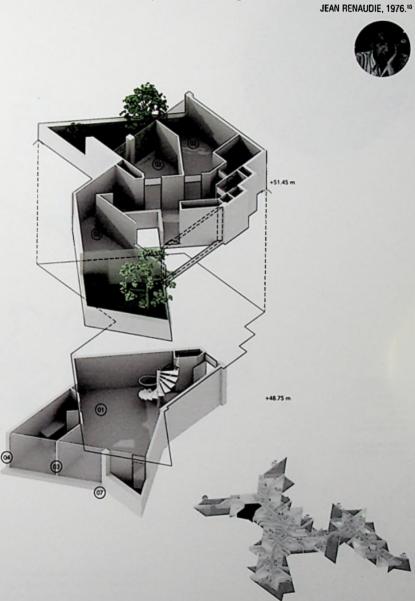
JEAN HACHETTE COMPLEX Jean Renaudie



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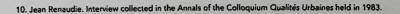
## MY TERRACE, IN FRONT OF MY HOUSE, OVER YOURS

**DWELLING 01** 



"Everyone makes housing for himself, with a desire to live in it." JEAN RENAUDIE, 1976.<sup>10</sup>

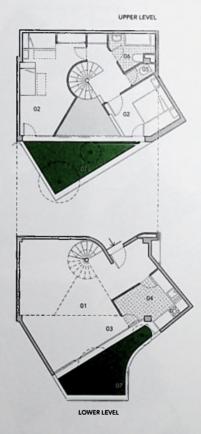
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## Chapter 7 DWELLINGS THE ABSENCE OF TYPE

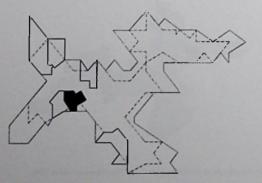
JEANNE HACHETTE COMPLEX Jean Renaudie





01 LIVING ROOM 02 BEDROOM 03 DINING ROOM 04 KITCHEN 05 W.C 06 BATHROOM 07 EXTERIOR SPACE

FLOOR AREA 86.34 m<sup>3</sup> OUTSIDE AREA 24.72 m<sup>3</sup>



The four unique compositional constants in the Jeanne Hachette maisonette units are: the triangular geometric form, the spiral stairs, the double-height open space and the terrace as the outdoor space connected to the dwelling. However, the formalizations and floor areas do not coincide in any way.

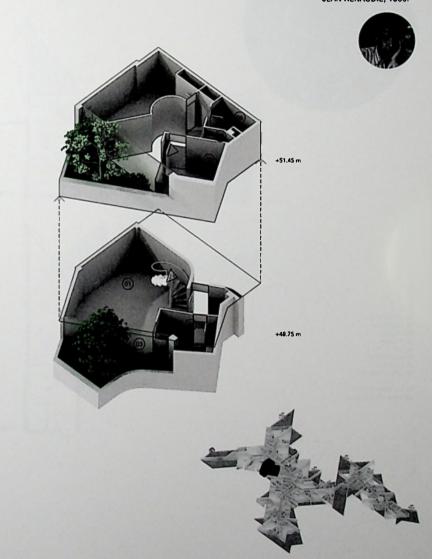
The terraces are different sizes, varying between 10 and 150 m<sup>2</sup>.

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### MY TERRACE, IN FRONT OF MY HOUSE, OVER YOURS

**DWELLING 02** 

"There are already certain corners where you can say: A concrete facade? No, it's not a concrete facade anymore, the inhabitants have made it into a facade of leaves, which turn red in autumn before falling away." JEAN RENAUDIE, 1980."



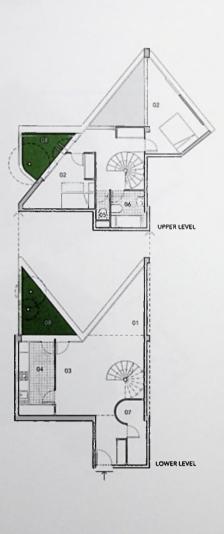
11. Jean Renaudie. La terrace, 1980, in: Irénée Scalbert. A right to difference. The Architecture of Jean Renaudie. A A, 2004. P. 145.

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## Chapter 7 DWELLINGS THE ABSENCE OF TYPE

JEANNE HACHETTE COMPLEX Jean Renaudie





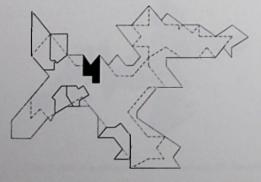
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01 LUVING ROOM 02 BEDROOM 03 DINING 04 KITCHEN 05 WC. 06 BATHROOM 07 STORAGE 08 EXTERIOR SPACE

FLOOR AREA 77.69 m<sup>2</sup> OUTSIDE AREA 20.00 m<sup>2</sup>



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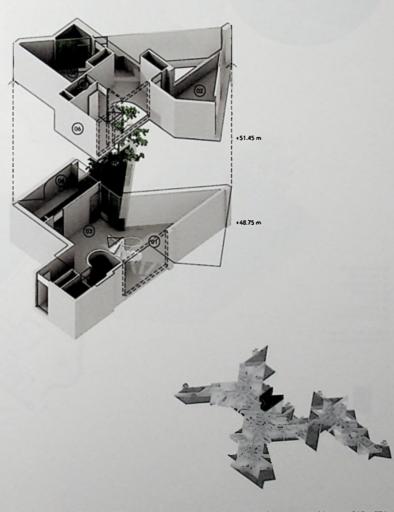
### MY TERRACE, IN FRONT OF MY HOUSE, OVER YOURS

## DWELLING 03

"For a child in his bedroom, the surface of the walls, the corner with his bed, the work corner, the play corner, all are more fundamental than the 'beauty' of a rectangle." JEAN RENAUDIE, 1976.<sup>12</sup>

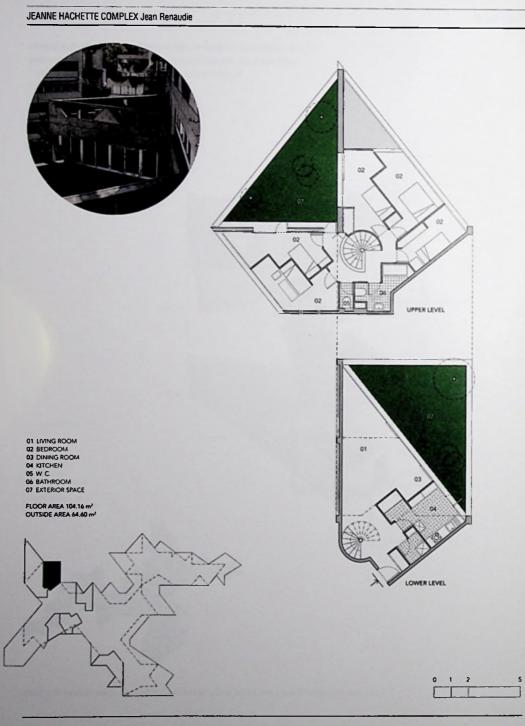


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12. Jean Renaudie. "Faire parler ce qui jusque-là s'est tu". Techniques et Architecture 312, 1976.

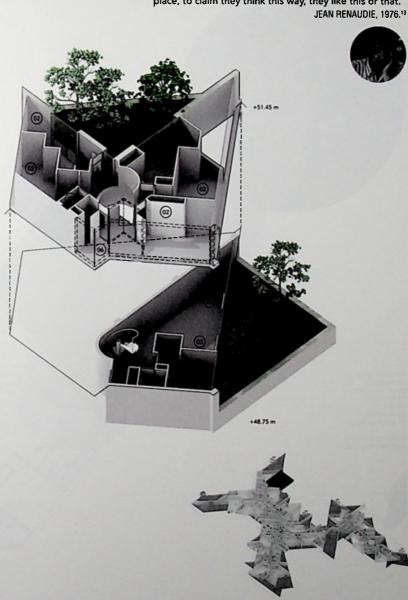
## 470 / 10STORIES OF COLLECTIVE HOUSING



Chapter 7 DWELLINGS THE ABSENCE OF TYPE

### MY TERRACE, IN FRONT OF MY HOUSE, OVER YOURS





"No one has the right to put himself in someone else's place, to claim they think this way, they like this or that."

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13. Jean Renaudie. Interview collected in the Annals of the Colloquium Qualités Urbaines held in 1983.

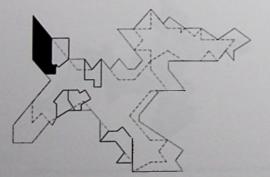
## Chapter 7 DWELLINGS THE ABSENCE OF TYPE

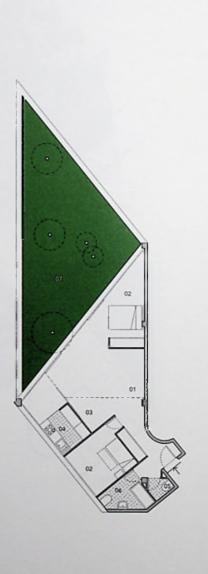
JEANNE HACHETTE COMPLEX Jean Renaudie



01 LIVING ROOM 02 BEDROOM 03 DINING ROOM 04 KITCHEN 05 W C 06 BATHROOM 07 EXTERIOR SPACE

FLOOR AREA 65.33 m<sup>2</sup> OUTSIDE AREA 63.00 m<sup>2</sup>





0 1 2 5

472 / 10STORIES OF COLLECTIVE HOUSING

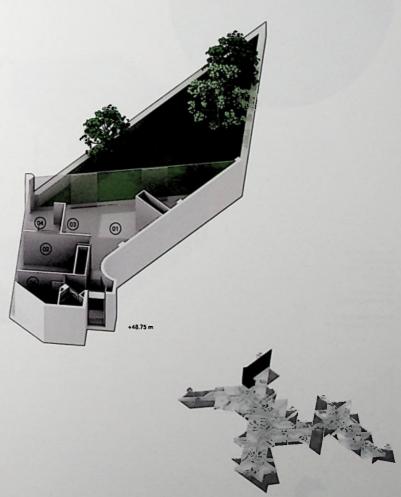
### MY TERRACE, IN FRONT OF MY HOUSE, OVER YOURS

## **DWELLING 05**

"The terrace creates a sense of intimacy. You feel like you're retreating a little from the outside world when you step back from the window." JEAN RENAUDIE, 1976.<sup>14</sup>



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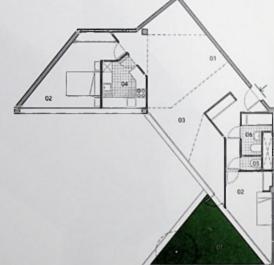


14. Jean Renaudie. "Faire parler ce qui jusque-là s'est tu". Techniques et Architecture 312, 1976.

## Chapter 7 DWELLINGS THE ABSENCE OF TYPE

## JEANNE HACHETTE COMPLEX Jean Renaudie

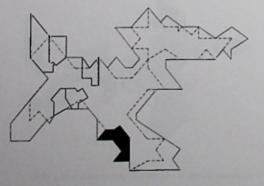




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01 LIVING ROOM 02 BEDROOM 03 DRING ROOM 04 KITCHEN 05 W. C. 06 BATHROOM 07 EXTERIOR SPACE

FLOOR AREA 81.22 m<sup>3</sup> OUTSIDE AREA 16 53 m<sup>3</sup>



474 / 10STORIES OF COLLECTIVE HOUSING

### MY TERRACE, IN FRONT OF MY HOUSE, OVER YOURS

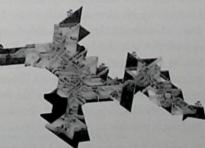
**DWELLING 06** 

"According to these famous criteria, the kitchen ought to be placed near the front door. That the front door has a function is undeniable, but it ends when life in the flat begins. It is important, therefore, that the location of the kitchen is determined by the organization of the spaces of the flat as a whole. Following this principle, it could just as well be placed at the back of the flat." JEAN RENAUDIE, 1976.<sup>15</sup>



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15. Jean Renaudie. "Faire parler ce qui jusque-là s'est tu". Techniques et Architecture 312, 1976.

## Chapter 8 DESIGN PROCESS TRACE OVER TRACE

REFERENCES



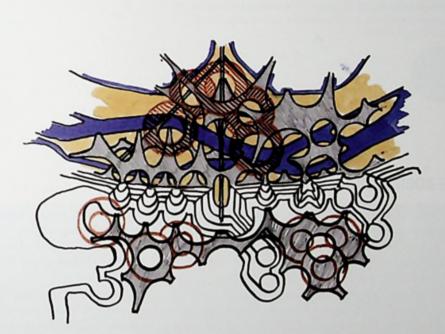
Renaudie "drew with a felt-tip pen, with anything in his hands: felt-tip, chalk, pastels, anything. He built up his own approach to the location, his free and open spaces. They were all curved and (...) worked in layers. He added, superimposed a vast array of layers, as a sort of progressive approach where the hand went back over what it had already drawn. It is not just the act of tracing which matters, it is the relation of the tracing, of the drawing to the thought process, the reflection upon the work at hand. Tracing, due to the very process of superimposing, allows one to act either on the approach to the location or on the first structures of an urban complex or even on the dwelling itself. (...) Thanks to its transparency, it makes it easier to transfer the idea, making it possible to go back a step to any previous step. That is the interesting thing."<sup>16</sup>

16. Interview with Serge Renaudie. Calque sur Calque. Blog de réflexion autour de l'architecture, de sa pratique et de ses enjeux. 23 April 2010. http://www.calquesurcalque.fr/entretiens/entretien-avec-serge-renaudie/



Drawings made by Renaudie with a felt-tip pen onto tracing paper

Atelier de Montrouge. Le Vaudreuit new town, 1967-1968



Pierre Riboulet, member of the Atelier de Montrouge, even thought Renaudie's projects to be too complex, that they had become complicated to design and that this was why they often went unbuilt.<sup>17</sup> Drawing for drawing's sake frequently became an end in itself. Converting the thick felt-tip pen lines into structural axes with precise dimensions required a great deal of effort to adapt the layers. It must not be forgotten that Renaudie firmly believed that imposing a grid as the axes for the system went against creative freedom. One of the few exceptions to this vertical coincidence are the Jeanne Hachette service shafts which are aligned and do in fact coincide. Ralph Erskine had the very same problem with the roofs on the Byker Wall (see p. 405).

17. Irénée Scalbert. A right to difference. The architecture of Jean Renaudie. Architectural Association, 2004. P. 123.

## **EPILOGUE** My terrace, in front of my house, over yours

## THE DOOR TO DREAMS

The Jeanne Hachette complex is a manifesto against standardized housing, a cry ringing out against the grands ensembles, a clamour against merciless functionalism. Renaudie accepts functional needs but he also includes dreams, those aspects which are not clearly quantifiable, what he terms the "abstract content,"<sup>18</sup> which provide pleasure and allow the resident to feel free in a space, in his list of goals.

This project bears witness to his efforts to fill the dwelling with meaning, to distance himself as far as possible from the routine of the bee and its hive of identical cells. Without contradicting the organic-driven influences which guided his work, Jean Renaudie designed for the specific resident who he refused to pack into a block of housing types. Over time his complexity, for which he was censured by critics, has become one of his main virtues for bringing identity and uniqueness. Ahead of his time regarding the social changes which are now present in any housing programme, he questioned the separation of day and night functions; he discarded the differentiation between servant spaces and served spaces; he brought the rural into high-rise housing; he added urban intensity to the city centre and rejected any axiom which prevented him from opening the door to dreams.

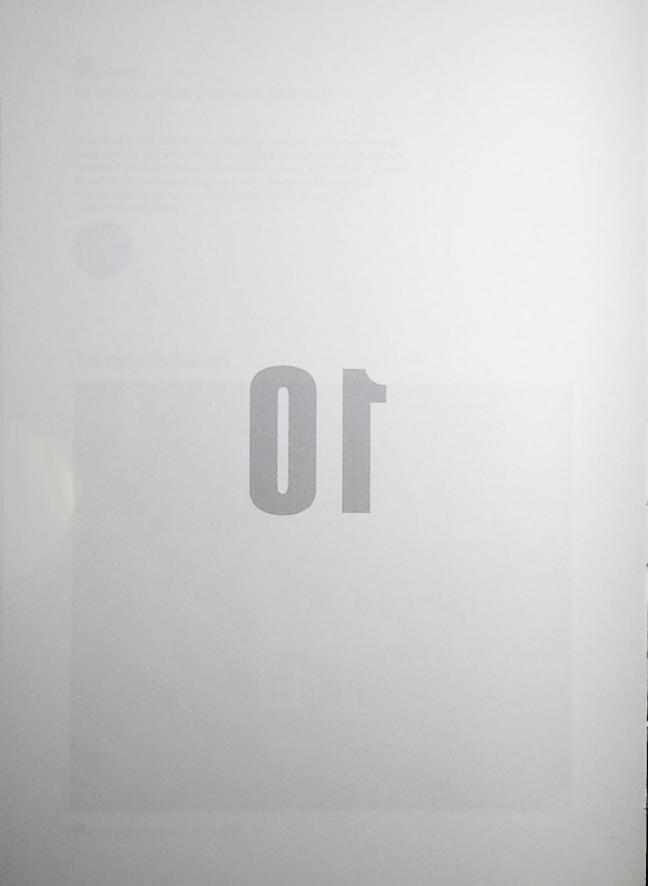
Jean Renaudie. "Faire parler ce qui jusque-là s'est tu". Techniques et Architecture 312, 1976.
 Irénée Scalbert. A right to difference. The Architecture of Jean Renaudie. Architectural Association, 2004. P. 50.

"Jeanne Hachette is like Kowloon Walled city without the walls. It is like the Yokohama International Port Terminal before the age of computers. Here for the first time was an architecture founded not on the functional demands of modernists or on the psychological considerations of sociologists, but on a system of pure, pertinent differences." IRÉNÉE SCALBERT, 2004.<sup>19</sup>



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CITE DE LA MUETTE Beaudouin, Lods, Mopin, Bodiansky.

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#### 09 BUILDING MOODS BYKER REGENERATION Ralph Erskine

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#### ERRATUM

The image located on page 68 states that it was that of Nikolai Alexandrovich Miliutin, when it was in fact that of Vladimir Miliutin (1884-1937).

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- ever, a+t research group has conducted an analysis of ten inspin

Losterpieces through drawings and texts highlighting the most important conbutions made by each of the architects towards developing desirable housing. T book recognizes masters such as Ignazio Gardella, Jean Renaudie, Ralph Erskine ar Fumihiko Maki, among others, who defended their own personal vision of architec ture, a far reach from dogmatism and closer to users. Each story is a journey through multiple possible links which relate the project with works that preceded it, set it against those of its generation and match it up with recent 21<sup>st</sup> century designs. This is neither a canonical list of buildings nor the top ten of collective housing. They were chosen as one chooses one's friends. Faults and all, they make everything worthwhile.

# **10 STORIES OF COLLECTIVE HOUSING**

